**Shaping pharmacist’s future: overcoming educational challenges**

Alice Rolandini Jensen

**Standfirst**

Something must be done about pharmacy education. Pharmacy leaders and stakeholders, are to meet and address educational challenges at a first-of-its-kind Global Conference on Pharmacy and Pharmaceutical Sciences Education, held in Nanjing in China, November 2016. Here, key attendees and organizers, tell us why this conference is so important for the future of pharmaceutical science.

**Main article**

The pharmaceutical sciences continue to develop ground-breaking treatments and medications for patients on a global scale. Medications are also becoming increasingly affordable and available to more people worldwide. This is great, you might say. But, what if we don’t have enough healthcare professionals with the knowledge and skills to administer appropriate treatments? Pharmacy healthcare is also developing new trends and the workforce faces new diseases and challenges, does this mean that it is time for the traditional pharmacist role to develop?

These are questions that the pharmacist and pharmaceutical science community want to address, and they are not new. The International Pharmaceutical Federation (FIP) issued a Centennial Declaration (1) in which they accepted responsibility and accountability for “Improving global health and patient outcomes by improving the development, distribution and responsible use of medicines”. Key to this is the creation of a workforce that can deliver pharmaceutical services and face the challenges of global health and patient care. This led to ‘education’ becoming the FIP’s third strategic objective in 2008 (2). In order to achieve the UN Sustainable Development Goals (3) related to the global health workforce, the community needs to work together to develop and train future healthcare professionals.

The World Health Organization (WHO) UNESCO FIP Pharmacy Education Development Team was set up to develop and implement the Pharmacy Education Action Plan. As a result of the plan, the first Global Conference on Pharmacy and Pharmaceutical Sciences Education is to be held on 7-8th November 2016, in Nanjing, China. Professor Claire Anderson of Nottingham University, UK, and a group leader in the Taskforce, says, “The conference will make a significant contribution to improved global and local health outcomes by ensuring that the pharmacy workforce is appropriately educated and competent to close gaps in development, distribution and responsible use of medicines”.

There is a global imbalance in the pharmacy workforce. Developed countries, such as the USA have many trained pharmacists and some evidence of workforce planning. However, in sub-Saharan Africa, the smallest proportion of pharmacists are seen and this trend is similar in many developing countries (4). Here, Anderson adds, “Local needs vary from country to country. For example, in India there is a very large pharmaceutical industry so there is a need for both scientists and clinicians, but in Denmark 75% of students go into industry. And, in the UK very few graduates go into industry”. The conference seeks to address questions related to how to increase the number of pharmacists where required, and also to ensure and increase the level of the pharmacist’s education.

With respect to this, Professor Lilian Azzopardi, President of the European Association of Faculties of Pharmacy (EAFP) states, “A target of pharmacy education is to merge the advances in pharmaceutical sciences with the application of this knowledge into different practice scenarios ranging from industrial to patient settings. Regular review and updating of pharmacy curricula, particularly the expected outcomes of undergraduate, postgraduate and lifelong learning programmes for the pharmacy workforce leads to ensuring that the graduates are provided with skills and competences that are in tandem with new scientific and professional developments”.

The role of a professional pharmacist is evolving, and as such, their knowledge must too. Professor Philip Schneider of University of Arizona College of Pharmacy, USA and Nanjing Conference co-chair, explains, “As pharmacists transition from a role of preparing medicines, to helping improve the responsible use of medicines, they will need a good understanding of the biologic sciences, such as pathology, pathophysiology, and genomics, in addition to the physical sciences, such as chemistry”.

Pharmacy is traditionally a science based profession. However, as healthcare develops, the remit of a pharmacist is also increasing. This is particularly true in low- and middle- income countries. Schneider adds, “Pharmacists will also need good communication skills for conversations with prescribers and patients about medicines-use and health. Healthcare should, can, and will become more inter-professional in the future. Pharmacists in some countries eg UK are already developing some of the skills that are similar to medical doctors and nurses, such as physical assessment and administering injections such as vaccines”.

Here Azzopardi adds, “In the patient care setting, the requirements for the pharmacist to be available in a multidisciplinary team, in the pharmacotherapy decision making, and in monitoring and supporting the patient, has emerged as a need that impacts on pharmacy education. Changes in pharmacy education programmes at undergraduate and postgraduate level, leading to advanced clinical pharmacy skills are preparing the pharmacist workforce that is required in healthcare systems to support society in the use of more complex medications in a safe and cost-effective manner”.

With these points in mind, it is clear that the conference will aim to develop education to support both industrial pharmacists and clinical pharmacists. Pharmacists roles will need to develop and evolve to suit their individual circumstances and the needs of the local populous. Professor Hiroshi Suzuki, Chairman of the Department of Pharmacy at the University of Tokyo Hospital, Japan is attending in November and he thinks, “The activities of pharmacists have expanded greatly. However, in this changing world, it is the time for us to discuss the ideal pharmacists of the future and the form they will take. For this, there are many aspects that need to be considered. Discussions on education are of course essential in constructing our bright future”.

1. FIP Centennial Declaration, 2012 http://www.fip.org/www/uploads/database\_file.php?id=339&table\_id=
2. 2020 Vision, FIP’s Vision Mission and Strategic Plan, 2008, http://www.fip.org/files/fip/strategic%20plan%20no%20annexes.pdf
3. UN Sustainable Development Goals, https://sustainabledevelopment.un.org/?menu=1300 Accessed August 27th 2016
4. The International Pharmaceutical Federation Global Pharmacy Workforce Report (2009)