Assuming our global responsibility: improving working conditions for health care workers globally

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EALTH CARE SYSTEMS WORLDWIDE CONTINUE to be plagued by difficulties in recruiting and retaining health workers, resulting in a shortage of health human resources that is now considered a global crisis.^{1,2} However, although the gap between the need for health care workers and the supply is experienced globally, it widens disproportionately, so that the regions with the greatest need have the fewest workers: sub-Saharan Africa and southeast Asia together have 53% of the global disease burden but only 15% of the world's health care workforce.³ Moreover, the shortage experienced by countries that can least afford it is exacerbated by health worker migration to high-income countries. South Africa, for example, has fewer than 7 doctors per 10 000 people, but reported in 2002 that 14% of the physicians who had trained there had emigrated to the US or to Canada.⁴ And the problem is not going away:5 in the UK, US, Canada and Australia, 23% to 28% of all physicians are international graduates.

Efforts to reduce migration usually focus on reducing recruitment by high-income countries, and these efforts are gaining a higher profile.^{7,8} Improving the working conditions in source countries has not received the same attention, however, even though this would help counter the factors that push health professionals to seek better conditions elsewhere. It would also make

work healthier for those who remain, and thereby reduce work absenteeism, as well as occupational concerns such as injuries, violence and stress, and exposure to biological, chemical and physical hazards.

Although concerns about healthy work conditions exist to varying degrees around the world, they are greatest in nations with few resources, and particularly in Africa, here work conditions are the most challenging. It is well documented that health workers in lowand middle-income countries experience fear and frustration when caring for patients with tuberculosis and blood-borne diseases, and that they do so often in difficult work environments and under the ever-present stigma associated with exposure. It is now also well established that health workers are indeed at higher risk of acquiring numerous infectious diseases.

What is being done? From global policy to front-line initiatives

International organizations are recognizing the importance of promoting and protecting the health of the global health care workforce — conservatively estimated to be just over 59 million — and are undertaking con-

structive initiatives to do so.⁷ The World Health Organization (WHO) has explicitly recognized the need to improve the environment of health care workers in order to increase retention^{14,15} and is promoting the use of workplace audit checklists to help guide the reduction of infectious disease transmission in health care.^{16,17} WHO is also promoting the immunization of all health care workers against hepatitis B, ¹⁸ and, in collaboration with the Pan American Health Organization, is working to move forward specific Healthy Hospital Initiatives, ¹⁹ which include projects that involve both infection control and occupational health practitioners, and that train practitioners along with health and safety representatives in conducting workplace inspections.²⁰

Canada and other countries that receive health care workers from low-resource settings compromise the workforce in the source country as they supplement their own. The situation is inequitable and, over time, will undermine those low resources further, worsening the already challenging working conditions and creating even more pressure for health care workers to emigrate. To offset this effect, high-income countries can offer reciprocity by improving working conditions in source countries. British Columbia, which attracts the highest number of South African physicians of all Canadian provinces, has taken a step in this positive direction by sharing expertise in occupational health and infectious disease transmission control.

In 2006, at a meeting of the WHO Collaborating Centres in occupational health, the director of South Africa's National Institute for Occupational Health and the director of that country's National Department of Health, Medical Bureau of Occupational Diseases invited a group of Canadians to form an international partnership that would pool knowledge and experience. This partnership linked BC researchers in infection control and occupational health with professionals in South Africa who had similar interests. A pilot project was initiated at Pelonomi Hospital in the province of Free State, and workplace assessments were conducted throughout the hospital (using an assessment tool based on the work of Canadian team members²³ as well as the South Africans). Among the important lessons learned from this study, results (reported elsewhere)²² highlighted the need to reduce blood and body fluid exposure and to increase the use of protective barriers (including gloves, masks and respirators).

From our interactions with colleagues at WHO, as well as in Latin America and South Africa, our Global Health Research Program team at the University of British Columbia has developed the Occupational Health and Safety Information System (OHASIS),²⁴ based on similar occupational health information systems we had designed collaboratively in Canada. Going beyond Canadian programs like the generic program used at Winnipeg's Health Sciences Centre²⁵ and the Workplace

Health Information Tracking and Evaluation System used across BC, ^{26,27} OHASIS was designed from the beginning with two fundamental priorities in mind: infection control and capacity-building to improve working conditions.OHASIS also includes EPINet, a surveillance system for blood and body fluid exposure, which is used in thousands of hospitals in the US, Canada and internationally.²⁸

What needs to be done?

