Shortage of Healthcare Workers in Developing Countries—Africa

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Loss of health professionals from sub-Saharan Africa: the pivotal role of the UK

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The already inadequate health systems of sub-Saharan Africa have been badly damaged by the emigration of their health professionals, a process in which the UK has played a prominent part. In 2005, there are special opportunities for the UK to take the lead in addressing that damage, and in focusing the attention of the G8 on the wider problems of health-professional migration from poor to rich countries. We suggest some practical measures to these ends. These include action the UK could take on its own, with the African countries most affected, and with other developed countries and WHO.

The movement of health professionals around the globe is not new. Medicine has always had its "centres of excellence"—the island of Kos, Rome, Alexandria, Padua, and so on—to which doctors have flocked, eager to advance their skills and understanding.[1] Migration was usually not permanent, so medical advances would be disseminated as a result. In the 21st century, many migrant health professionals probably intend to return to practise in their own countries. Indeed, evidence exists that some are doing so; with new opportunities opening up for highly qualified professionals in India, for example.[2] The problem for most countries, particularly in sub-Saharan Africa, is that many do not.

In recent years, international migration of health professionals has not only grown considerably, but is often permanent. Walt[3] believes that the greatest challenges to health stem from the global liberalisation of trade with the resultant movement of goods and services (including health workers) within the world economy. With the exception of a few countries, such as India and the Philippines, which already have collaborative health-worker migration schemes, migration is seriously affecting the sustainability of health systems in many developing countries. Such countries clearly cannot compete on equal terms on the international market for health professionals, so permanent migration from developing to developed countries is common. A 1998 UN Conference on Trade and Development/WHO study estimated that 56% of all migrating doctors flow from developing to developed nations, while only 11% migrate in the opposite direction; the imbalance is even greater for nurses.[4]

The serious consequences that result from loss of health professionals for some countries are becoming increasingly recognised and are now being widely discussed in the public media. What has not been so widely recognised is that the effects are most severe for the English-speaking countries of sub-Saharan Africa. The UK has a special role in both the genesis of the problem and its solution, since large numbers of the migrating health workers come to the UK. One obvious issue is the "vacuum" of the large numbers of job vacancies in the UK, resulting from the inadequate supply of UK-trained doctors and nurses. Data from 2002 show that among the 11 234 new registrations with the General Medical Council nearly half were from non-European Union countries.[5] The pattern is similar for nurses. In 2002–03, one in four "overseas" (ie, non-European Union) nurse registrants were from the "proscribed" list of developing countries appended to the Department of Health Code of Practice for International Recruitment. It is current policy that these countries will not be targeted for active recruitment by the National Health Service (NHS).[6]

The problem for sub-Saharan Africa

Numbers of health professionals

The figure shows that, although some other countries—Nepal, Bhutan, Papua New Guinea, Afghanistan, Cambodia, and Indonesia[7]—seriously lack doctors, the problem is especially severe in sub-Saharan Africa. Although many of these countries have made considerable efforts to train their own doctors, the rate of loss by migration often outstrips production. In sub-Saharan Africa, 24 of the 47 countries have only one medical school; 11 have no medical school at all.[8]

It has been estimated that 60% of the doctors trained in Ghana in the 1980s have left the country; indeed, 200 doctors left in 2002 alone (Sagoe K, Ghana Ministry of Health, personal communication). In 2003, UK work permits were approved for 5880 health and medical personnel from South Africa, 2825 from Zimbabwe, 1510 from Nigeria, and 850 from Ghana, despite these countries being included among those proscribed for NHS recruitment.[9]

Patterns of migration

Migration, at least in the context of Africa, is nearly always towards a country with more doctors than the source country. A "medical carousel" has been described, around which doctors continuously rotate to countries offering a better standard of training, more attractive salaries and working conditions, and a higher standard of living. Thus, Tanzanian, Kenyan, or Nigerian doctors moved to South Africa (no longer true today—see below), South African doctors moved to the UK, British doctors moved to Canada and the USA, and Canadian doctors migrated to the USA, producing a circular movement

