FISEVIER

Contents lists available at ScienceDirect

Public Health

journal homepage: www.elsevier.com/locate/puhe



Commentary

The negative impact of global health worker migration, and how it can be addressed



0/).

J. Eaton ^{a, *}, F. Baingana ^b, M. Abdulaziz ^c, T. Obindo ^d, D. Skuse ^e, R. Jenkins ^f

- ^a London School of Hygiene and Tropical Medicine, UK
- ^b World Health Organization, African Regional Office, People's Republic of Congo
- ^c Africa Centres for Disease Control and Prevention, Ethiopia
- ^d Association of Psychiatrists in Nigeria and University of Jos, Nigeria
- ^e University College London, UK
- f King's College London, UK

ARTICLE INFO

Article history: Received 27 May 2023 Received in revised form 7 August 2023 Accepted 15 September 2023

Keywords: Human resources for health Low- and middle-income countries Health workforce Global health Health Services

ABSTRACT

International migration of healthcare workers is well established and has become a means of maintaining service quality in many high income countries. In recent years, there has been a dramatic increase in recruitment of health personnel who have been trained abroad, including from the poorest countries in the world. In this article, using General Medical Council (GMC) data, we chart the growth in numbers of international staff working in the United Kingdom, where since 2018, over half of all new GMC registrations have been of doctors trained abroad. There is evidence that this migration of health staff results in poorer health service provision in low and middle income countries, as well as substantial economic impacts in these countries that have invested in training their health workforce. Recruiting governments have argued that remittances compensate for the loss of personnel, and that training opportunities can enable skills transfer to countries with weaker health systems. However, we found that the costs to the source countries dwarfed remittances, and that only a tiny fraction of people who move to take up posts in wealthier countries ever return to their countries of origin to work. We conclude that in addition to the investment in health systems (and workforce development) in low and middle income countries as part of Official Development Assistance for Health, there is an urgent need to increase training of nurses and doctors so that damaging migration is no longer relied upon to fill gaps in healthcare personnel. © 2023 The Author(s). Published by Elsevier Ltd on behalf of The Royal Society for Public Health. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.

Introduction

The valuable contribution made by health staff who migrate to work in other countries is incontrovertible, compensating for local shortfalls in personnel, and improving the quality of care that can be provided. Many high-income country health systems, for example in the USA, Canada, Australia, and the United Kingdom have had a longstanding lack of locally trained personnel, and so have become increasingly reliant on personnel trained abroad and could not currently function effectively without them.

There are, however, substantial consequences for the source countries where these personnel trained. In this article, we

E-mail address: julian.eaton@lshtm.ac.uk (J. Eaton).

document the scale of migration from countries where health systems are often poorly staffed and argue that alternatives to such large scale recruitment of overseas health staff must be found.

As an example, the UK National Health Service's (NHS) recruitment of doctors from overseas, especially from low- and middle-income countries (LMICs), is increasing dramatically (see Fig. 1). The UK currently has 356,506 registered doctors of whom 146,984 (36%) trained outside the UK. Of these, 110,929 (75.4%) trained outside the European Economic Area (EEA). Indeed, the UK currently has 78,823 doctors on the medical register who were trained by the 57 poorest countries in the world (GMC data 24.11.22).

Since 2018/19, more than half of doctors joining the GMC register have trained outside the UK, which implies that the UK is now training less than half the number of doctors it needs. The UK is not alone in relying on overseas health personnel. Migrant doctors and nurses from LMIC working in Organisation for Economic Co-operation and

^{*} Corresponding author. Centre for Global Mental Health, LSHTM, Keppel St, London, WC1E 7HT, UK. Tel.: +44 7711140365.



Fig. 1. Recruitment of overseas trained doctors to the UK (General Medical Council, GMC data). Numbers have more than doubled in the last four years. The proportion of this number from LMICs is also increasing.

Development (OECD) countries increased by 70% between 2000 and 2019.1

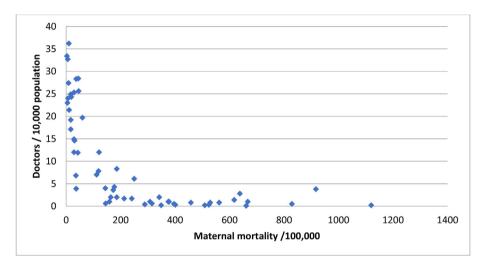
It is important to note that different specialisms and cadres of health personnel are subject to a range of diverse influences on their migration decisions. Factors include the extent of need for certain gaps to be filled in source and destination countries, policies or rules around recognition of their qualifications, the ease with which they can gain permits to work, a and how they are treated (in terms of working conditions or remuneration) in their home countries.

