LETTERS

What is Missing in the Bachelor of Science Clinical Pharmacy Program in China?

With the largest population in the world, the main focus of China's Ministry of Public Health is to improve its healthcare policies and health education. With the introduction of the doctor of Pharmacy (PharmD) program in the United States, clinical pharmacy has become the most popular pharmacy practice worldwide. In China, the shift from the bachelor of science (BS) in pharmacy as the entry level degree to the BS in clinical pharmacy has helped in developing effective clinical expertise for pharmacists. In 2011, there were 25 colleges in China offering clinical pharmacy education either as a specialty or subspecialty. The duration of the various programs varied from 4 to 5 years.¹ However, since 2012, all colleges and schools of pharmacy in China were required to extend their BS clinical pharmacy program to 5 years. This was a good step forward, but there remained a lack of accreditation standards and guidelines as well as a unified degree program with a defined curriculum and a validated practice model.

The Ministry of Public Health of China set forward a recommendation in 2002 that, "the clinical pharmacist should take part in the diagnosis and treatment of disease, provide pharmaceutical care, and improve the quality of medical care," so clinical pharmacy departments were established in hospitals.² This recommendation also demands a well-organized model of clinical pharmacy practice to fully train clinical pharmacy students. In the United States, according to the Accreditation Council for Pharmacy Education Accreditation Standards and Guidelines, pharmacy practice experience (PPE) is divided into 2 phases: introductory pharmacy practice experience (IPPE), which is provided in the first 3 years of a PharmD program, and advanced pharmacy practice experience (APPE), which provides students with an opportunity to practice in different healthcare settings in their final year.³ In China, the PPE plan is mostly arranged either by or according to the requirements of affiliated hospitals as there is lack of an organized practice devised by the universities themselves. Students practicing in different hospitals, or even those in the same settings, have completely different levels or types of practice knowledge. This difference can be significant if we consider it on a national level.

The 5-year BS clinical pharmacy program at China Pharmaceutical University (CPU) was the first to be officially authorized by the Ministry of Education of China in

2006. In the BS clinical pharmacy curriculum at CPU, there are currently no specific IPPE courses. However, 2 courses (Clinical Pharmacy Training and Communication Skills) are offered in the fourth year to introduce students to hospital clinical settings and to develop familiarity with hospital staff. China Pharmaceutical University has collaborative relationships with 10 hospitals to implement an APPE program where students are placed according to the availability of preceptors and student interest. Among these hospitals, Gulou Hospital in Nanjing has devised a well-organized practice plan to provide an APPE for students in their final year. This practice has helped students in achieving basic knowledge about healthcare services provided by clinical pharmacists in hospital wards and pharmacies.

Nevertheless, there is a need to take further steps to improve and standardize this practice to the level of PharmD clinical practice. These steps might include the following: (1) Pharmacy practice experiences offered at most of the universities in China are only hospital oriented. Community pharmacy practice and ambulatory healthcare practice must also be required to enable students to integrate and apply all competency areas needed for the delivery of holistic patient care; (2) Introductory pharmacy practice experiences need to be well established. In addition to hospital or community practice, other forms should be used like simulations and service learning; (3) Advanced pharmacy practice experiences should involve direct patient care and must include primary, acute, chronic, and preventive care among patients of all ages. During their hospital orientation, pharmacy students in China check medical records, interview patients, and access therapies, but this data is copied in their performance notebooks for evaluating their grades instead of using their findings to improve patient care; and (4) The fruitfulness of clinical pharmacy practice can only be enjoyed by offering similarly structured PPEs to clinical pharmacy students of all colleges and schools of pharmacy in China.

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