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Perceptions of healthcare professionals towards Clinical Pharmacists in Cambodia

**Introduction**

Clinical pharmacy is a health science discipline in which pharmacists working alongside other health professionals enable delivery of better health outcomes for patients.1 Clinical pharmacists, in collaboration with other health care professionals, provide patients with effective medication therapy management and disease state management as well as educate patients on disease prevention.2 As they are ‘medication experts’, they can help physicians in reviewing prescriptions, decrease medication errors and optimize therapy. Pharmacists can play a critical role in educating patients to manage diseases such as diabetes, hypertension or other chronic non-communicable diseases.3 Clinical pharmacists are one among other health professionals that are considered important in delivery of pharmaceutical care in both hospital and community settings. In the United States, clinical pharmacists are regarded as drug specialists to provide patients with a comprehensive medication review.4 However, in Asian countries, there is wide variation in application of pharmaceutical care in their health care systems. A few countries like Malaysia, Singapore and Thailand are utilizing clinical pharmacists for providing clinical services to patients. In addition, Thailand and Indonesia are integrating clinical pharmacy into their health education.5 In Cambodia, though, clinical pharmacy is still a novel, vital, and yet underrepresented discipline in which these important health care professionals are still trying to find their footing in both hospital and community settings. This article describes the current role of clinical pharmacy and the perceptions from other health professionals about clinical pharmacists in Cambodia.

**The development of Clinical Pharmacy in Cambodia**

In Cambodia, to achieve a bachelor degree in pharmacy, students are required to complete at least five years of coursework at University and then pass the national exit exam. All the faculties of pharmacy, both public and private, follow identical coursework. During the five years of study, students learn a variety of subjects such as physiology, medicinal chemistry, medical biology, pharmaceutical technology, pharmacology, clinical pharmacy, etc. Starting from year 3, students undergo internships within different hospital pharmacies, hospital laboratories, pharmaceutical enterprises and other institutions. Clinical pharmacy is one among several subjects required in the pharmacy curriculum of Cambodia.6 This subject provides students with knowledge and understanding of clinical practice regarding medical reviews in order to meet the patients’ disease need.7 Even though it has been integrated into the pharmacy curriculum, clinical pharmacy is not widely utilized in the delivery of health care in Cambodia. There are only few public and private hospitals that utilize this advanced form of pharmaceutical practice. According to the national guideline on complementary package of health services for referral hospitals, there is only one sole competent pharmacist who is responsible for delivery of clinical pharmacist services. Currently there is no requirement for a clinical pharmacist in each clinical department; for example, nephology, acute care, neurology etc.8

Even though clinical pharmacy is not practiced in all stages of health care delivery, there is increased recognition of its importance for both health care providers and patients. Angkor Hospital for Children (AHC), an innovative and renowned Cambodian health facility in Siem Reap, has incorporated delivering of clinical pharmacy services since 1999. Pharmacy staffs in AHC are responsible for providing high quality medication counseling and education to parents of pediatric patients and other care givers. Furthermore, they collaborate with other health care professionals in the oncology department to create guidelines for chemotherapy.9 In addition, in Sihanouk Hospital Center of HOPE, there are around 800 prescriptions that are filled by qualified pharmacists per day while playing an important role in educating patients on proper administration and safety.10 Finally, pharmacists in Sonja Kill Memorial Hospital in Kampot Province are starting to develop the concept of clinical pharmacy. They are not only dispensing medications but also instructing patients on how to use their medications.11 While clinical pharmacy is a new concept and there are still many challenges to provide this service in Cambodia, pharmacists have started integrating this form of compassionate care into their health services. This is a positive path for future clinical pharmacists that will ensure clinical pharmacy will exist in all health services in Cambodia.

**Perceptions of health professional towards clinical pharmacists**

Clinical pharmacists are an important member of health care delivery team. In order to improve patient health outcomes, all health care providers need to collaborate and work together by recognizing expertise of various members of the team. Throughout Southeast Asia, however, there are varying opinions on the role clinical pharmacists should have in a health care system though a majority of them are encouraging for the profession. Current studies in Malaysia show that physicians seem to have negative perceptions of clinical pharmacists. They are not satisfied with clinical pharmacists and their clinical services. This is attributed to blurring the separation of roles between pharmacists and physicians.12 However, another study conducted in Indonesia revealed that involvement of pharmacists in health care delivery reduces errors in drug use and increase effectiveness of medications.13 Similar results are reported from Chinese studies where physicians have positive perceptions of clinical pharmacists and their role. They found that the support from clinical pharmacists on medical reviews and medication education of patients helps to reduce treatment errors.14 In Thailand, clinical pharmacy was introduced in 1989 and was attributed to a great demand of pharmacists in their healthcare system.15 However, physicians felt that pharmacists have limited knowledge of clinical pharmacy. To address this perception and produce a more competent clinical pharmacist, one additional year was added to the pharmacy curriculum. All pharmacists in Thailand now have to undergo six years of college education and are awarded doctor of pharmacy degree.16

The health care system in Cambodia has improved during the last decade with the improvement of the health status of Cambodian patients.17 However,, the demand for human resources is still challenging in each health sector. Through interviews with health care professions in a referral hospital in Koh Kong province, it was revealed that several physicians would appreciate increased availability of health care professionals helping them to meet the health care needs of their patients as increased numbers of patients are coming to the hospitals. Among health care providers that physicians listed as vital are clinical pharmacists. These physicians understand that clinical pharmacists are health care professionals who can collaborate with physicians to improve patient’s health outcome. *I am a health professional who does diagnosis and gives treatment to patients and pharmacist needs to analyze the prescriptions and dispense drugs to the patients* (Physician at Koh Kong Referral Hospital, oral interview, April 25, 2018). Besides this, some health care professionals expected to have more clinical pharmacists. They believe that clinical pharmacists will help in strengthening the health care system and provide patients with high quality treatment. *I expect to have a clinical pharmacist in my hospital as I want to collaborate with them to improve health outcomes of people in community* (Physician at Koh Kong Referral Hospital, oral interview, April 25, 2018). Therefore, it appears that most physicians wish to collaborate with clinical pharmacists, and this is a positive sign for the profession and in the delivery of better healthcare outcomes for the Cambodian people.

**Conclusion**

In conclusion, clinical pharmacy is important to improve health outcomes for all patients worldwide. This improvement necessitates collaboration between clinical pharmacists and other health care professionals at every stage of healthcare delivery. In Cambodia, clinical pharmacy is a novel and vital discipline that needs to be integrated into the public and private health care system; however, the number of currently practicing clinical pharmacists in health services is limited. Similar to other countries in Southeast Asia, clinical pharmacists in Cambodia need to improve their knowledge and clinical skills to be able to analyze the prescription, interact with patients or physicians effectively, and provide kind, compassionate care. In addition, Cambodian pharmacists should attend training on clinical pharmacy through continuing professional education to update their knowledge and experiences on regular basis. Through this continuing education and improvement in knowledge, the perspectives of other healthcare professionals will shed a more positive light on the vital role and skills clinical pharmacists can provide.

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