

# Global health learning outcomes for pharmacy students in the UK

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## Abstract

**Context :** The pharmacy world is a highly globalised environment. Pharmacy graduates must therefore be adequately prepared. The question for educators is, how best to prepare our students. We propose that integrating global health learning outcomes within the core curriculum would ensure that all students – irrespective of their personal interest and intended work sector - are engaged with global issues.

**Description:** Internal discussions were held with representatives from all disciplines within University College London (UCL) School of Pharmacy and existing curriculum documents were reviewed. A draft set of learning outcomes was proposed and then revised following consultation with representatives from the United Kingdom (UK) pharmacy profession and others with an interest in global health.

**Evaluation:** Analysis of the consultation data led to the derivation of a revised set of global health learning outcomes for pharmacy.

**Future plan:** Embedding and assessing global health learning outcomes within the UCL School of Pharmacy's undergraduate curriculum is now our focus.

**Keywords:** *Global, Health, Learning, Objective, Outcome, Pharmacy*

## Context

The processes of globalisation have led to an increasingly interconnected world with both health benefits and costs. They have improved the ease of international collaboration and the pace of discoveries in research, health care delivery and policy. However, there has also been a rise in the spread of disease, a shift in the causes of illness and death worldwide, and drug-related problems such as antibiotic resistance. In addition, the lack of health professionals in certain areas is a barrier to the delivery of effective healthcare. Access to, and responsible use of, medicines is central to addressing many international health priorities. Thus, health professionals need to be cognisant of the interdependence, partnerships and co-operation needed to secure global supply chains and to achieve optimal outcomes from medicines.

The nature of contemporary pharmacy means that graduates are de facto working in a highly globalised profession, as healthcare itself is becoming more and more globalised (Schroth & Khawaja, 2007). In the United Kingdom (UK), most pharmacy graduates practise in patient-facing settings, in hospitals or community pharmacies (Seston & Hassell 2009) and encounter diverse patient populations. Pharmacists may be involved in the management of diseases that have generally been

associated with other regions of the world but now have increased local prevalence due to the movement of populations, for example tuberculosis, whose substantial rise has been suggested to reflect migration patterns (Kruijshaar *et al.*, 2012).

Pharmacists can also be a link between formal and informal care, which requires an understanding of local health care systems and the social and cultural perspectives of the local population (Anon, 2009).

Pharmacists are involved in ensuring the supply, quality and safety of medicines in diverse settings (McCann *et al.*, 2010; Anon, 2009) and so engage with and are part of the international pharmaceutical industry and supply chains. They encounter problems such as resistance to existing drugs or recreational drugs becoming drugs of abuse. For example, in Chile, it was the pharmacists who first raised the alert on the need to control the distribution and consumption of substances such as opium (Fernández Labbé, 2013). These highlight the complex issues of international regulation and global markets. Medicines supplied through unregistered online pharmacies, online advertising of prescription drugs, direct-to-consumer websites, and the distribution of SSFFC (substandard and spurious, falsely-labelled, falsified or counterfeit) medicines present further challenges (Liang & Mackey 2011; Lynas, 2013). Thus, global perspectives are

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necessary for the profession to develop and maintain effective channels for the supply, and safe and effective use of medicines.

The importance of global perspectives is endorsed by the pharmacy profession, especially in relation to education (Shah *et al.*, 2010; EPSA & IPSE, 2012), mirroring recognition in other professions (Shiel & Jones, 2005; Blum & Bourn, 2013). The challenge for higher education institutions is how to best prepare students so that they are aware of global perspectives in health and medicines use, acquire the skills and aspirations to address new challenges, and recognise the career opportunities that this presents. While global health topics, such as antibiotic resistance, can be (and indeed are) introduced to pharmacy students on an *ad hoc* basis throughout the undergraduate degree, the presence of a set of specific learning outcomes is more likely to ensure global issues permeate the core curriculum. Global health learning outcomes have been proposed for other programmes of study: medical, veterinary and nursing students (Johnson *et al.*, 2012; Maud *et al.*, 2012; Wilson *et al.*, 2012), interprofessional education (Thistlethwaite *et al.*, 2010), prescribing curriculum (Ross & Loke, 2010), and global oral health (Seymour *et al.*, 2013). However, to our knowledge, none have been proposed for pharmacy students.

### Description

The UCL School of Pharmacy participated in a 'Students as Global Citizens' project (IOE, 2014) - a three year collaboration between the UCL School of Pharmacy, the UCL Institute of Education, the UCL Institute for Global Health, the Royal Veterinary College and the London International Development Centre - whose aim was to develop and evaluate methods to integrate teaching and learning about global and development issues into undergraduate curricula in pharmacy, medicine and veterinary science (Maud *et al.*, 2012; Willott *et al.*, 2012; Murdan *et al.*, 2014).

