GUEST EDITORIAL

Brain drain

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In this issue, three papers discuss the issue of the brain drain: of psychiatrists from Egypt and Nigeria, and of nurses from East Africa. They explore the complexities of professional migration and its impact on the health of populations in source and recipient countries; they also review how recommendations for changes in policy and practice might influence the so-called 'push' and 'pull' factors that aggravate the brain drain.

Migration in the context of the global shortage of staff

Migration of psychiatrists and psychiatric nurses is part of a long-standing scenario of health worker migration in the context of a global shortage of such workers. It is predicted that the current global shortage of 7.2 million health workers will increase to 12.9 million by 2035; shortfalls are greatest in sub-Saharan Africa (SSA), which bears 24% of the world's disease burden but has only 3% of the global health workforce (World Health Organization, 2006). Despite these shortages in low- and middle-income countries (LMICs), there is a long-standing flow of health workers to high-income countries as a result of major differences in salaries, working conditions, infrastructure, career development and research opportunities between poor and richer countries (Chen *et al*, 2004).

The emigration of health workers from poor countries is aggravated by rich countries that are seeking to improve their staffing numbers at a pace which is not met by their own training schemes. This imperative is being exacerbated by the ageing of populations in rich countries and by the increased specialisation of their workforce, both of which factors are driving up demand for health workers. This has led to the situation where, for example, in the UK over a third of registered doctors are not originally from the UK and nearly half of nurses are from overseas. Current data from the UK General Medical Council (GMC) (taken in June 2016 from its website at http://www.gmc-uk.org/doctors/register/search_stats.asp) shows that out of 255 141 doctors registered in the UK, only 173 275 (63.3%) trained in the UK, while the remaining 36.4% is made up of: 9.2% from India; 3.8% from Pakistan; between 1% and 2% each from South Africa, Nigeria, Ireland, Italy, Greece, Egypt and Germany; and under 1% each from Sri Lanka, Romania, Iraq, Poland, Australia, Sudan, Spain, Hungary, Czech Republic and Bulgaria. This compares with 22% of nurses and 14% of the general employed workforce being foreign born. Thus, the UK population relies for its standards of healthcare on health professionals trained elsewhere, and these foreign-born health professionals undoubtedly provide a cultural richness and expertise that are also valuable in meeting the needs of the UK's diverse population.

Costs and consequences of migration

One study estimated that Kenya loses US$517 931 for every doctor and US$338 868 for every nurse who emigrates (Kirigia *et al*, 2006). MEDACT calculated that it costs £220 000 to train a doctor in the UK and £125 000 to train a nurse; this implies a saving to the UK of £65 million from the employment of 293 Ghanaian doctors and £38 million from the employment of 1021 Ghanaian nurses alone, a total sum that exceeds annual UK aid to Ghana (Mensah *et al*, 2005).

Migration of health workers represents a skills drain for source countries, the consequences of which are now widely recognised by policy makers (House of Commons International Development Committee, 2004). This skills drain has a huge opportunity cost for LMICs (Eastwood *et al*, 2005) and is a perverse subsidy to the UK. The flow of resources from users of poor-country healthcare systems to users of rich-country systems subsidises the latter, because the migrating professionals were trained in the poor country, whether at public or at private expense. The UK's National Health Service is using resources it has not created through investment. The subsidy is perverse and unjust because it worsens the inequity in access to healthcare at a global level (Mensah *et al*, 2005).

The migration of health workers has implications for the right to health of the populations living in the countries of origin and hence their rights to life, work and education (Mensah *et al*, 2005). It may seem reasonable to restrict their ability to travel to work abroad, but that coercive approach to prevent health workers leaving may be in contradiction to the right to freedom of movement (International Covenant on Civil and Political Rights, article 12.2; Universal Declaration on Human Rights, article 13; African Charter on Human and People's Rights, article 12 (2)). Thus there are conflicts between the human rights of migrant health workers and the human rights of the populations of their countries of origin, and between the human rights of the countries of origin and the human rights of the destination countries. Policy responses to these dilemmas inevitably involve implicit or explicit hierarchies between the human rights of different groups (Mensah *et al*, 2005).

Furthermore, global health security, as it is affected by preparation for and the early detection of pandemics and other emergencies, is endangered by weak health systems. The dangers

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are exemplified by the recent outbreak of Ebola in West Africa, which was able to spread so rapidly because of weak health systems. Those systems would have been significantly stronger had it not been for health worker migration to the UK.

As well as the loss of clinical staff, there has been an equivalent debate about the loss of research talent in LMICs and the importance of creating mechanisms to retain promising researchers in their own countries (Council on Health Research for Development, 2006).

Addressing the problem

The World Health Organization's Global Code of Practice on the International Recruitment of Health Personnel was adopted by the 63rd World Health Assembly on 21 May 2010 (World Health Organization, 2010). The Code recognises the interconnectedness of human resources for health actions in national and global health labour markets, and therefore the need for a systemic approach to health workforce development. However, it recommends that member states discourage active recruitment from LMICs facing critical shortages of health workers, and that steps are taken to create a sustainable health workforce. Member countries ought to provide effective workforce planning, education, training and retention strategies that will reduce their need to recruit migrant health personnel. They should encourage and support health personnel to utilise work experience gained abroad for the benefit of their home country. Accordingly, the Code seeks to redress the imbalances in the supply of health workers around the world by raising important issues of human rights, including access to health, equity and social justice. In the context of migration, the Code encourages receiving countries to consider the impact of their policies and actions on the countries from which health workers migrate.

