

Brain drain: the flight of human capital

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The international migration of highly skilled professionals first emerged as a major public health issue in the 1940s, when many European health professionals emigrated to the United Kingdom and the United States. By the mid-1960s, the losses were enough to cause concern. In 1979, WHO published a detailed 40-country study on the magnitude and flow of health professionals, whose findings suggested that close to 90% of all migrating physicians were moving to just five countries: Australia, Canada, the Federal Republic of Germany, the United Kingdom, and the United States (1). In recent years, the migration of health workers has become a prominent and controversial feature of health sector planning.

A moral challenge

There is growing recognition, in both developed and developing countries, of the dangers posed by indiscriminate recruitment of skilled health professionals. Despite the awareness of the risks, little effort has been made to solve the problem. Regardless of one's point of view in the debate, the fundamental issue is the same: should skilled migration be left completely to market forces or should some form of intervention be introduced? If so, what are the possible options?

Intuitively, the indiscriminate poaching of skilled health professionals is unlikely to be a neutral phenomenon. It is potentially damaging to the effective delivery of health services in the source country, where it constitutes a huge financial loss and could have a negative impact on the economy. Indeed, the likelihood that poor developing countries may be indirectly subsidizing the health-care systems of richer countries raises ethical and moral questions. Fortunately, however, some developed countries are beginning to acknowledge the potentially harmful effects of their recruitment practices. The United Kingdom is a case in point: in 2001 the Department of Health initiated the *Code of practice for NHS employers involved in the international recruitment of healthcare professionals*. In 2003 the Commonwealth adopted a non-binding code of practice to guide ethical recruitment from member countries.

Despite these positive developments, many countries remain largely indifferent. Some, like Germany, are currently developing aggressive immigration policies targeted specifically at "the best minds" among professionals from the developing countries (2). A manpower strategy that is based on indiscriminate poaching of skilled human resources is rather shortsighted, however, and can only be a temporary solution. Its long-term consequences for the health and overall well-being of the affected populations may extend well beyond health to other sectors of the economy. To escape hardship, many skilled and unskilled persons may be forced to emigrate, and their destinations will almost certainly be in the industrialized countries. Such develop-

ments can only exacerbate the problems of illegal migration into many western countries. Consequently, more draconian measures will be needed to stem future waves of desperate refugees. Hence, merely for purely selfish reasons, the developed countries cannot afford to be spectators in the unfolding drama.

Solutions

Is there an inexpensive way to discourage richer countries from poaching scientists from poorer ones? Unfortunately not — the issues involved are complex and almost all countries are affected to varying degrees. At one end of the spectrum are countries such as Cuba that produce an excess of health professionals; at the other end are those such as the United States that train too few. In between is a variety of sending and receiving countries, each with a pattern of migration that reflects its level of social, political and economic development. Consequently, focusing solely on the "pull" factors that attract migrants may obscure the importance of the "push" factors encouraging them to leave, thereby diverting attention away from some important policy options.

Finding a workable solution requires the cooperation of all countries. The aim should be to solve the legitimate manpower shortages of the developed countries without damaging the health systems of the developing countries. A three-pronged approach may offer a chance for such a solution: first, a series of measures to be undertaken by the developing countries on their own; second, a set of measures that the developed countries can unilaterally adopt; and third, the development of an international code of practice to regulate the ethics of international recruitment. The following is a brief outline of possible elements of these suggested strategies.

Suggested national strategies for developing countries

- Determine the political, economic, social and professional reasons behind the decision to emigrate.
- Restructure training programmes to reflect the knowledge, skills and attitudes that are most appropriate for national development. This should not translate into the production of substandard health professionals, but rather a bold attempt to respond to pressing national needs.
- Involve local and rural communities in the process of student selection and scholarship awards for entry into health institutions. People tend to have more sense of obligation and responsibility to their families and villages than to a faceless, nameless bureaucratic system in the capital city.
- Convert the resources used to support the importation of foreign health professionals into incentive packages to encourage rural practice.

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- Invest in improving the working conditions of health professionals.
- Vigorously pursue policies that give priority to the development of science and technology research.
- Enter into bilateral agreements with receiving countries in an attempt to control the flow and derive some compensation for the loss of professionals.

Suggested national strategies for developed countries

- Make a genuine commitment to train more health professionals. Canada and the United Kingdom have both decided to do this, and Australia has gone a step further by explicitly tying the increase in numbers of medical students to rural requirements, and providing financial incentives for rural practice.
- Develop and implement a national code of conduct for ethical recruitment. The guidelines for ethical international recruitment, published by the United Kingdom Department of Health, are a clear example.
- Take a unilateral, principled decision to limit recruitment from countries with very clear staffing shortages; do not advertise job openings in the journals of such countries.
- Issue non-extendable visas, specifically geared to the acquisition of skills for the benefit of the source country.
- Pay some compensation to source countries through bilateral arrangements. This could take a variety of forms including financial help, the expansion of infrastructure (buildings and equipment), the expansion of communication and information technologies, improved access to library information, the creation of research grants targeted specifically to developing countries, and the development of a system of exchange of health professionals designed to enhance the quality of the source institutions affected by departures.
- Implement policies that facilitate the re-entry of skilled professionals into the host country after a period of stay in their countries of origin.

Suggested internationally binding regulations

For the above measures to yield measurable results, strict international rules are required to govern the recruitment of health workers. Formulation and adoption of an international code requires the active participation and cooperation of all the major

players: major developed countries, major developing countries, international organizations such as the International Labour Organization and WHO, and representatives of the health professions. Experience with the *Code of practice for the international recruitment of health workers* adopted by the Commonwealth health ministers will provide a good starting point.

The main objectives of such a code will be to:

- link international migration to the health policy goals of individual countries;
- identify countries from which recruitment may be less harmful;
- regulate the international movement of health workers in a way that allows a sending country to produce the extra manpower needed to meet the demands of a receiving country, without injuring its own health system;
- safeguard the rights of recruits in the host country;
- set appropriate guidelines for bilateral agreements on compensation between source and receiving countries. There is little doubt that the international administration of such a compensation policy is likely to be quite complicated; it is nevertheless necessary if we are to uphold the principles of fairness.

An important consideration in this effort will be the need to improve the underlying data on migration. The work of Carrington & Detragiache (3) has amply illustrated the weaknesses of existing databases. Very little documentary evidence exists on the sending countries. We need to understand the scope, magnitude and direction of the migratory flows, within and outside the country, as well as the characteristics and skill of the migrants. Such data are necessary if a clear distinction is to be made between local production shortage, internal brain drain to other sectors of the same economy, and international brain drain. The development of a core of standardized data collection instruments will be an essential step in ensuring international comparability. ■

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Rebuilding the ship as we sail: knowledge management in antiretroviral treatment scale-up

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In a recent film about the Napoleonic wars, a frigate suffers heavy damage and loss of life after a withering canon barrage from a faster and more heavily armed privateer. Listing with a damaged hull and broken mast, the crew assumes they will return to port

to rebuild. In the captain's mind, however, his duty is clear and their options are singular: they must rebuild as they sail.

In meeting the challenge of providing equitable care to the 40 million people in the world living with human im-

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