

Clinical clerkships for Japanese graduate pharmacy students in U.S. medical centers

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Before World War II, Japanese universities did not have a primary interest in training pharmacy students to perform dispensing functions. The emphasis, in their four-year programs, was in preparing students for research and academic positions. In contrast, professional schools of pharmacy were mostly private, three-year institutions that emphasized the technical aspects of pharmacy and prepared students for pharmacy practice. However, after the war, all professional schools of pharmacy were upgraded to a university-level, four-year curriculum. The curricula of the private schools were modified by adding substantial course work in the basic sciences (e.g., organic, analytical, and medicinal chemistry). Graduates of the private schools became more interested

in careers in industry and less in pharmacy practice.

Pharmacists currently working in hospitals and in other practice sites in Japan are well educated in the basic sciences but have little clinical pharmacy training. Colleges of pharmacy did not emphasize clinical pharmacy in the past because it was not an area

of examination for professional licensure. However, in 1996 the content of the pharmacy licensure examination changed from almost all basic sciences to half basic sciences and half practical pharmacy. This shift served as a wake-up call to colleges of pharmacy to focus on the practice aspects of pharmacy. It has been difficult to implement this change because of the four-year curriculum, however. A few colleges, including Kyoritsu College of Pharmacy, have begun requiring a four-week practical internship for fourth-year students.

Concurrently with these changes in educational programs, Japanese pharmacists are making efforts to establish clinical roles in hospitals. Some hospital pharmacists have started providing counseling for inpatients, but they are not ready to provide more comprehensive patient-directed services. In general, pharmacists are not substantively incorporated into clinical teams in Japanese hospitals. Individuals who can lead Japanese clinical pharmacy are

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strongly needed not only in hospitals but also in pharmacy schools.

Clinical pharmacy program at Kyoritsu. Kyoritsu College of Pharmacy, founded in 1930 in Tokyo as a private school, has been offering a two-year clinical pharmacy program at the graduate level since 1996. The goal is to train students to become pharmacy leaders and preceptors in progressive hospitals. Before enrolling in the program, students must complete a four-year B.S. program and obtain pharmacist licensure. Upon finishing the graduate program, students receive an M.S. degree. The program consists of didactic course work focusing on diseases and drug therapy (six months), hospital pharmacy practice (one to two months) and clinical clerkships (six to seven months) at affiliated training hospitals in Tokyo, community pharmacy practice in Tokyo (two weeks), clerkships in the United States (four to five weeks), and research for a master's dissertation (seven months).

Currently, Kyoritsu is the only Japanese pharmacy school to regularly send graduate students to the United States for a month of clinical clerkships. The U.S. clerkships were incorporated into the program because of the limited opportunity for exposure to clinical pharmacy services in Japanese hospitals. However, the students are required to take eight months of clerkships at several rotation sites in Japan before going to the United States. Kyoritsu has training arrangements with eight hospitals in Tokyo. While these hospitals offer few clinical pharmacy services, they do provide counseling for inpatients.

Clinical clerkships in the United States. Three institutions in the United States have entered into educational affiliations with Kyoritsu College of Pharmacy: Loyola University Medical Center, Maywood, Illinois; University of Kansas School of Pharmacy and Medical Center, Kansas City; and the University of Wash-

ington School of Pharmacy and Medical Center, Seattle. These institutions have agreed to educate students from Kyoritsu by providing experiential rotations in various subspecialties of clinical pharmacy practice. The rotations are scheduled during the second year of the graduate program.

Loyola University Medical Center. In 1996 Kyoritsu appointed a clinician from Loyola University Medical Center with a Pharm.D. degree and fluency in Japanese as a visiting professor. He delivers lectures on diseases and drug therapy in Japanese one month every year to the graduate students. Although most of the students can read and understand basic English, few speak it fluently. Thus, having a Japanese-speaking clinician from Loyola is a large advantage.

In summer 1997, Kyoritsu and Loyola signed an academic exchange agreement. During that summer, two groups of three Japanese students visited Loyola for two weeks each. Clinical pharmacy preceptors went on rounds with the students in the areas of burns and trauma, infectious diseases, neonatal intensive care, pediatric intensive care, and clinical nutrition. The goal for this first visit by Japanese students was simply to let the students observe what American pharmacists do on a medical team.

Later in 1997, Kyoritsu College of Pharmacy invited Loyola's director of pharmacy to Tokyo to discuss the future of the exchange program. It was agreed that clerkships would last four weeks, that each preceptor would accept two students at a time, and that the rotation sites would consist of the burn and trauma unit, the infectious diseases unit, the pediatric and neonatal intensive care units, the clinical nutrition unit, and the drug information section. There would also be visits to outside institutions, including hospitals, a nursing home, and community pharmacies.

