

## VIEWPOINTS

### Academic and Institutional Capacity: A Global Issue

Claire Anderson, PhD, BPharm

*American Journal of Pharmaceutical Education*  
School of Pharmacy, University of Nottingham

*Inadequate human resources for health, including pharmacists and pharmacy technicians, threatens to undermine all efforts to strengthen health systems and improve healthcare.<sup>1</sup>*

Pharmacists in many countries are too few in number and trained at a critically insufficient scale. On average in the United Kingdom, for example, there is 1 pharmacist for every 1,300 people. In Uganda, there is 1 for every 140,000, and local health authorities estimate that there is only one third of the required pharmacist workforce. Ethiopia has only 1000 pharmacists in a country with a population of 80 million, and in Malawi, where a new school of pharmacy has recently opened, there are only 30 pharmacists. The scaling up and quality improvement of pharmacy education and training is essential for tackling workforce shortages, meeting basic health needs, and saving lives. The capacity to provide pharmaceutical services in each country is dependent on 2 workforce needs: an appropriately trained pharmacy workforce to provide the services, and a competent and committed academic workforce to train sufficient numbers of new pharmacists and other pharmacy support staff at both basic and enhanced levels. These each depend on appropriately resourced academic institutions composed of students who have the necessary intellectual and emotional competence to be change agents for health in their communities.

One response to the global shortage of pharmacists has been an increase in the size and number of pharmacy schools in both developed and developing countries. An expansion in the number of pharmacy graduates occurred or was recommended in the United Kingdom,<sup>2</sup> United States,<sup>3</sup> Australia,<sup>4</sup> Canada,<sup>5</sup> the Republic of Ireland,<sup>6</sup> and Northern Ireland.<sup>7</sup> This has led to an increase in the number of pharmacy schools and increases in enrolments at existing schools. Expansion however, presents many concerns including the quality of teaching, the number of available pharmacy-trained academic faculty members, and the academic standard of applicants. Higher educa-

tion funding policies encouraged higher enrolments, which have not been matched by similar increases in resources including staffing levels.<sup>2</sup> This has sometimes caused problems. In the United Kingdom, for example, a minimum proportion of pharmacy faculty members are required to be full-time pharmacists for the school of pharmacy to gain degree accreditation from the Royal Pharmaceutical Society of Great Britain. A report in the United States by the American Association of Colleges of Pharmacy (AACCP) Argus Commission in 2000 states that the need and ability to expand pharmacy education should be determined by local factors.<sup>3</sup> Additionally declining applicant pools and faculty shortages were illustrated as key problems to be addressed if pharmacy education were to be expanded.

Alignment of curricula with actual practice activities is important for a number of reasons including job satisfaction and to provide the best healthcare for patients. Matowe et al point out that pharmaceutical practice differs widely from what students were taught at university.<sup>8</sup> A report to the Higher Education Authority in Ireland in 1999 ascertained that the academic achievement required to obtain a place on the pharmacy course in Ireland was greater than the academic ability required to practice pharmacy.<sup>6</sup> A small survey in the West Midlands in the United Kingdom revealed that approximately 1 in 3 respondents didn't feel challenged enough by their work; this was more evident in younger pharmacists and was attributed to the changing undergraduate degree program.<sup>9</sup> Another misalignment of pharmacy education, highlighted in developing countries, was that pharmacy schools were largely located in urban areas; therefore, the majority of students were from relatively near the urban centers. This fact, alongside the fact that the pharmacy curriculum was similar to that of more developed countries, meant that graduates had little relevant understanding and skills required for addressing health problems in rural areas of their own country and administrators realized that their ambitions were unlikely to be met in these rural locations.<sup>10</sup>

The World Health Organization (WHO) UNESCO FIP Pharmacy Education Taskforce ([http://www.fip.nl/www/?page=pharmacy\\_educationfip](http://www.fip.nl/www/?page=pharmacy_educationfip)) is overseeing the