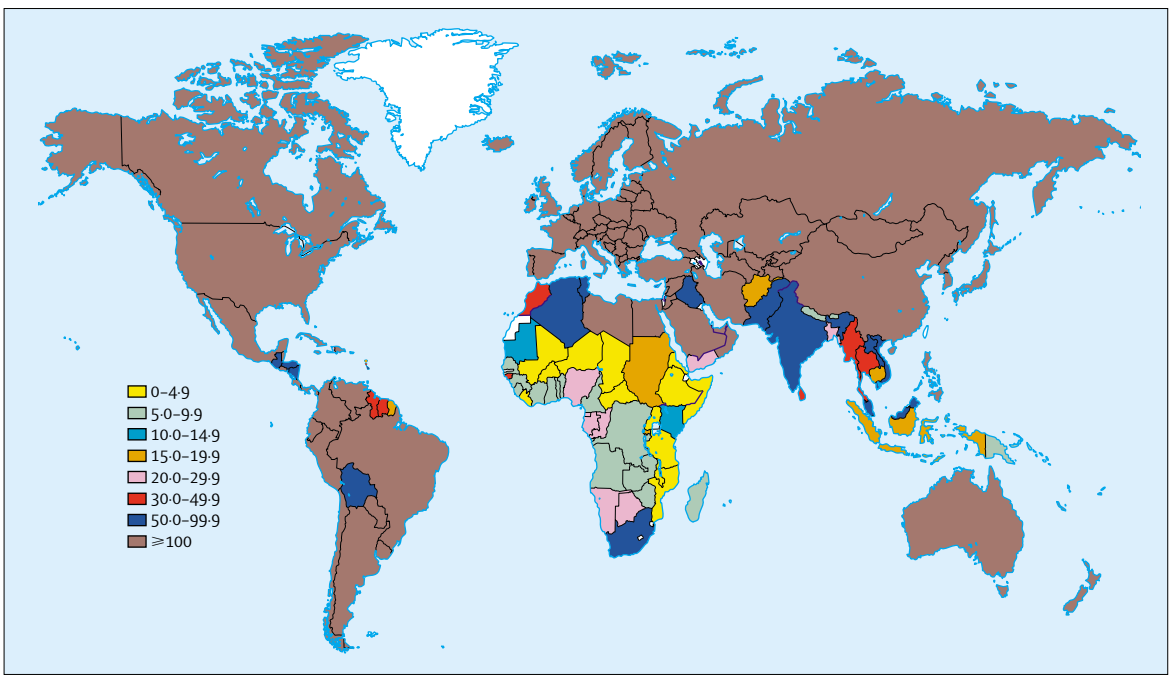

Figure: **World distribution of doctors per 100 000 population in 2004**[7]

around the globe.[10] But who on this medical merry-go-round arrived back in Tanzania (where there are currently 2·3 doctors per 100 000)?[7] The answer is very few doctors indeed, so Tanzania was, and is, left with a severe shortage. The medical carousel unfortunately does not turn full circle, as it has in the past,[11] so the poorest nations experience all drain but no gain.

Choice of destination country

An important factor for sub-Saharan Africa is that all medical schools run their courses, and use textbooks, in a European language. Not surprisingly, those who learn in English (the majority) find it easier to migrate to an English-speaking country, and those learning in French or Portuguese will find it easier to move to countries using these languages. In practice, English is becoming an increasingly international language, so the loss of health professionals from developing countries is an issue particularly for the English- speaking world. It is interesting to note that in France—another country whose language is widely used in undergraduate medical education—only around 5% of practising doctors qualified overseas.

The degree to which migration of health professionals from both developing and developed countries is driven, both directly and indirectly, by North American demand is clearly an important issue but lies outside the scope of this paper.

Effects on source country

Doctors and nurses are the linchpins of any health-care system. In countries already severely deprived of health professionals, the loss of each one has serious implications for the health of the citizens. The idea that repatriated overseas earnings could make up for the deficiency is unrealistic, as there is no way of ensuring that such repatriated income will find its way into investments in health care, particularly without the professionals to champion and lead such improvements. Indeed, senior officials in Ethiopia, Nigeria, and Uganda have cited shortage of health personnel as the main constraint to mobilising responses to health challenges.[12]

The UN Conference on Trade and Development has estimated that each migrating African professional represents a loss of US$184 000 to Africa,[13] and the financial cost to South Africa, 600 of whose graduates are in New Zealand, is estimated at $37 million.[14] Yet Africa spends $4 billion a year on the salaries of foreign experts.[15] In Ghana, as elsewhere, the employment of Cuban doctors (who often need support from interpreters) is widely seen as a drain on resources that could be used to train and retain Ghanaian health professionals.