One example is mental health specialists like psychiatrists and psychiatric nurses. Due to a relative shortage compared to other specialities in both source and destination countries, there is relatively substantial movement toward high income countries. As this flow comprises a high proportion of the total trained by the source

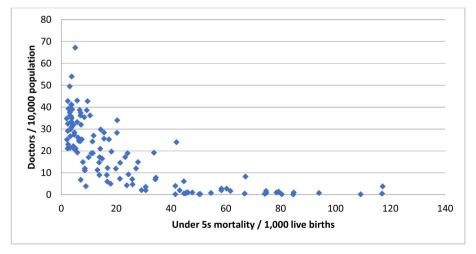
country, there is a significant costly impact on poorly resourced countries: The influx of émigré psychiatrists to the UK, US, Australia and New Zealand has halved the number that would otherwise be available in Bangladesh, Myanmar, Afghanistan, Egypt, Syria, and Lebanon; while some other countries (Philippines, Pakistan, Sri Lanka, Liberia, Nigeria and Zambia) would have between five and eight times more psychiatrists/million population without emigration.²

The impact of international health worker migration on health

Academic literature spanning decades has documented the damage that the medical brain-drain does to health services in poorer countries.^{3,4} WHO reports have repeatedly drawn attention to the critical shortages of health workers across Africa, the Middle East and Asia.⁵ Most LMICs have much poorer health indices than OECD countries, and the WHO has estimated that countries with less than 23 health workers (doctors, nurses, midwives) per 10,000 population are unable to deliver essential health services.⁶ While the relationship between health personnel availability and health outcomes is complex, Graphs 1 and 2 show the inverse relationship between doctors per head of population and maternal mortality and in mortality in children under 5 years of age.



Graph 1. Inverse relationship of doctors per 10,000 population in each source country from whom the UK takes doctors versus maternal mortality rates in those countries.



Graph 2. Inverse relationship of doctors per 10,000 population in each source country from whom the UK takes doctors versus under 5 childhood mortality rates in those countries.

Africa has a global population share of 13.76%, and a 25% share of the global burden of disease, but only a 1.3% share of healthcare staff. Despite decades of medical training schemes, the doctor/population ratio has been deteriorating since the 1980s, when there was 1 doctor per 10,000 population in sub-Saharan Africa. By 2004, this had fallen to 0.2 doctors per 10,000, compared to 24 doctors per 10,000 in the US and 28 per 10,000 in the UK. (Box 1).

Impact on economic development

Recruitment of medical staff from LMIC is responsible not only for the loss of skilled personnel, but serves to inhibit economic development, especially in countries with the lowest Human Development Indices. Saluja et al. (2020) estimated economic costs for LMICs due to excess maternal mortality and under-5 mortality associated with migration of doctors were \$15.86 billion annually. As a percentage of gross national income, these are greatest in the WHO African region.

The ongoing skills-drain provides an enormous economic subsidy to high income countries, representing a flow of resources from poorly resourced healthcare systems to richer systems. As training costs of migrating professionals are typically heavily subsidised by their governments, countries like the UK benefit economically by avoiding the considerable costs of training adequate numbers of their own medical staff.

International workforce recruitment commitments

In February 2021, the UK Department of Health and Social Care (DHSC) published a Revised Code of Practice for International Recruitment.¹² It made a commitment that stated 'All international recruitment will be sensitive to local health and social care needs so that international recruitment from any country should not weaken local health and social care provision'. That commitment is blatantly not being followed at a national level. Whilst most recruitment in recent years was not carried out directly by the DHSC, but by individual service providers (whether in the public or private sector), and by specialist agencies, to whom recruitment is outsourced, the government still has the mandate to ensure national compliance with international commitments and norms. It also has the power to enact policies that will promote better practice and if necessary, ensure enforcement to curtail breaches of such commitments.

The UK is a signatory to the WHO Code of Practice on the International Recruitment of Health Personnel 2010, which discourages active recruitment from LMIC facing critical shortages of

Box 1
The impact of COVID-19

Since the start of the COVID-19 pandemic, OECD countries including the UK have expanded their recruitment of foreign health workers from LMIC still further,8 and the OECD warned in 2020: While the international recruitment of foreign health workers has been considered as a quick fix to address skills shortages in some countries during the Covid-19 crisis, it cannot be seen as an efficient or equitable solution. First, it does not address more structural imbalances between the supply of and the demand for health professionals. Moreover, given the global nature of the pandemic, it deprives sending countries-often characterised by weak health systems-of essential health workers when facing a major epidemic'. The pandemic demonstrated vet again the importance of having strong health systems in all countries. Wealthier countries would also benefit if LMIC have strong health systems, in the context of the increasingly global nature of public health, especially infectious diseases.

health workers. Further, signatories agreed never to recruit from the 57 (now 49) poorest countries, on the WHOWHO Health Workforce Support and Safeguards List.¹³ The Code of Practice instructs member states to create their own sustainable workforce for a more equitable global approach.¹⁴