WHO's Code of Practice for the Recruitment of International Health Personnel encourages countries that receive emigrant health care workers to assist in improving working conditions in source countries. Our Pelonomi Hospital project is an example of how this goal can be achieved at the grassroots level. The BC government should be commended for providing some support for these initiatives; however, much more is needed. WHO, the International Labour Organization, the International Commission on Occupational Health, the International Social Security Association and Public Services International (an organization that represents public sector trade unions) need to work together. Indeed, steps have been initiated by our group to collaborate with the Department of Health of South Africa as well as with the relevant international organizations. These efforts would be greatly assisted by further support from governments in Canada and other high-income countries. As beneficiaries of health care worker migration, these countries have a genuine responsibility to reciprocate with resources of their own. At the university level, researchers and practitioners can contribute to this knowledge exchange by partnering with their colleagues in low-income countries. Such collaborations are essential.

Also needed are intensified efforts to promote further integration of worker safety and patient safety. To ensure that information systems being developed support this goal, we need to promote evidence-based decision-making and share our information with those who can benefit from it. That way, each jurisdiction will not need to find millions of dollars annually to design, implement and maintain separate systems that could be more easily shared and reproduced. To achieve this aim, we need international collaboration to: 1) reach consensus on a data dictionary; 2) complete the programming of non-proprietary information systems such as OHASIS, which can betailored to different technological environments and made widely available using Creative Commons licensing; 3) train health and safety committees (focusing on occupational health as well as infection control) to conduct workplace audits, use the information systems and implement appropriate prevention measures; and 4) conduct intervention studies to evaluate and refine approaches to improving working conditions in health care.

Much of what needs to be done can be accomplished with simple, effective, low-cost solutions that benefit both patients and workers. ^{29,30} What it will take is commitment from high-income countries to assist in the development, refinement and implementation of these tools in collaboration with low-income countries. Such endeavours can be made possible by making them a priority at the national funding level. Academic institutions and hospitals also need encouragement to translate good intentions into action. Local experts must be prepared to volunteer their time, with the support of their governments, hospitals and universities.

The need to promote a healthy and safe work environment in health care has now become critical. There is an urgent need to go beyond local initiatives and commit to global solutions. Proprietary information systems will, by design, limit the global sharing of information at a time when standardization and integration are paramount. It is time for high-income countries that have benefited from the migration of health workers from poorer countries to assume a responsibility for improving the health of the global health care workforce. We must promote a safer environment globally for both patients and health practitioners.

REFERENCES

- Chen L, Evans T, Anand S, Boufford JoI, Brown H, Chowdhury M, et al. Human resources for health: overcoming the crisis. *Lancet*. 2004;364(9449):1984–1990.
- 2. Narasimhan V, Brown H, Pablos-Mendez A, Adams O, Dussault G, Elzinga G, et al. Responding to the global human resources crisis. *Lancet*. 2004;363(9419):1469–1472.
- 3. Raman VV. The healthcare workforce shortage a new pandemic. *The Lancet Student [website]*. 2008 [accessed 29 Aug 2009].
- Hagopian A, Thompson M, Fordyce M, Johnson K, Hart LG. The migration of physicians from sub-Saharan Africa to the United States of America: measures of the African brain drain. *Hum Re-sour Health*. 2004;2(1):17.
- 5. Taché S, Schillinger D. Health worker migration: time for the global justice approach. *Am J Bioeth*. 2009;9(3):12–14.
- Mullan F. The metrics of the physician brain drain. N Engl J Med. 2005;353(17):1810–1818.
- World Health Organization. The World Health Report 2006: Working together for health. Geneva: World Health Organization: 2006.
- 8. 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): 685–688.
- Connell J, Zurn P, Stilwell B, Awases M, Braichet J. Sub-Saharan Africa: beyond the health worker migration crisis. Soc Sci Med. 2007;64(9):1876–1891.