Medical students and young doctors in training need motivated, well-educated, articulate champions of both the health service and their specialty. Loss of well-trained, experienced personnel is perhaps the most serious aspect for the future in many countries, and one that monetary compensation cannot replace. Transfer of funds might temporarily assuage the guilty conscience of the receiving country, but does little to replace a doctor who has taken 5 years to train and is a teacher and role model to students and junior doctors.

One aspect of migration sometimes forgotten is that the loss of a health worker from a large city in

sub-Saharan Africa often ultimately affects a rural population. A vacancy in a hospital in a city with colleagues and further education may be a welcome career opportunity for a doctor working in a relatively isolated district hospital. Often, however, the reason doctors move back to the big cities from remote facilities is the lack of good quality schools for their children in rural areas and their inability to support two homes if the doctor's family remains in the city. In other words, in-country migration is another aspect of out-of-country migration. The overall number of doctors in Ghana is nine per 100 000 population.[7] Most are in the south and the north is very poorly served. There is, for example, no paediatrician north of Kumasi—ie, in the upper two-thirds of the country.

The health services of a continent already facing daunting challenges to the delivery of minimum standards of health care are now also being overwhelmed by HIV/AIDS. An investigation commissioned by the South African Health Ministry in 2002 concluded that HIV/AIDS was seriously affecting their health system through "loss of staff due to illness, absenteeism, low staff morale, and also through the increased burden of patient load".[16] Initiatives to tackle HIV/AIDS, such as the WHO 3-by-5 target—aiming to provide lifelong antiretroviral treatment for 3 million people living with HIV/AIDS in poor countries by the end of 2005—require additional health workers; such targets, therefore, are likely to be seriously threatened by the continuing losses.[17] Indeed, the authors of a recent study[18] estimated that an additional 1 million extra workers will be needed in sub-Saharan Africa to deliver the health services necessary to meet the Millennium Development Goals by 2015.

Benefits for destination countries

In many countries, health professionals from overseas constitute a substantial proportion of the total workforce. In the UK, for example, 31% of practising doctors and 13% of nurses were born outside the UK: for London the corresponding values are 23% and 47%.[15] Furthermore, half the recent expansion of the NHS—8000 of an additional 16000 staff—qualified abroad.[19]

The migration of health professionals from developing countries provides a great financial benefit to the economy of developed countries. In the UK, for example, each qualifying doctor costs £200 000–£250 000 and 5–6 years to train. So every migrating doctor arriving in the UK is in effect importing this sum—or, in economic terms, appropriating human capital at zero cost—for the use of the UK's health services. Furthermore, the effect is immediate rather than in 5 years' time.

Reasons for migration

Published work on the migration of health professionals documents the push and pull factors that affect decisions to migrate.[20] A wide range of factors are clearly at work, affecting both temporary and permanent migration (panel 1).

In addition to these factors, national policies and international agreements such as General Agreement on Trades in Services (GATS) Mode 4—which may become more important in the future—can also be an influence. For example, the World Bank has in the past proposed that "health services are another area in which developing countries could become major exporters by temporarily sending their health personnel abroad".[21] Nor have essential public health services been exempted from public expenditure cuts, either as a condition of World Bank/International Monetary Fund assistance or as a consequence of some governments in sub-Saharan Africa giving greater priority to other spending, including military expenditure. Countries such as India and the Philippines have made agreements with the UK facilitating the employment of their nationals as health professionals.

What has been done?