**Corresponding Author:** Claire Anderson, Professor of Social Pharmacy, Division of Social Research in Medicines and Health, School of Pharmacy, University of Nottingham, Nottingham, NG7 2RD. Tel: 0115 951 5389. E-mail: [Claire.Anderson@nottingham.ac.uk](mailto:Claire.Anderson@nottingham.ac.uk)

implementation of the Pharmacy Education Taskforce Action Plan 2008-2010. The Action Plan aims to enable the sustainability of a pharmacy workforce that is relevant to local needs. The Action Plan is dedicated to 3 domains of action: quality assurance, academic and institutional capacity, and competency and vision for pharmacy education. Regarding academic and institutional capacity, the taskforce is gathering and analysing data on academic/faculty workforce, and reviewing and developing capacity development strategies that meet local, regional, or global needs. FIP is working with WHO and the University of Copenhagen on the Avicenna Global Directories of Education Institutions for Health Professions, a publicly accessible database of schools, colleges, and universities for education of academic professions in health, including pharmacy (see <http://avicenna.ku.dk/>).

At a recent country case study workshop for the WHO UNESCO FIP Pharmacy Education Taskforce, it was evident that our 7 case study partners from Ethiopia, Ghana, Kenya, Malawi, Tanzania, Uganda, and Zambia all face critical issues around appropriate planning and funding for pharmacy schools. They all lack adequately and appropriately trained staff members, particularly pharmacists to teach practice-based subjects. They also lack funding for developing infrastructure such as laboratories, materials and equipment, and sites for practice placements. Many of them also complain of a lack of purpose-built facilities for training pharmacists and some are using medical school facilities. The work of the Taskforce is largely achieved through the efforts of dedicated and enthusiastic international teams of volunteers. To find out more about it and how you can help, please visit FIP's web site ([http://www.fip.nl/www/?page = pharmacy\\_education](http://www.fip.nl/www/?page = pharmacy_education)).

## References

1. Working group on access to essential medicines. Prescription for healthy development: increasing access to medicines. Report on the taskforce on HIV/AIDS, Malaria, TB and access to essential medicines. 2005. UN Millennium project.
2. Taylor KMG, Bates IP, Harding G. The implications of increasing student numbers for pharmacy education. 2004;4:33-9.
3. Cohen JL, Kabat HF, Knapp DA, Koda-Kimble MA. Pharmaceutical education and the Pharmacy workforce. Should we expand our programs? Report of the AACP Argus Commission 1999-2000. *Am J Pharm Educ.* 2000;64:4S-7S.
4. Health Care Intelligence Pty Ltd, Australia (February 2003). Study of Demand and Supply of Pharmacists, 2000–2010. Available at: [http://www.guild.org.au/uploadedfiles/Research\\_and\\_Development\\_Grants\\_Program/Projects/2001-501\\_fr.pdf](http://www.guild.org.au/uploadedfiles/Research_and_Development_Grants_Program/Projects/2001-501_fr.pdf) Accessed September 22, 2008.
5. Peartree Solutions Inc A situational analysis of human resource issues in the pharmacy profession in Canada. Available at <http://www.pharmacyhr.ca/articles/eng/68.pdf> Accessed September 22, 2008.
6. Peter Bacon and Associates. Assessing Supply in Relation to Prospective Demand for Pharmacists in Ireland; 1999. Report to the Higher Education Authority. <http://www.heai.ie/uploads/pdf/Pharm%20Report.pdf> Accessed March 13, 2008.
7. KPMG Consulting for the Department of Health, Social Services and Public Safety; May 2001. Comprehensive Review of the Pharmacy Workforce Available at: Available at: [http://www.dhsspsni.gov.uk/wfp\\_comprehensive\\_review\\_of\\_the\\_pharmacy\\_workforce.pdf](http://www.dhsspsni.gov.uk/wfp_comprehensive_review_of_the_pharmacy_workforce.pdf) (accessed 10.03.2008)
8. Matowe L, Duwiejua M, Norris P Is there a solution to the pharmacist brain drain from poor to rich countries. *Pharm J.* 2004;272:98-9.
9. Boardman H, Blenkinsopp A, Jesson J, Wilson K. A pharmacy workforce study in the West Midlands (4) Morale and motivation. *Phamr J.* 2001;267:865-90.
10. Smith F. Pharmacy in developing countries. In: Taylor K, Harding G, eds. *Pharmacy Practice.* Taylor and Francis, London; 2001:95-6.