

## Part 2. Introduction

### Authors

*Claire Anderson, Marion Schaefer, Rebecca Buckle Nordor, Janet Cooper, Craig Pedersen, Pharmacy Workforce Working Group, Board of Pharmacy Practice, FIP.*

### Summary

- Many countries worldwide experience a shortage of pharmacists and distribution imbalances within countries.
- There is a need for comprehensive pharmacy workforce development modelled on local needs and circumstances.
- To support growth in the establishment of pharmacy practice and its aspiration for increased patient focused care, workforce needs and other trends (increasing number of prescriptions, increasing trend of part-time work, etc) will need to be factored into workforce and pharmaceutical service development plans.

Reports of shortages of the health workforce had surfaced in the 1970s but it was not until the following decade, and in particular the publishing of The World Health Report in 2006 that health workforce issues gained sufficient momentum to merit widespread investigation and international action to bring about changes.[1] This report was a major driving force for expansion of the international health workforce in order to meet the health related Millennium Development Goals.

Pharmacists represent the third largest healthcare professional group in the world after nurses and doctors. The Global Health Workforce Alliance was established to accelerate progress towards these goals by identifying and implementing solutions to the shortages.[2] The international shortage of healthcare professionals exists in different severities and has different root causes dependent on the particular health profession and the country of origin. However, due to the increasing overlap of professional roles and collaborative working it is essential that countries work with all health professionals when developing workforce plans. The healthcare priorities differ between countries and a universal health system or workforce model would invariably not provide the required healthcare efficiently to all those that need it. For pharmacy the degree of shortage and the subsequent impact on pharmacy services depends on the roles that the pharmacy workforce (pharmacists and pharmacy technicians) play in each country. These vary from largely distributive functions

to patient care roles where a greater workforce density is required. Although in many countries pharmacists are aspiring to greater caring roles.

The World Health Report 2006 calls for action on a wide range of human resources issues, including higher training output, better employment practices and the management of migration. It states that there are three main factors at work; the number of health workers, the distribution of health workers and wider policies.[1]

Until recently there has been very little workforce research or policy analysis about pharmacy and lack of data has probably led to oversight of pharmacy in health workforce planning. Recent work in Australia, Canada, Great Britain and the USA and the 2006 FIP Global Pharmacy Workforce and Migration report has added to our understanding of the issues.[3-8]

WHO advocates for a 'working life span' approach to systematically developing strategies to develop the health workforce. [1] The WHO states that there is a need for comprehensive policies that support pre-service education and performance as well as managing attrition. In many countries worldwide there is a shortage of pharmacists and inequity in the distribution of the workforce within countries.

Figure 1 indicates the inequalities in the distribution of the pharmacy workforce worldwide highlighting the countries particularly affected by workforce shortages, particularly in sub-Saharan Africa. In this cartogram, the country size is representative of the country's share of the global pharmacy workforce, i.e., countries that have a smaller share of the pharmacy workforce have a smaller geographical representation and vice versa.[9]

Figure 1. Geographical representation of the share of the world's pharmacy workforce (pharmacists, technicians, assistants).[9]



© Copyright 2006 SASI Group (University of Sheffield) and Mark Newman (University of Michigan). Reproduced with permission.

Quality of health workers in general is a determinant of the health status of a population. Health system resources including medicines will be wasted and misused if not managed by adequately trained and motivated health workers. Furthermore pharmacists, like other health workers are often concentrated in urban settings whereas rural and remote settings lack basic health care. Additionally there is distribution in favour of the private sector as compared to the public sector which accelerates inequity within the health system particularly in developing countries. Furthermore the burden of HIV/AIDS has had a major effect on the health workforce, many of whom have contracted it and on the workload in developing countries.

The size of the workforce depends on a number of issues, including the number in the labour market of working age, the participation rate of those who are working, and the availability of those no longer working but who may return to pharmacy employment. It is also important to examine the health and retirement age of pharmacists.[8] Other priorities may include identifying the levels, causes and implications of turnover among different cohorts of pharmacists; the adequacy and suitability of undergraduate training; examining the job satisfaction levels, career aspirations, motivations of pharmacists and pharmacists' commitment to their job, career, organisations and to the pharmacy profession; and ensuring ethical recruitment.