There have also been strong calls for mechanisms of compensation to donor countries, including a restitution fund to strengthen the health systems in LMICs and to increase the remuneration of local health workers (Chen *et al*, 2004; Mensah *et al*, 2005). Mackey & Liang (2013) argued that high-income countries should assume responsibility for the costs they have inflicted on resource-poor populations and should provide equitable resource sharing to those countries most adversely affected by shortages of healthcare workers. They argue for the establishment of a global health resource fund, in conjunction with an international framework for health worker migration. The objective would be to provide global governance to encourage equitable migration pathways and to establish data collection mechanisms in order to provide a clearer picture of how those pathways are changing over time.

The House of Commons International Development Committee (2004) urged the Department for International Development to focus on health systems strengthening in LMICs and to work with the Department of Health to reduce recruitment from LMICs, including in private care homes.

Table 1

Numbers of foreign-born psychiatrists from key source countries registered in the UK, 2008 and 2015

Source country	2008	2015
India	1235	1851
Pakistan	181	586
Egypt	100	146
Sri Lanka	23	112
Ghana	16	23
Nigeria	214	554
South Africa	196	233

I gratefully acknowledge the assistance of Paul O'Connor and Joanna Carroll in the compilation of the information for this table".

Source countries can continue their efforts to limit emigration by improving working and living conditions, and by diversifying the training programmes and hence their clinical skill mix to include cadres that would not be recognised in other countries and hence would be less vulnerable to international migration. They should also encourage the return of migrant health workers to their home country. High-income countries should decrease their reliance on foreign-trained workers by increasing their investment in the education of domestic health professionals, and should align governmental educational spending with employment opportunities. They should desist from hiring from countries with weak health systems.

The urgency of the situation is clear; there has been little or no progress in stemming the flow of inward migration in recent years. Table 1 shows dramatic increases in the psychiatric brain drain from key countries to the UK between 2008 (Jenkins *et al*, 2010) and 2015.

Conclusion

A change in national government policies in rich countries is long overdue. That change should address equity in global healthcare, not only to address global human rights to health but also to achieve global health security. The UK, in particular, needs to ensure its training systems are producing adequate numbers of psychiatrists and psychiatric nurses to meet its perceived workforce needs. The UK should desist from its historic extensive and habitual reliance on recruitment from poorer countries. Looking forward, it is hard to envisage any voluntary change in practice; only when rich countries assume some responsibility for reimbursing the country of origin for each foreign-born health worker does it seem the flight of skilled health workers from LMICs to rich countries might be stemmed.

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THEMATIC PAPER

Health professionals in Kenya: strategies to expand reach and reduce brain drain of psychiatric nurses and psychiatrists

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This paper highlights the extent of the brain drain in relation to human resources for health (HRH) that is currently challenging Kenya, and suggests strategies that have the potential to change current working environments and improve HRH retention rates. Governments in partnership with health professional bodies and regulators could improve the working conditions for psychiatrists and mental health nurses: by promoting career choices in mental health; by providing accessible professional development opportunities; and by easing workload pressures by expanding service reach through thoughtfully planned and delivered task-shifting to primary care. While these strategies have the potential to make a significant difference, the evidence suggests a brain drain will continue as long as working conditions remain sub-optimal and global HRH shortages persist.

Much has been written about the highly complex and seemingly insurmountable issue of the brain drain of health professionals – the outward flow of skilled health professionals and the academics who teach them. The situation is particularly acute for mental health services in Kenya, where the numbers of specialist psychiatrists and mental health nurses fall well beneath the population ratios recommended by the World Health Organization (WHO). Much has also been written about current global shortages in human resources for health (HRH), resulting from factors such as the higher pay and better working conditions in higher-income countries, although it should be noted that accurate HRH mental health data are difficult to source and verify.

Brain drain is a long-standing issue in Kenya. A search for contributing factors has been increasingly sought over the past two to three decades (Yonga *et al*, 2012; Odhiambo, 2013). Kenya has invested heavily in increasing its HRH but ratios still remain below the minimum levels recommended by the WHO (Oywer, 2011). It is difficult to source reliable and comparable data, but there is sufficient information available to confirm that Kenya remains on the list of countries identified by the WHO as having critical shortages in HRH, with recently reported ratios of just 23 doctors, nurses and midwives per 100 000 population (Otieno, 2016). Kenya is also challenged by the poor distribution of these resources across the country; there is a 13-fold difference between the highest- and lowest-resourced county.

Reportedly, one in every five nurses trained in Kenya applies to emigrate (Otieno, 2016). Figures for doctors are equally concerning, with a reported 30–40% of the 600 medical graduates leaving on completion of their internship, every year (Muraguri, 2015). Kenya also suffers a critical shortage of mental health nurses. Of the few that exist, the number of new graduates is not keeping pace with the numbers lost to the brain drain or retirement (Oywer, 2011).

The financial impact of the brain drain is substantial; in 2006 it was estimated that the total cost of educating each medical doctor, from primary school through medical college, was US$65 997. An estimated lost return on investment of approximately US$517 931 was incurred for every doctor who then emigrated. The total cost of educating a nurse from primary school to nursing graduation was estimated to be US$43 180, with an equivalent loss on investment to migration of US$338 868 (Kirigia *et al*, 2006). In response to these figures, Kenya scaled up the production of HRH. Consequently, there has been a reduction in the brain

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