In July 1998, four students visited

Loyola University Medical Center for their clinical training. The students rotated through four specialty areas, spending one week in each area. One of Kyoritsu's clinical pharmacy faculty members and a Japanese hospital pharmacy director who had been serving as a preceptor for one of the students also visited the medical center with the students for a week.

University of Kansas Medical Center. The academic exchange agreement between Kyoritsu College of Pharmacy and the University of Kansas School of Pharmacy was signed in December 1997. Two students spent five weeks at the medical center during the following summer. Because there were no Japanese-speaking people at the center, at least one of the students had to be able to speak relatively good English. A faculty member in charge of the clinical pharmacy program at Kyoritsu accompanied the students. The faculty member oriented the students to the medical center and their housing and gave a seminar on pharmacy education and practice in Japan to the medical center pharmacists.

The students practiced in the surgical intensive care unit (SICU) for three weeks under the instruction of the clinical staff pharmacist in charge of the unit. The remaining two weeks were spent in the drug information center and visiting other pharmacy sites (a pediatric hospital, a nursing home, a community pharmacy, and a home health care company). During the SICU rotation, the students usually spent their mornings on rounds or collecting information from patients' charts and flow sheets. Afternoons were spent in the library or drug information center researching patients' drugs and diseases. The students also attended occasional inservice meetings and toured other areas of the hospital. Early in the rotation, it became apparent that the students had particular difficulty interpreting medical abbreviations. They were given a medical abbreviations dictionary.

During the drug information rotation, the students were exposed to questions from medical practitioners as well as the public. Although the students did not directly take the telephone calls, they did actively participate in finding accurate answers to the questions. This activity exposed them to many sources of drug information, including the Internet. Because the drug information center and the poison center at the University of Kansas Medical Center share the same space and resources, the students were also able to see how poison calls are handled.

University of Washington Medical Center. Kyoritsu College of Pharmacy and the University of Washington entered into an academic exchange agreement in April 1997. Initially, the American institution's dean and an associate dean traveled to Tokyo to meet the Kyoritsu faculty and give lectures, and a Kyoritsu professor and the chairman of Kyoritsu's board of directors spent several days at the University of Washington campus. In the summers of 1997 and 1998, Kyoritsu sent two students to the University of Washington for clinical clerkships. In 1997, each student was assigned to an inpatient adult medicine team at the University of Washington's Harborview Medical Center for three weeks and then visited several other pharmacies, clinics, and institutions outside the medical center during the fourth week. In 1998 the students spent less time at any one site, but spent one to two days each with pharmacists who provided patient-focused

care in general medicine, various inpatient subspecialties, ambulatory care clinics, progressive community pharmacies, and a local biotechnology research company.

Two local pharmacists who had previously trained in Japan and a Japanese-speaking University of Washington student were recruited as interpreters. It was not always possible to translate what the Japanese students wanted to say, but this gave them a chance to practice their English and attempt to make explanations by themselves.

From the students' standpoint and that of the program coordinator at Kyoritsu College of Pharmacy, staying at one site for two or three weeks is better than visiting a different site every day. A few offsite visits help to enrich the experience. On the other hand, while this latter approach allows more continuity of experience for students, it can be difficult for preceptors because of the time needed to explain procedures and because Japanese students, unlike American students, are unable to assist in providing care to patients, given the language barrier. Also, having an extra person (e.g., the interpreter) at the bedside or in the examination room may add to already crowded conditions. A rotating schedule may minimize these problems.

Assessment. The exchange program has been very beneficial for Kyoritsu College of Pharmacy. Students gain an appreciation for what American pharmacists do on a daily basis and learn about life in the United

States. The four-week period provides a satisfactory introductory experience, although some students have suggested that the duration of the experience should be expanded.

The language difference is an ongoing challenge. Japanese students understand much of what they are seeing and hearing, but when they try to respond in English, they occasionally have difficulty finding the correct words. When they do not understand something, they may be reluctant to admit it, perhaps out of a desire not to overburden their hosts. While most Japanese students have had classes in English, they may not have had many chances to practice it. (We would like to incorporate English classes into the graduate program's curriculum.)

We believe that an ongoing exchange program will be of mutual benefit to participants on both sides of the Pacific. In the future, Kyoritsu College of Pharmacy would like to accept students and preceptors from the three institutions and let them experience Japanese hospitals and pharmacies. Kyoritsu will soon be accepting a Pharm.D. student from the University of Washington for a one-month clerkship.

Conclusion. Kyoritsu College of Pharmacy has developed a two-year graduate program in clinical pharmacy to train students to become leaders and preceptors in progressive hospitals. Through agreements with three U.S. medical centers, Japanese students are exposed to a variety of clinical pharmacy services.