

Perspective Piece

Connecting Rural and Global Health Education for Workforce Development

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Abstract. Healthcare workforce shortages are continuing to increase worldwide with more profound deficits seen in rural communities in both developed and developing countries. These deficits impede progress towards health equity and global health initiatives including the 2030 Sustainable Development Goals. Medical training has supported the idea that having a rural background influences future practice in rural settings. With a majority of global health experiences taking place in rural settings, there is an opportunity for health profession programs to take advantage of expanding global health education to encourage future practice in rural settings and address inequalities in workforce distribution.

*“Human factors are the most important element in empowering a workforce”.*¹ Despite 50% of the world’s population living in rural communities, only 23% of health-care workers practice in those areas, leading to significant gaps in care for rural populations across developed and developing countries.² Population growth and epidemiologic transitions continue to contribute to health workforce shortages with an expected deficit of 10.1 million health professionals by 2030.³ Access to trained and motivated health workers is crucial to improving health outcomes and reducing barriers to care in rural and remote settings. Uneven distribution of health workers impedes progress towards health equity and achieving the Healthy People objectives by 2020 and the Sustainable Development Goals by 2030. The WHO 2018 Declaration of Astana reinforced the importance of ensuring access to quality primary health care services to all, including rural populations that may lack the workforce to address significant health disparities.⁴ With a philosophical mission to produce an educated workforce that meets the needs of society and local communities, academic institutions can play a vital role in closing the rural workforce gap through education and training.

While non-communicable diseases (NCDs) have been increasing in prevalence across both developed and developing countries, globalization has also lent to the emergence and reemergence of some infectious diseases, including neglected tropical diseases.⁵ The Center for Disease Control estimates that a disease can be transported to any major city in as little as 36 hours, reminding us that diseases such as HIV, Zika, and Ebola are not limited by borders.⁶ Infectious tropical diseases disproportionately impact underserved and rural populations globally.⁷ Factors such as inadequate healthcare access, medication access, health education, and social determinants of health can all contribute to increased infectious and non-infectious disease burden in these populations. As workforce shortages continue to increase, rural and remote populations globally will inequitably feel those impacts,^{2,3} further decreasing access to care for individuals with tropical diseases commonly seen in those areas.

To effectively mitigate healthcare inequities caused by uneven distribution of the health workforce, interventions need to address both migration into, and retention of healthcare workers in rural and remote settings.⁸ Factors contributing to migration and retention of workers, including personal values and a sense of community, can be influenced through exposure to rural settings. While the WHO evidence-based recommendations for rural workforce development promote best practices for academic institutions to strengthen the workforce, including the recruitment of students from rural backgrounds and training students in rural settings, most institutions are located in urban settings, making implementation of these approaches challenging. As demand for global health training increases across all health professions, exposure to rural health settings through global health training may provide a creative outlet for academic institutions to contribute to rural workforce development.

Global health has been defined as an area of practice that contributes towards improving health and achieving health equity for all people worldwide.⁹ While medical students have engaged in global health education for the last 50 years, demand has increased substantially over the last few years, resulting in greater emphasis of global health principles in health curricula.¹⁰ Health profession programs have incorporated global health education through clinical rotations, global health electives, visiting lecturers, and international partnerships. Academic institutions can take advantage of the increasing demand for global health experiences by highlighting the similarities between global and rural health. While historically global health education has been a localized movement in North America, more developed countries in parts of Europe and Australia are now incorporating global health into their curricula.¹¹ With over 25% of United States medical students participating in a global health experience before graduation, and a growing number in other professions and parts of the world, there is an opportunity to shift perspective in how one views global health experiences in the context of rural workforce development.^{12,13}

As academic institutions expand their global footprint, they should be mindful that a significant portion of global health work takes place in rural settings with underserved populations. Rural communities in both developed and developing countries face similar challenges associated with resource limitations, social determinants of health, access to quality health services, and a rise in NCDs. Although these

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challenges can be relative within different contexts, they share an underlying fundamental principle related to health equity, the foundation of global health. In addition to similar challenges, global and rural health both stress the importance of incorporating interdisciplinary teamwork and cultural considerations into patient care and population health. While there remains some ambiguity regarding the definition of global health, many have claimed that global health is synonymous with local public health given shared principles and philosophies.¹⁴ From this perspective, one could justify that global health is comparable to rural health.

Health professional programs worldwide have an opportunity to show students the link between global and rural health and provide students with an outlet to build local healthcare capacity and improve its delivery. Studies show that medical students who participate in global health experiences may be more likely to practice in primary care or work with underserved populations following graduation.^{10,15} Medical school training also supports the premise that having a rural background influences health professionals to select a rural practice site in the future.¹⁶ However, there are not enough students from rural backgrounds to satisfy the current deficit of health care workers.¹⁷ One potential reason that students with rural backgrounds or experience are more likely to practice in a rural community is the emotional connection they make when working with underserved populations in a challenging environment. When students participate in global health experiences, they create similar emotional connections by developing meaningful relationships with patients, overcoming barriers, and realizing their self-efficacy. These emotional connections can make students feel empowered and inspired to continue providing care in underserved areas and may be a reason why a key factor for preferring to work in rural settings is the desire to make a difference in people's lives.¹⁸ As many of the academic global health training sites abroad take place in rural areas, these experiences can support one of the WHO's evidence-based recommendations for rural workforce development by training students in rural settings.⁸

There are many ways that health profession programs can help students connect global and rural health. Programs could start by integrating core global and rural health concepts into existing curricula including social determinants of health, barriers to care, population health, and quality improvement. New courses could also be created, such as a global and rural health course to help students recognize global health concepts in local environments. Programs can expand their experiential global health offerings domestically to rural locations to strengthen the local impact of global health efforts. Working with indigenous populations can facilitate global health learning as these populations often have challenges accessing primary care for chronic disease states and are at a higher risk for emerging infectious diseases.^{19,20} Students may also be more likely to work with community health workers in rural settings, highlighting the role of health extension workers in the global health workforce. To institutionalize the connection between global and rural health, programs could embed this concept within their degree competencies, include global and rural health together within strategic plans, and form community partnerships with local health departments.

Debriefing with students during and after global health experiences can help students apply their learning locally. Critical reflections may also help students appreciate how their global health experience transformed their personal and professional perspectives as it relates to their future career direction. Reflection can not only help students apply global health principles to rural populations, but also help students form a unique perspective of their local health care system as they consider how the local systems they operate in can be improved. Reflection can also lead to future global health engagement including participation in medical mission trips abroad or local volunteer opportunities. There are many positive learning outcomes associated with global health experiences and the rural application of them is just one outlet programs can use to augment the impact of these experiences.

Even beyond academic institutions, global health organizations can help their workers and trainees understand the connection between global and rural health to influence the development and retention of health workers in rural and remote areas. Political interventions are key aspects to achieving equitable health workforce distribution⁸; global health organizations can also leverage their network to advocate for new education, financial, or personal and professional development interventions that may support development and retention of rural healthcare workers. Given that community health workers play a critical role in the health of rural communities, academic programs can collaborate with global health organizations to help strengthen the training and capacity of these workers to better address local needs.

As global health experiences become more prevalent in health education, educators need to make a stronger link between global and rural health to address inequalities in workforce distribution in rural settings. Without this connection, students may be unaware of how their global health interests can be applied locally. Rural health practice can provide a mechanism for students to utilize global health principles in meaningful ways, while furthering their appreciation for delivering care to underserved populations.

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