Reformulation and strengthening of return-of-service (ROS) schemes could change the narrative on global health workforce distribution and shortages in sub-Saharan Africa

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ABSTRACT

Despite policies for addressing shortages and maldistribution of health professionals, sub-Saharan Africa continues to experience shortages and maldistribution of skilled health professionals. Policies such as return-of-service schemes or state-funded educational initiatives do not seem to be achieving their intended objectives, potentially due to poor design, implementation; and lack of monitoring and evaluation of the strategies. A focus by global health experts on strengthening and reformulating educational initiatives offers potential for producing, retaining and recruiting health professionals.

INTRODUCTION

WHO has designated 2020 as the year of the nurse and midwife.¹ It also marks the 10th-year anniversary of its Global Code of practice for the international recruitment of health professionals (WHO Code).¹ This landmark coincides with the beginning of the decade leading to the review of the Sustainable Development Goals (SDGs).¹ But what do these milestones mean for the global health workforce that drive these health systems?

The global celebration of the nurse and midwife is an opportunity to reflect and identify how health systems can better nurture and strengthen their health workforce. While the year marks the role of nurses and midwives, poor working conditions and staff shortages, particularly in low-income and middle-income countries (LMICs), remain significant barriers to their contribution.¹ In addition, in LMICs, nurses are often being required to take on the role of doctors who are also in short supply.² The combination of these factors often generates a reinforcing cycle of skilled health professional (SHP) shortages, poor retention and maldistribution of these workers across and within nations, with large

and negative impacts on population health and health system performance.

WHO Code was introduced to offer some consideration and potential resolution of these persistent issues but has been widely criticised as being ineffectual largely due to its voluntary nature.¹ Further, frictions between WHO and states continue to limit attempts to address health professional shortages that extend beyond nurses and midwives. Beyond these factors, a significant proportion of the shortages could be accounted for by outdated, incoherent, poorly coordinated and supported policies or other factors known and unknown.²

WHO characterises a health system as consisting of six elements: leadership and governance; human resources for health (HRH); medical products, vaccines and technologies; information and research; service delivery; and health financing.³ The effective interaction of these core elements potentially produce beneficial health system outcomes, including population health, the provision of quality services and ensuring access to affordable services. HRH acts as the key stimulant of the health system, without which health delivery and access to quality healthcare is impossible. Hence, the performance of a health system is reliant on the production, distribution and retention of HRH.²

Maldistribution of SHPs can arise due to the low production of SHPs by lower-income countries, migration of SHPs to the private sector or urban centres and emigration to higher-income countries.^{4–6} Lehmann *et al*⁵ and Grobler *et al*⁴ attribute most of the loss of SHPs to push factors such as a lack of personal and professional support, poor working and living conditions and environment rather

than available immigration opportunities.^{4 5} The maldistribution and shortage of health professionals results in poorly functioning services and inequity in access to healthcare in many parts of the world,⁴⁻⁶ particularly in LMICs.⁷ Despite the fact that sub-Saharan Africa bears up to 25% of the global burden of disease, it has only 3% of the global health workforce and the lowest density of doctors and nurses of any region.^{4 7} In contrast, 37% of the world's health workers work in WHO region of the Americas, which accounts for 10% of the global burden of disease.⁴ This disparity leads to poor attainment of health outcomes and might in some instances lead to catastrophic global disasters, such as the West African Ebola outbreak of 2014–2015.⁴ While it is too early to assess the impact of COVID-19 on global health workforces and health systems, existing disparities are likely to be exacerbated as already stretched health systems come under increased pressure, potentially worsening the spread and impact of the pandemic on vulnerable populations.

In sub-Saharan Africa countries like South Africa, 44% of the population live in rural areas but are served by approximately 12% of doctors.^{4 8-10} Others, such as, Ghana and Senegal also reflect a similar picture: 87% and 60% of the respective physicians serve in urban areas where 23%–44% of the population reside.⁴ Several strategies have been used to address this maldistribution. These include: financial incentives (rural allowance, scholarships and loan repayment schemes); educational mechanisms (targeted admission policies for medical schools, undergraduate and postgraduate training exposure and the location of medical schools in rural areas and/or the inclusion of rural training programmes); personal and professional support; and regulatory initiatives.^{4-6 9}

State sponsored educational initiatives are strategies that combine the training of aspiring health professionals with government human resources recruitment and retention strategies.^{2 4 5 11-13} These strategies also known as return-of-service (ROS) schemes award study scholarships or bursaries to health sciences students in return for their commitment to serve government on a year-for-year reciprocal contract after completion of their studies.^{2 4 5 11-13} The primary objective is to increase the pool of health professionals in a defined area and/or government service for a set number of years.^{2 4 5 11-13} The secondary objective is to retain these health professionals in the same area of their service beyond their obligatory service period.^{2 4 5 11-13} Despite the stated intentions

underlying these policies, and the fact that such policies are the cornerstone of many African health systems including South Africa, Eswatini, Botswana, Lesotho and Namibia,^{5 13 14} their impacts do not always match the policy objectives due to a variety of factors, including poor HRH planning, poor monitoring mechanisms, poor HRH skills mix, disjointed HRH information systems.^{4-6 12}