There is a need to develop models for comprehensive pharmacy workforce referring to local need and circumstances based on the number of practitioners needed and skills required to provide services. The numbers of professionals are not distributed to meet local and regional needs. The developed economies appear to be very attractive for health professionals to work in, because of high professional satisfaction and high incomes. This leads to migration from developing to developed economies. However even in developed economies there is often a shortage of pharmacists and allied staff, for example. Survey results show that the majority of the USA's population live in areas that report at least a moderately high difficulty in filling vacant pharmacy positions. About 10% of pharmacy positions in Canada were

vacant in the year 2000. There are concerns that the excess demand for pharmacists is undermining the slow progress and development of clinical pharmacy. Rural areas in Canada, Australia and New Zealand find it difficult to recruit younger pharmacists and are served by pharmacists who are looking to retire in the next ten years.

The current developments in pharmacy practice, its diversification as well as its aspiration for increased patient orientation will have an impact on the pharmacy workforce. Further aspects include the structure of the pharmacy workforce in various practice and administrative settings and a differentiating approach with regard to the international arena and different structural and legal conditions in developed and developing countries. Furthermore aspects such as increases in the volume of prescriptions; growth of population over the age of retirement; increased use of technology in the medicines supply process, such as electronic transfer of prescriptions, robotic-aided dispensing and automated stock control, the advancement of biotechnology and personalised medicine; changing business models for example the corporatisation of community pharmacy in Europe and the US, greater administrative requirements for handling third-party payments; changing roles of pharmacists; changing career patterns of pharmacists; the growing proportion of women in the profession who are less likely to work full time for their whole career span; changes in attitudes of generation X and generation Y compared to previous generations, and the global economic climate will all affect the pharmacy workforce.

## References

1. The World Health Organisation (2006). *The World Health Report 2006: working together for health*.  
<http://www.who.int/whr/2006/en/> (accessed 02.02.2009)
2. World Health Organisation (2006). *Global Health Workforce Alliance Strategic Plan*.  
<http://www.ghwa.org/> (accessed 03.05.2008)
3. Human Capital Alliance Pharmacy Workforce planning study literature review, 2008.  
[http://www.guild.org.au/research/4cpa\\_project\\_display.asp?id=1852](http://www.guild.org.au/research/4cpa_project_display.asp?id=1852) (accessed 1.02.2009)
4. Human Capital Alliance Analysis of Secondary data to understand pharmacy workforce. Initial supply report. 2008.  
[http://www.guild.org.au/research/4cpa\\_project\\_display.asp?id=1852](http://www.guild.org.au/research/4cpa_project_display.asp?id=1852) (accessed 1.02.2009)
5. Canadian Pharmacists Association. *Blueprint for Pharmacy revised draft: The vision for pharmacy. Optimal drug therapy outcomes for Canadians through patient-centred care*. 2008.
6. Guest D, Battersby S, Oakley P. *Future Pharmacy Workforce Requirements; Workforce Modelling and Policy Recommendations Executive Report March 2005*  
<http://www.rpsgb.org/pdfs/futphwfreqexecrept.pdf> (accessed 10.03.2008)
7. *The Pharmacist Workforce: A Study of the Supply and Demand for Pharmacists (December 2000)* Department of Health and Human Services, Health Resources and Services Administration and Bureau of Health Professions <http://bhpr.hrsa.gov/healthworkforce/reports/pharmacist.htm> (accessed 18.03.08)
8. Chan XH, Wuliji T., 2006 International Pharmaceutical Federation (FIP) *Global Pharmacy Workforce and Migration Report – a Call for Action*.  
[http://www.fip.org/www2/subsections/index.php?page=menu\\_resources\\_forhealth](http://www.fip.org/www2/subsections/index.php?page=menu_resources_forhealth) (accessed 02.02.2009).
9. Worldmapper. *Share of the world's pharmacists, 2008*.  
<http://www.worldmapper.org/> (accessed 02.09.2009)
10. Dayrit MM, Dolea C: *The health workforce crisis – where are the pharmacists*. *International Pharmacy Journal* 2006.