In 2020, the OECD again called on destination countries to increase their domestic training and retention to avoid dependence on international recruitment. It called for international aid to help poorer countries build a sufficient workforce and strengthen health systems, and so reduce 'push factors'. These push factors include frustration at poor remuneration, few opportunities for career development, and poorly resourced infrastructure. 15 A systemic review of drivers of migration classified them at a macro- (global and national), meso- (professional) and micro-level (personal) factors. Remuneration and security were the most common macrolevel factors (83.2% and 58.9% of studies respectively), with career prospects (81.3%), a good working environment (63.6%) and job satisfaction (57.9%) most cited at a meso-level. Micro-level factors were family ties (61.6%) and improved quality of life (69.7%). 16 Of course, health workers are affected by the same wider social determinants of quality of life as anyone else, and poverty, poor infrastructure and services, insecurity and conflict, and poor prospects for their children have always been strong motivating influences on the decision to migrate. The reason why health workers migrate in such large numbers is simply that their skills and qualifications enable them to do so with relative ease.

Everyone has the human right to self-determination, to seek a better life elsewhere, to education and to labour rights, but no human right is pre-eminent. The right to health of populations residing in both the source and destination countries is also important and needs to be considered too. Individuals will make their own decisions in the light of their personal circumstances, but governments have an ethical duty to consider the right to health of both their populations and those of other countries.¹⁷

Do migrants return to their home countries with skills and experience to offer?

It has been argued that migration offers training and experience to people who then return to their source countries. When signing agreements to facilitate medical recruitment from LMIC into the UK, for example in an agreement with Kenya in 2021, ministers claimed there were benefits to the countries supplying personnel. It is possible that Kenya and the UK, in signing this agreement, argued that such a benefit was plausible, but in practice, the proportion of overseas doctors who permanently return to their source countries is vanishingly small. Recent GMC figures show that after specialist training, only 175 people returned to their source countries over the period 2016-2021, i.e. on average 35 a year. This is in stark contrast to the 85.860 people from LMIC licensed in the UK; and to the 19,473 recruited from LMIC in the last two years. Torres and Wittchen (2014) state that 'there is no strong evidence that Kenyan health professionals working abroad ever return home after having worked a few years abroad, in order to share their augmented medical expertise acquired abroad'.18

Remittances

International remittances clearly support provider countries financially. However, while remittances to Kenya in 2005 totalled about US\$ 500 million, ¹⁹ in that same year an estimated US\$ 3 billion was lost to the Kenyan economy annually because of emigration by health professionals. ²⁰ A study of 150 countries found that migration of highly educated personnel to the US, especially health workers, resulted in severe damage to economic

growth in the source countries² and the value of remittances fell far short of the cost of health worker losses.

Losing a doctor has a significant economic cost to that country. Evidence indicates Kenya loses US\$ 517,931 for every doctor and US\$ 338,868 for every nurse who emigrates. This calculation is based purely on the cost of education and the loss of that investment over a potential 35 year working life. It does not include the economic impact of lost health promotion, prevention, treatment and rehabilitation; the loss of supervisors, mentors, and role models; reduced functionality of the referral system; loss of employment opportunities for ancillary staff; or loss of tax revenue.

The Philippines, with whom the UK also signed a recent agreement, is an important example of a country that has specifically encouraged migration in order to maximise remittances. The income to the country is significant, and there is no fundamental reason why a country should not make use of human resources as a source of foreign income. In order to mitigate the loss of personnel, specific measures are in place to compensate for the loss of talent, for example training large numbers of nurses. But even here, there is considerable evidence of damage to the health system from the longstanding recruitment of nurses, and more recently doctors, to the UK and other OECD countries.²¹

Conclusion

International recruitment of medical staff is, in many instances, creating a subsidy from poor to richer countries, leading to serious financial losses and health system weakening in source countries. Such active recruitment is contrary to a number of international agreements. Systematic overviews of Skilled Health Worker agreements generally conclude that recipient countries benefit more from such agreements, with mitigation offered for loss of workers being inadequate.²²

The NHS has been warned for decades that it is not training sufficient health staff (an issue signalled by the Todd report on Medical Education in 1968). Medical school placements have lagged behind domestic need and available posts, and nurses were disincentivised financially from training when the NHS Bursary Scheme ended in 2017. The equitable solution to a shortage of health staff in the UK is to increase the number of domestically trained medical and nursing students²⁴ We welcome the announcement in June 2023 by the UK Prime Minister of the intention to double training places for doctors and almost double that of nurses as part of a 15-year NHS England health workforce plan.