As part of this project, we undertook a two-stage consultation to develop Global Health Learning Outcomes for Pharmacy. First, an internal meeting was held with academic staff from all pharmacy disciplines - the pharmaceutical sciences, phytopharmacy, pharmacology, as well as professional and clinical subjects, to devise an initial set of learning outcomes. Participants were briefed regarding the goals of the consultation prior to a face-to-face workshop. The aim of the workshop was to identify the relevant knowledge, skills and aspirations needed by pharmacy graduates regarding global health, and to refine and organise these into an initial set of learning outcomes.

The second stage of this process involved presenting this initial set of global health learning outcomes to an external audience of representatives from the pharmacy profession and other stakeholders with an interest in global health, for discussion and further development. Held at the University College London (UCL) School of Pharmacy, it was attended by academic staff from many schools of pharmacy in the UK and abroad, non-

pharmacy academics with an interest in global health and education, representatives of the Royal Pharmaceutical Society (UK) (professional body) and the General Pharmaceutical Council (which oversees standards and content of pharmacy education in the UK) and the International Pharmaceutical Federation (FIP); pharmacists from hospital, community and industry, individuals with experience in pharmacy services in low-income settings and undergraduate and postgraduate pharmacy students, including representatives from the British Pharmaceutical Students' Association. Table I presents the final set of Global Health Learning Outcomes for Pharmacy, derived from this two-stage process.

**Table I: Proposed Global Health Learning Outcomes in Pharmacy**

Proposed Global Health Learning Outcomes in Pharmacy
<p><b>Public health and disease</b>            Explain changes in patterns of disease and their impact on international health priorities            Identify current priorities and the potential for pharmacy to support public health goals in different geographical settings            Discuss concepts of, and approaches to, health promotion from an international and inter-sectoral perspective</p>
<p><b>Political, economic, social, cultural and ethnic dimensions of medicines and pharmacy</b>            Discuss access to, and the rational use of, medicines in the global context            Identify the influence of gender and ethnicity on the access to, and use of, medicines and, on drug disposition            Demonstrate awareness of the diverse regulatory and financial frameworks of medicines in the UK and internationally            Explain the existence of inequalities/inequity in provision and access to medicines in the UK and elsewhere            Demonstrate awareness of the costs and resource implications of global pharmaceutical provision            Discuss the relevance of the cultural context to the definition and use of medicines, and of traditional remedies            Describe the impacts of fragile states and crisis situations (e.g. natural disasters) on pharmaceutical care</p>
<p><b>Pharmaceuticals</b>            Discuss the properties of a pharmaceutical product, and the implications of poor quality and of counterfeit products            Describe the pharmaceutical treatments available to the world's population, including that of the 'bottom billion'            Discuss the role of 'personalised medicine' in the global context            Discuss the development of medicines that are age-appropriate and culture-sensitive            Explain the challenges presented by diverse climates to the stability of medicines and vaccines</p>
<p><b>International infrastructure for the supply and use of medicines</b>            Demonstrate awareness of diverse medicine supply chains in the UK and internationally, and discuss the implications for medicine quality in specific contexts            Identify diverse international models of health care systems and provision, and explain the impact on pharmacy practice            Debate current concerns regarding the global pharmacy workforce            Debate the challenges associated with international regulation of medicines</p>
<p><b>Professionalism</b>            Compare UK and international codes of ethics for pharmacists            Respect the rights and equal value of all people without discrimination and provide compassionate care for all            Work effectively with other health practitioners in diverse sectors to ensure optimal pharmaceutical care</p>
<p><b>Interdisciplinarity in health and pharmacy</b>            Debate the role of poverty on inequality in health, and implications for pharmacy            Discuss the links between globalisation, climate change, food and water security, dietary transitions, health and pharmacy            Describe the influence of biocultural diversity and environmental change on health and pharmacy            Identify the links between human and animal health, particularly in terms of medicines' use</p>

### Future Plans

Following the development of the Learning Outcomes, implementation and assessment is now our focus. As part of the 'Students as Global Citizens' project, a number of novel teaching and learning activities have been developed (Murdan *et al.*, 2014), and these will continue to be refined, evaluated and embedded in our curriculum.

The Global Health Learning Outcomes for Pharmacy were principally devised with a focus on pharmacy education in the UK, but an international approach may provide opportunities to gain insights into priorities and perspectives elsewhere which may enrich their content, and facilitate shared understanding and learning experiences for pharmacy students. We welcome ongoing discussion with academic colleagues and stakeholders worldwide to ensure a curriculum that reflects changing international priorities in medicines and health, and inspire our students to identify and embrace challenges that being a 'global pharmacist' presents.

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### Declaration of interests

There are no conflicts of interest.

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