Existing measures or codes of practice

In an illuminating report last year, sponsored by the UK's Department for International Development (DFID),[22] James Buchan suggested that the UK Department of Health's Code of Practice for recruitment has very significant weaknesses and loopholes. Principally, the problem is one of ease of circumvention by various indirect means, and the code's failure to cover private employers and recruiting agencies. Measures intended to make good some of these deficiencies were announced by the Health Minister, John Hutton, in August, 2004.[23] However, it is difficult to believe that strengthening the code on its own will overcome the demand from UK employers for more staff to run their hospitals. Unfortunately, it is this demand that appears to be a

Panel 1: Push and pull factors

Push factors

- Lack of opportunities for postgraduate training
- Underfunding of health-service facilities
- Absence of established posts and career opportunities
- Poor remuneration and conditions of service, including retirement provision
- Governance and health-service management shortcomings
- Civil unrest and personal security

Pull factors

- Opportunities for further training and career advancement
- The attraction of centres of medical and educational excellence
- Greater financial rewards and improved working conditions
- Availability of posts, often combined with active recruitment by prospective employing countries

principal cause of the drain of health professionals from English-speaking sub-Saharan Africa.

The Commonwealth Secretariat's Code of Practice for the International Recruitment of Health Workers represents a wider international effort in tackling the same issue.[24] Buchan notes in his report[22] that the UK has not signed this agreement, apparently because of the late addition of clauses related to the possibility of compensation for source countries; Canada and Australia too have not signed the agreement.

More radical options

Superficially, a compelling case exists for direct financial compensation for developing countries whose health professionals (usually trained at public expense) have migrated to developed countries. There would be the cost of 5 years' undergraduate medical training as well as compensation for the loss of a fully trained doctor who would be a potential role model and teacher. However, financial compensation would not rectify the problem, and in any case there is little immediate prospect of the UK or other developed country agreeing to direct compensation.

Restriction on freedom of movement is another unsatisfactory proposal. Practically and ethically, it is always difficult to restrict freedom of movement of individuals, and to try to limit their wish to gain experience in other parts of the world, although the training of the health worker has usually been paid for by the citizens of their country.

From time to time it is suggested that the countries of sub-Saharan Africa should only half-train their doctors—to a standard that would severely limit their prospects for employment overseas. Even if half-training were both practicable and acceptable it is clear that half-trained doctors would also be recruitment targets, and the problem of health-worker migration would remain. Irrespective of the degree of training achieved as a health professional, individuals will be able to find positions in a UK health facility, and be lost to their country. Indeed, an auxiliary care assistant with very basic training could obtain employment in a UK nursing home tomorrow. Panel 2 shows that Ghana's loss of health workers in 2003 included almost as many auxiliary nurses as fully trained nurses, and many doctors. It is likely that most of these health workers left Ghana, although some will have been re-employed within the country.

Panel 2: **Numbers of health professionals leaving their jobs in Ghana in 2003**

Doctors	166
Dentists	3
Medical assistants	26
Professional nurses	583
Auxiliary nurses	449

Source: Sagoe K, Ghana Health Service, personal communication.

Our reservations about half-training do not apply to medical assistants. These health professionals, who are usually nurses with further training, are widely and very successfully employed in the countries of sub-Saharan Africa, in some of which they are essential for the maintenance of their health systems.

How could we slow the flow and mitigate the effects?

The UK, as a major beneficiary of health professionals from sub-Saharan Africa, has a responsibility to give a lead in tackling the problem of health professional migration, and has exceptional opportunities to do so in 2005. The measures we suggest are aimed at restriction of both pull and push factors. Some strategies are specific to the UK; others would require joint agreement and bilateral action between the UK and the African countries most severely affected. Important steps also need to be taken in collaboration with other developed countries and WHO, and could be initiated in the context of the G8's focus on Africa.

What more could the UK do unilaterally?

Increase training in the UK

We have pointed out above that almost half the recent expansion of NHS staffing came from the recruitment of health professionals trained outside the UK and Europe.[19] The UK's chronic need to recruit doctors, nurses, and other health professionals from overseas is currently increasing, by contrast with the situation in European countries of similar size to the UK. In France and Germany, for example, the proportion of practising doctors who trained overseas is ⩽5% (UK >31%).[25] France, Italy, and Germany have many more doctors per 100 000 population than the UK (Italy 606, Germany 362, France 327, UK 166).[7] Indeed, in Italy and Germany some medical professionals are now unemployed. It is not surprising, therefore that overseas doctors make up such a small proportion of their medical workforces.