- Musharrafieh UM, Bizri ARN, Nassar NT, Rahi AC, Shoukair AM, Doudakian RM, et al. Health care workers' exposure to blood-borne pathogens in Lebanon. Occup Med (Lond). 2008;58(2):94–98.
- Taegtmeyer M, Suckling RM, Nguku PM, Meredith C, Kibaru J, Chakaya JM, et al. Working with risk: occupational safety issues among healthcare workers in Kenya. AIDS Care. 2008;20(3):304-310.
- Menzies D, Joshi R, Pai M. Risk of tuberculosis infection and disease associated with work in health care settings. *Int J Tuberc Lung Dis.* 2007;11(6):593–605.
- Foss K, Maphumulo S. New confirmed case of virus as observation list tops 90. The Star [Johannesburg, South Africa].
- World Health Organization. The WHO code of practice on the international recruitment of health personnel. Geneva: World Health Organization: 2008.
- Neira M, Wilburn S, Ivanov I. Role of occupational health in response to challenges of modern public health [keynote address].
 129th ICOH International Congress on Occupational Health: March 21–27, 2009: Cape Town, South Africa. Cape Town (South Africa): 2009.
- Sherman H, Castro G, Fletcher M, Hatlie M, Hibbert P, Jakob R, et al. World Alliance For Patient Safety Drafting Group. Towards an International Classification for Patient Safety: the conceptual framework. *Int J Qual Health Care*. 2009;21(1):2–8.
- 17. World Health Organization. *Avian influenza, including influenza A (H5N1), in humans: WHO interim infection control guideline for health care facilities.* Geneva: World Health Organization: 2007 [accessed 29 Aug 2009].
- World Health Organization. Hepatitis B vaccines. Wkly Epidemiol Rec. 2004;28(79):253–264.
- 19. Rodríguez GJ, Dybka L, Watson R, Lavoie M, Yassi A, Gamage B, et al. International Commission on Occupational Health and American College of Occupational and Environmental Medicine. Protecting the health of health care workers: A global perspective. Rebman R (editor) Proceedings of the International Commission on Occupational Health and American College of Occupational and Environmental Medicine 2007 State-of-the-Art Conference Pre-conference Workshop: Protecting the Health of Health Care Workers: A Global Perspective: October 24, 2007: Vancouver, BC. Atlanta: National Institute for Occupational Safety and Health: 2009.
- 20. Pan American Health Organization & World Health Organization. Regional goals for human resources for health 2007–2015. 27th Pan American Sanitary Conference, 59th Session of the Regional Committee [provisional agenda item 4.6]: Oct 1–5, 2007: Washington, DC. 2007.
- 21. Labonte R, Packer C, Klassen N, Kazanjian A, Apland L, Adalikwu J, et al. The brain drain of health professionals from sub-Saharan Africa to Canada. *African Migration & Development Series no.* 2. 2. Ottawa: The Institute: 2006.
- 22. Yassi A, Nophale L, Dybka L, Bryce E, Kruger W, Spiegel J. Building capacity to secure healthier and safer working conditions for healthcare workers: A South African-Canadian collaboration. *Int J Occup Environ Health*. 2009;15(3)
- Bryce EA, Scharf S, Walker M, Walsh A. The infection control audit: the standardized audit as a tool for change. Am J Infect Control. 2007;35(4):271–283.
- Centre for International Health. Occupational Health and Safety Information System [website]. Vancouver: University of British Columbia: [accessed 2009 Aug 29].

- 25. Yassi A. Utilizing data systems to develop and monitor occupational health programs in a large Canadian hospital. *Methods Inf Med.* 1998;37(2):125–129.
- 26. Spiegel JM, Lockhart K, LoChang J, Tremblay J, Dybka L, Yassi A. Workplace and workforce health information systems in healthcare: acknowledging the role of university researchers and highlighting the importance of health and safety committee capacity-building. *Can J Public Health*. 2009;100(2):157.
- 27. Alamgir H, Cvitkovich Y, Astrakianakis G, Yu S, Yassi A. Needlestick and other potential blood and body fluid exposures among health care workers in British Columbia, Canada. *Am J Infect Control*. 2008;36(1):12–21.
- 28. International Healthcare Worker Safety Center. *EPINet: Exposure Prevention Information Network [Internet]*. Charlottesville, VA: University of Virginia Health System: 2008 [accessed 29 Aug 2009].
- 29. Stop TB Partnership. World Health Organization. *The global plan to stop TB*, 2006–2015. Geneva: World Health Organization: 2006.
- 30. World Health Organization. WHO guidelines on hand hygiene in health care. Clean care is safer care: The first global patient safety challenge. Geneva: World Health Organization [accessed 29 Aug 2009].

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