Many factors in low-income countries encourage health staff to leave their home countries. Governments and professional associations in many LMICs do act to encourage trained professionals to remain in the local workforce. Some issue 'bonds' t requiring staff to work locally or a specified number of years after training. However, they could retain a more secure workforce by health system strengthening and sufficient investment, for example (in Africa) by fulfilling commitments like the Abuja Declaration to spend 15% of annual government expenditure on health. ²⁵ The Declaration also encourages Official Development Assistance for health, and we propose that such international investment should be used to strengthen local health systems, improving work environments in the long term, to enable those trained to serve their populations, and reduce the major global health inequities between richer and poorer countries that we see today.

Author statements

Ethical approval

None sought.

Funding

None declared.

Competing interests

None declared.

References

- OECD Health Working Papers 126. International migration and movement of doctors to and within OECD countries-2000. to 2018: developments in countries of destination and impact on country of origin. Organisation for Economic Cooperation and Development; 2021.
- Jenkins R, Kydd R, Mullen P, Thomson K, Sculley J, Kuper S, et al. International migration of doctors, and its impact on availability of psychiatrists in low and middle income countries. *PLoS One* 2010;5(2):e9049.
- Beine M, Docquier F, Rapoport H. Brain drain and human capital formation in developing countries: winners and losers. *Econ J* 2008;118(528): 631–52
- **4.** Mills EJ, Schabas WA, Volmink J, Walker R, Ford N, Katabira E, et al. Should active recruitment of health workers from sub-Saharan Africa be viewed as a crime? *Lancet* 2008;**371**(9613):685–8.
- WHO Global Atlas of the Health Workforce. Geneva: World Health Organization. 2020.
- WHO. The world health report 2006 working together for health. Geneva: WHO Press: 2006.
- Packer C, Labonté R, Spitzer D. Globalization and health worker crisis. Globalization and health knowledge network research paper. P18. University of Ottawa; 2007.
- OECD Contribution of migrant doctors and nurses to tackling COVID-19 crisis in OECD countries. Organisation for Economic Co-operation and Development; 2020.
- Lal A, Erondu NA, Heymann DL, Gitahi G, Yates R. Fragmented health systems in COVID-19: rectifying the misalignment between global health security and universal health coverage. *Lancet* 2021;397(10268):61–7.
- Asongu SA. The impact of health worker migration on development dynamics: evidence of wealth effects from Africa. Eur J Health Econ 2014;15(2): 187–201.
- Saluja S, Rudolfson N, Massenburg BB, Meara JG, Shrime MG. The impact of physician migration on mortality in low and middle-income countries: an economic modelling study. BMJ Glob Health 2020;5(1):e001535.
- DHSC. Code of practice for the international recruitment of health and social care personnel in England. Updated 11 November 2021. Department of Health and Social Care, UK.
- WHO Health Workforce Support and Safeguards List. Geneva: World Health Organization; 2020. https://cdn.who.int/media/docs/default-source/healthworkforce/hwf-support-and-safeguards-list8jan.pdf?sfvrsn=1a16bc6f_5 [Accessed July 2023].
- WHO Global strategy on human resources for health: workforce 2030. Geneva: World Health Organization; 2016.
- Witt J. Addressing the migration of health professionals: the role of working conditions and educational placements. BMC Publ Health 2009;9(1):1-5.
- Toyin-Thomas P, Ikhurionan P, Omoyibo EE, Iwegim C, Ukueku AO, Okpere J, et al. Drivers of health workers' migration, intention to migrate and nonmigration from low/middle-income countries, 1970–2022: a systematic review. BMJ Glob Health 2023;8:e012338.
- Labonte R, Schrecker T, Gupta AS. Health for some: death, disease and disparity in a globalising era. Toronto: Centre for Social Justice; 2005.
- Torres MAA, Wittchen U. Brain drain across the globe: country case studies. 2014.
- Mohapatra S, Ratha D, Xu Z. Remittance trends 2006. Migration and development brief. Washington, D.C.: World Bank Group; 2006. no. 2, http://documents. worldbank.org/curated/en/212281468137732041/Remittance-trends-2006 [Accessed Aug 2022].
- Kirigia JM, Gbary AR, Muturi LK, Nyoni, Sedoh A. The cost of health professionals' brain drain in Kenya. BMC Health Serv Res 2006;6:89.
- 21. Cheng MH. The Philippines' health worker exodus. *Lancet* 2009;**373**(9658): 111–2.
- **22.** Yakubu K, Durbach A, van Waes A, Mabunda SA, Peiris D, Shanthosh J, et al. Governance systems for skilled health worker migration, their public value and competing priorities: an interpretive scoping review. *Glob Health Action* 2022;**15**(1):2013600.
- Royal commission on medical education 1965-68 report. London: HM Stationery Office; 1968.
- **24.** The Health Foundation. *The king's fund and the nuffield trust.* London, UK: The Healthcare Workforce in England; 2018.
- WHO. The Abuja Declaration: ten years on. Geneva: World Health Organization; 2010.