The need to train more doctors in the UK is now urgent. For many decades, an unacknowledged dependence on overseas doctors has existed, and the flow has never shown signs of slowing. Therefore, any underestimate of the future need for doctors is very unlikely to have adverse consequences for the UK population. Recently, the capacity of UK medical schools has been increased substantially.[26] Whether this expansion will be sufficient to reverse the UK's long-standing dependence on doctors trained overseas remains to be seen. Indeed, the additional doctors might simply be used to staff continuing expansion of the NHS. Increases in early retirement of doctors, together with the extension of the European Working Time Directive to more senior doctors, will add to the problem. The UK's

chronic dependence on nurses and other health professionals trained overseas also needs reassessment.

We urge the Medical Workforce Standing Advisory Committee to clarify in its future deliberations what increases in the numbers of doctors and other health professionals in training are necessary to eliminate the UK's dependence on recruitment of health professionals from sub-Saharan Africa over a period of 10 years. Without such clarification, it seems unlikely that the UK will be able to structure its medical workforce in a way that avoids serious continuing damage to health provision in sub-Saharan Africa.

Increase aid and technical assistance from the UK

Evidence is emerging about the factors that affect the retention, migration, and return of health professionals in the countries of sub-Saharan Africa, much of which is contained in reports sponsored by DfID.[27] The UK is well-placed to advise and assist in strengthening measures encouraging health professionals to stay in or return to their original countries. The costs to the UK are likely to compare very favourably with those that would have been incurred in the training of doctors in the UK, had there not been such immigration of health workers.

We suggest that new resources be made available to DfID for the creation of bilateral ring-fenced funds for the African countries most severely affected by loss of their health professionals to the UK. These funds would be directed towards specific measures agreed with each country to assist in recruitment and retention of health professionals, especially in rural areas (eg, assistance with imaginative housing and transport incentives), and to improve in-country postgraduate training programmes.

Very recently, DfID has announced an encouraging "first step in Britain's pledge to increase aid to Africa in 2005".[28] A 6-year £100 million programme of support to the health service in Malawi (ranked 198 out of 198 countries listed by WHO, with 1·13 doctors per 100 000 population[7]) will include investment in "better training and higher salaries for doctors, nurses and other health workers". If this initiative can be made effective and is replicated elsewhere in sub-Saharan Africa by the UK and other donors, it could help to reduce the rate of migration of health workers.

Restrict duration of UK training for health-workers from proscribed countries

An example has been set by South Africa (69·2 doctors per 100 000 population),[7] which has devised policies to avoid being a magnet for doctors coming for training from other parts of sub-Saharan Africa—most of which have fewer than 20 doctors per 100 000 population. One such policy is to restrict the duration of visas granted to doctors (and other health professionals) to the duration of the course of training. Many African doctors who go to Germany for training do return home because their period of training has come to an end and their visas have expired.

We believe that the UK can do more to follow these examples. The Home Office could work with the Department of Health and the professional registration groups to ensure that temporary work permits and registrations for health workers from proscribed countries do not become permanent without exceptional reason.

Joint action with African countries

Action to reshape and strengthen national incentive schemes

In common with many developing countries, governments in sub-Saharan Africa have attempted, with limited success, to introduce schemes designed to retain the services of their health professionals, and to attract those abroad to return. One such scheme is to impose conditions on new graduates, such as service in rural areas. This has been a method favoured by the government of South Africa who have introduced a Certificate of Need both for newly trained doctors and for doctors returning from abroad. This means that there will be a stipulation that the doctor works in a needy area. Furthermore, recognition by the Health Professions Council of South Africa of overseas training now depends on the doctor having undertaken a spell of practice in an undeveloped area where infrastructure is lacking. This is clearly desirable for a population in need of medical services but may cause a returning South African trained doctor to postpone his return, possibly permanently.

Bonding schemes, in which the health worker agrees before starting training to work for a number of years within the country, are another possible strategy. This system has been tried in Ghana as a method of retaining nurses but with limited success. Schemes of special non-salary allowances and benefits for key workers have also been proposed.

