INTERNATIONAL PHARMACY EDUCATION SUPPLEMENT

Introduction to the International Pharmacy Education Supplement

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As we enter the second decade of the 21st century, pharmacy educators worldwide continue to face a number of pressing issues that threaten the quality of pharmacy education at a time when there are limited resources to address these challenges. While pharmacists have unprecedented opportunities to expand their roles and responsibilities, this unfortunately is a time when there is a global shortage of qualified pharmacist to provide patient care.

This theme issue on international pharmacy education was developed to provide greater insight into the issues, concerns, and challenges facing the world pharmacy education and practice community and how countries are addressing them. Representatives from the International Pharmaceutical Federation (FIP) Pharmacy Education Taskforce (Anderson et al¹), Canada (Austin and Ensom²), China (Yang et al³), Great Britain (Sosabowski et al⁴), Australia (Marriott et al⁵), France (Bourdon and Brion⁶), and the Middle East (Kheir et al⁷) were asked to comment on aspects of their pharmacy educational system and practice (Table 1). To our surprise, similar concerns and challenges were expressed by all of the authors who were involved in pharmacy education and practice. Perhaps of greatest concern was the reoccurring theme of too few pharmacists and inadequate means to train greater numbers (Anderson et al). With the new demands on pharmacists, educators are scrambling to upgrade their educational programs to meet this demand. These general challenges and opportunities were best summarized by Austin and Ensom² as a need to enhance existing educational programs; (2) a better process to integrate internationally educated pharmacists into the country's health care system; (3) the need to develop continuing professional development programs to ensure that the current pharmacy workforce is "fit for purpose, and (4) finding and training the next generation of aca-

demic pharmacists. The other contributors to this theme issue expressed similar concerns.

Differences in how pharmacy students are educated were identified. Sosabowski and colleagues⁴ note that in order to practice pharmacy in the United Kingdom, a 4-year master's degree in pharmacy (MPharm) program, followed by a 1-year pre-registration placement must be completed. The authors' explain that under the Bologna agreement for educational equivalence across Europe, the MPharm degree is classified as an "undergraduate master's program" requiring lower qualifications than the traditional master of science (MSc) degree. Recent developments in the United Kingdom have led to a shift to an integrated 5-year MPharm program. As well, Kheir et al⁷ note that although the curricula of the 5-year baccalaureate degree programs generally resemble most western accredited programs, the clinical training experiences required for graduation among the 13 Middle Eastern schools reviewed was quite variable. Some programs did not have a structured practical experience as a requirement for graduation, while others had experiential training requirements that ranged from 10 to 36 weeks. In China, Ryan and colleagues note that, presently, the emphasis in practice is beginning to shift to clinical pharmacy. With this change, additional degree offerings are being developed to meet the growing demand for clinical pharmacists. There is also interest in practicing pharmacists developing more clinical skills through additional non-degree training. The Ministry of Education in China is considering a proposal for an entry-level program offering a master's and/or doctorate degree in clinical pharmacy similar to the doctor of pharmacy degree in the United States. Bourdon and colleagues describe a more universal approach in France, with a national committee that developed a program at the national level. The program is then adapted by each university and faculty of pharmacy according to its skills, specific features, and means.

Based on these contributions from an initial review of pharmacy education and practice, this supplement issue serves as an initial review of international pharmacy education and practice. There appears to be many

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Table 1. Areas Authors Were Asked to Address in Articles for the International Pharmacy Education Supplement

Pharmacy program:

- (1) What degree(s) is/are offered?
- (2) What is the length of the training years)?
- (3) How many qualified individuals apply each year?
- (4) How many individuals are accepted into pharmacy programs each year?
- (5) What criteria are used to determine admission?
- (6) Provide an overview of the curriculum (including pre-requisites).
- (7) Describe the nature of the clinical training/ experiences as part of your program.
- (8) Indicate whether or not your curriculum is “competency-based” or “abilities-based”?
- (9) What are the highlights of your pharmacy educational programs?
- (10) What are some innovations in instruction and assessment of student learning that you would like to draw attention to?
- (11) How and by whom are pharmacy education programs in your country accredited?

Pharmacy Practice:

- (1) Are there sufficient graduates to meet the demand for pharmacists?
- (2) What types of pharmacy practice do your graduates enter? Has that changed over the last 20 years?
- (3) Aside from working in a dispensary, what other opportunities exist for pharmacy graduates.
- (4) What is the current state of practice in their country (ie, what is the nature of pharmacy practice?)
- (5) What pharmacists can or cannot do in their practice?

Educational Challenges:

- (1) What are the current challenges in pharmacy education and future directions for pharmacy education?
 - (2) What do you envision to be the future of the pharmacy practice? What changes are occurring in practice and how might they impact the pharmacy education program in your country?
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educational opportunities for the global pharmacy community. Providing educational and pharmacy practice experiences in different parts of the globe appears possible, and if standardized across collaborating nations, could serve to overcome the lack of experiential practice sites and enhance the quality of pharmacist-provided patient care. In addition, there is an opportunity to cooperate on the development of both the content and delivery of pharmacy curriculum through the use of existing and future methods of communication. With increased globalization, pharmacy educators worldwide will continue to face many challenges to improving the quality of pharmacy education needed for enhanced pharmacist-provided patient care. By broadening our individual horizons and respecting pharmacy education and practice worldwide, educators can acquire and learn insight into strategies to improve individual programs and foster opportunities for additional collaboration. We should all remember the words of Anthony J. D’Angelo: “Without a sense of caring, there can be no sense of community.” Let’s start caring by gaining a better knowledge of worldwide pharmacy education and practice; and then perhaps we can enable a better sense of community in our world as pharmacy educators, practi-

tioners, and researchers. The theme editors hope you find this initial special issue on international pharmacy education informative and stimulating, and that it serves as a means to enhance dialogue with colleagues around the world.

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