Another complicating factor to the effective implementation of HRH strategies is the lack of production capacity in some countries and a resultant over-reliance on neighbouring countries and/or the referral of future health professionals abroad for studies.^{1 5} For example, until recently Eswatini, Lesotho, Botswana and Namibian governments would fund and send health sciences students to study in South African medical schools. Botswana and Namibia have since started training their own medical students with the opening of medical schools in 2009 and 2010, respectively. South Africa in-turn sends medical students to study medicine in Cuba.¹⁴

Under these government-sponsored schemes, there is an expectation that the graduates would return to their countries of origin after graduation. However, the consequences of the implementation of these schemes might not have been initially apparent to policy-makers: graduates might find employment and other opportunities in their host environment during their studies, choosing not to return to their country of origin after completion of their studies abroad. In the absence of any systematic review and evaluation of the implementation of these strategies by policy makers, it is difficult to assess the extent to which 'exported' students return to their countries to provide healthcare services.^{5 13}

The complexity of HRH shortages and maldistribution requires increasingly complex solutions. Governments need to appreciate that HRH policies cannot be implemented in a piecemeal fashion but require a coordinated and coherent approach which aligns with other policies. Importantly, these policies also require an appreciation and assessment of contextual factors. As an example, many countries rely on the development and implementation of ROS strategies as a vehicle for building and maintaining a skilled health workforce. At face value, it makes sense for a financially needy student to commit to a future obligatory period of public service following receipt of a scholarship. This can be represented by a simple linear equation where an input of an HRH policy aimed at recruiting SHPs results in an increase in SHPs.

Figure 1 Assumed return-of-service policy implementation.

Figure 2 Real world and return-of-service policy challenges.

This equation could be represented by [figure 1](#) where the shortages and maldistribution of SHPs will trigger the policy development process that will address the challenge. However, the real world is spherical and as such will bring forth multiple interacting and sometimes opposing contextual variables which can complicate this equation. While this commentary does not provide a settled equation that might facilitate a universal approach it does however raise, as demonstrated via [figure 2](#), some of the factors that might complicate the policy and its intentions.

Central to the success of this policy is the quantification of human resource needs based on burden of disease and demographic profile of the population, and the availability of funds to pay for future salaries factored into the equation before a potential future employee is enrolled. Asamani *et al*² have noted the paradoxical incapability of many sub-Saharan African governments to absorb an estimated 700 000 health workers by 2030.² Failing to consider the future salary needs will therefore be counterproductive in efforts to address the HRH situation in underserved areas, as poorer countries could end up training SHPs for higher-income countries.

CONCLUSION

The 10th-year anniversary of WHO global Code of practice for the international recruitment of health professionals offers an important opportunity to reconsider and reformulate costly HRH policies that are not achieving their

desired outcomes. The contribution of ROS to health system strengthening and policy targets such as universal health coverage has been limited by poor planning, implementation and monitoring of the schemes. Efforts to address these issues and leverage the significant potential of ROS schemes must focus on overcoming disjointed and fragmented human resource information systems that have resulted in inadequate monitoring of policies; subject ROS schemes to rigorous evaluation of their effectiveness and cost-effectiveness; and, engage in robust planning processes to ensure there is appropriate quantification of human resource gaps, the required skills mix and appropriate provisions for future salary needs from the point of enrolment into the scheme.^{2 4 5 11–13} Scholars and researchers can make an important contribution to this objective by taking the lead in quantifying the effects of these policies and investigating the cost-effectiveness relative to other potential HRH policies. However, it is vital that such activities are undertaken in close collaboration with government departments and planners responsible for the implementation of the schemes.

There are multiple complex and interacting factors associated with recruitment and retention of SHPs that must be considered in developing packages of interventions to effectively recruit, train and retain SHPs along the lines of those provided by Lehmann *et al*.⁵ Unless ROS policies are reformulated and strengthened, their long-term utility and viability as a vehicle for addressing global health workforce distribution and shortages in

sub-Saharan Africa will remain questionable. Worse, they could have perverse impacts on resource-constrained health systems whereby they fund the training of SHPs for higher-income countries, not only failing in their stated goal of overcoming persistent shortages of SHPs but also diverting resources vitally needed for service delivery to schemes with virtually no impact on population health or health system performance. Achieving universal health coverage for all and attaining SDG 3 by 2030 is impossible without a trained and motivated workforce and requires the scarce resources available for investment in health systems to be directed to their most effective uses possible. Reformulating complex and costly ROS schemes will be a challenging but unavoidable process if sub-Saharan African health systems are to overcome workforce shortages, develop a sustainable pool of skilled health workers and achieve universal health coverage.

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