Recent findings[22] suggest that some of these schemes could be successful if strengthened and better funded. Governments and health professionals in Africa must take the lead, but the UK is in a position to provide important support in some areas.

We believe that the UK should consult bilaterally with the African governments and the professional groups principally affected to help bring together the best local and UK expertise to devise improved incentive schemes for recruitment and retention, with the UK providing financial and technical assistance for specific elements. For example, while it is usual for local governments to fund salaries and related benefits, it might be appropriate for the UK to help fund the cost of transport and support housing incentives for health workers in rural areas.

Health professionals already working in the country will be able to assist in devising practical and locally effective incentives. Experience in Ghana, for example,

Panel 3: Housing

Provision of government-owned job-related housing
A method for attracting and retaining staff has been the provision of government-owned housing, but usually only in towns and cities. A drawback is that on retirement the doctor will usually be expected to vacate the residence within 3 months. After a lifetime of service such individuals may not have a house of their own, and so may have to return to their village and rent a room from relatives. It is easy to see how a specialist in training, who has not decided whether or not to migrate but seeing such an eventuality befall one of their role models, may decide that migration is the most sensible option.

Pressure on governments to sell residential housing
In some countries the World Bank has advised that government-owned housing should be sold, which can have a disastrous effect on recruitment and can threaten the availability of accommodation for doctors already in service. It also removed a means by which countries can retain its doctors.

What is the most effective strategy?
Government-owned job-related housing is useful in the short term. In the longer term it is probably more effective to assist doctors and other key staff in purchasing their own house during their working lives through the provision of innovative subsidised housing schemes—a form of non-tradeable benefit. This strategy, unlike a salary increase (with its knock-on effects on other workers), could be attractive to both health workers and governments.

suggests that the provision of transport for nursing staff in rural areas can have a substantial effect on motivation and retention.[29] Assistance with accommodation is another crucial issue (panel 3). Provision of flexible and transferable pension schemes is another. With technical advice where needed, and modest funding support, it should be possible to devise imaginative and more effective incentives (accruing with length of service and transferable within the countries in question, if not internationally).

Similarly, there could be scope for some countries to manage problems at their end of the recruitment process by establishing local agencies. The agency could contract to provide health professionals to developed country employers on, for example, 2–3 year contracts. Costs could be covered by charging fees similar to those charged to employers by recruitment agencies. There could be advantages to individual doctors, nurses, and other health professionals in terms of access to work permits and visas, and in the contracts they could negotiate through their governments in collaboration with NHS hospitals, rather than direct with employers. Nurses' organisations in the Caribbean are reported to have pioneered schemes of this kind.[22] An important outcome measure would be to assess the proportion of individuals who returned to their home country.

In-country postgraduate and specialist training

The absence of in-country postgraduate education is clearly a factor in the emigration of health professionals. Ghana is one country that has tried to tackle this problem by establishing in-country postgraduate facilities. The Ghana College of Physicians and Surgeons was inaugurated in December, 2003, and opened by the President of Ghana, John Kufuor. Medical colleges already exist in several African countries and they are also losing health workers, as in South Africa where postgraduate education and training is well established. Establishment of new colleges is clearly only a part of the educational effort.

We believe that there are at least two ways in which the UK is well-placed to make a contribution. First, the UK has substantial experience in medical education and health services in sub-Saharan Africa. One example is the Tropical Health and Education Trust,[30,31] established by Eldryd Parry (panel 4). Unsurprisingly, the work of this group is better known in Africa than in the UK. In Uganda, Malawi, Zimbabwe, and other countries of sub-Saharan Africa, the University of Bristol, in collaboration with the Tropical Health and Education Trust, runs annual teaching modules for medical undergraduate and masters programmes. Second, several UK hospitals and teaching centres have found mutual advantage in establishing working links with similar institutions in Africa (panel 5).[32] If encouraged and made more numerous, possibly with pump priming from DfID, these links can make a real contribution to postgraduate health training in countries vulnerable to the loss of health professionals to the UK.

Panel 4: The Tropical Health and Education Trust

- Works towards the goals of overseas partners—medical and nursing schools and government—in teaching, continuing education, service, or research
- Agrees long term, low cost, and sustainable programmes of staff and institutional development
- Strengthens local training, but is prepared to use targeted overseas skills training when necessary
- Ensures that training is designed so that, wherever possible, the poorest rural people benefit because their health workers have acquired additional skills
- Develops and catalyses links between UK and overseas hospitals or any overseas institution that is responsible for training health-care workers
- Promotes best practice for links, in their design, operation, monitoring, and evaluation, and in measurement of outcomes

http://www.thet.org

We suggest that DfID, in consultation with non-governmental organisations such as the Tropical Health and Education Trust, be tasked with taking the lead in discussions with the African countries principally involved. The aim would be to identify achievable and sustainable proposals for increased in-country postgraduate training for health professionals. The UK would offer financial and technical assistance where appropriate, and help to canvas additional official support within Europe and the wider international community.

Once these requirements are clear, we also suggest that the UK government, through DfID and the Department of Health, promotes the establishment of additional mutually advantageous working links between UK centres of expertise, and hospitals and teaching centres in English-speaking sub-Saharan Africa.

Action with other developed countries and WHO

An obvious but crucial factor driving the emigration of health professionals from developing countries is the widespread availability of jobs in the health sectors of developed countries, some of which themselves lose health professionals to higher-bidding developed countries. One way to limit the damage to the most vulnerable developing countries is to ensure that all developed countries train sufficient numbers of health professionals to maintain at least their own national requirements.

In our view, urgent consultation is needed between the UK, relevant EU countries, the USA (where more than 23% of physicians were trained outside the country, including more than 5000 doctors from sub-Saharan Africa[8]), Canada, Australia, and New Zealand, and WHO about the need for norms for the minimum numbers of health professionals in training in developed countries. These standards would ideally be referenced to the desired level of national health care provision, or, alternatively, gross domestic product per person. Without such internationally agreed minimum training targets for developed countries, the most vulnerable countries will continue to lose a large proportion of their health workers. At the same time, some developed countries, such as the UK, will continue to lose their own health professionals to other developed countries, not least to the USA, thereby fuelling their own need to recruit from developing countries.

Panel 5: **Components of a successful link**

- Regular personal contact between individuals from both groups
- Mutually agreed, locally relevant aims, which might include clinical priorities, teaching programmes, research objectives, or staff development, or a mixture of all four
- Clear written guidelines, preferably at institutional level, as to how the link will be fostered and supported
- Acceptance that the scope of the collaboration will not be limited by the priorities of funding agencies in developed countries
- Bilateral annual visits
- The vision of a long time scale (>10 years) with a view to a lasting collaboration, not a transient one
- Training of individuals from developing countries taking place in their own country as much as possible
- Ability to respond to a changing environment at either end
- Involvement of nurses and other health workers in the collaboration
- Consider honorary contracts for individuals taking part in established links; these can strengthen the link
- Early planning as to the means of securing future funding
- Independence from commercial sources of funding, avoiding possible future conflicts of interest and maintaining ability to publish the results of research
- Foster the development of other links and contribute to an international philosophy of links in general

Conclusion

We have attempted in this paper to focus attention on the problems UK recruitment of health professionals is creating for the countries of sub-Saharan Africa, and to suggest measures to radically reduce the migration. We believe our suggestions to be achievable, uncontroversial and capable of early implementation. Experienced health professionals and administrators in Africa, in the UK, and internationally will have the knowledge and skills to tackle the problems of implementation. First, there is a need for the concerted political will and funding support that will allow them to do what is necessary. The UK's chairmanship of the G8 in 2005 and its close involvement with the Commission for Africa provide ideal opportunities for progress. The UK also urgently needs to review why, in contrast to most European countries, it continues to rely on developing countries (particularly Commonwealth countries) to train such a high proportion of its health professionals. At the same time, we recognise that the UK/sub-Saharan Africa problem is just one dimension of a much wider and more complex international predicament. Developed countries and WHO urgently need to agree criteria for mimimum national health training targets for all developed countries so that continuing loss of health workers from developing countries is brought under control.

Contributors

All authors contributed to the writing and revision of the manuscript. R E Conroy constructed the map.

Conflict of interest statement

We declare that we have no conflict of interest.

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