

An Approach to Teaching the History of Pharmacy

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I believe that the professional education of pharmacists benefits substantially from the inclusion of the history of pharmacy as a formal part of the professional curriculum. Incorporating a few lectures that attempt to summarize the history of pharmacy within the framework of another professional practice course is better than nothing. However, my observations convince me that a specific course in the history of pharmacy, offered as a professional elective, is much more effective in developing a conscious appreciation of the importance and value of the history of pharmacy. Ideally, specialists and scholars in the history of pharmacy should take the lead in providing this instruction. Realistically, however, it is unlikely that most of our colleges are ready to commit a faculty position for this purpose. Who then will serve as teachers of the history of pharmacy? In many cases, a pharmacist-faculty member who has a serious interest in the history of pharmacy may be able to serve as an effective instructor for an introductory history of pharmacy course.

My predecessor, the late Dean Roy A. Bowers, and I are examples of such teachers of the history of pharmacy. Dean Bowers developed his interest in the history of pharmacy by his contact with Dean Kremers and Professor Urdang when he was an undergraduate and graduate student at the University of Wisconsin in the 1920s and 1930s. He was later influenced by his association and collaboration with another distinguished scholar in the history of pharmacy, Professor David L. Cowen, of Rutgers University. When Dean Bowers came to Rutgers in 1951, Professor Cowen taught a required course in the history of phar-

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macy. That course later became a professional elective. Upon the retirement of Professor Cowen, Dean Bowers began teaching the history of pharmacy elective. From the time of my appointment to the Rutgers faculty in 1978 to the time of his death in 1992, Dean Bowers offered the two-credit professional elective, and there was always a healthy demand for the course. My own interest in the history of pharmacy traces to when I was in the second year of the four-year B.S. program at the University of Pittsburgh School of Pharmacy. I took a required two-credit course in the history of pharmacy during the 1957-58 school year. It was taught by a faculty member from the Department of History in the College of Arts and Sciences. He began the course by telling us that he really didn't know anything about the history of pharmacy beyond what he had read in our textbook (the second edition of Kremers and Urdang), and that he had been assigned to teach this course more or less as a punishment because he was at a low rank and not in high favor within his departmental administration. That kind of approach would not likely occur today given the Continuous Quality Improvement (CQI) orientation in higher education. However, despite the professor's lack of enthusiasm, it became apparent as the course went on that he had a good grasp of world history which tended to make the course interesting. I nearly devoured the textbook. I still have my copy of it which shows it was well used with many passages underlined, and comments and extra notes inscribed in the margins. I really feel I learned a lot about the profession and its history from having studied that book during that course. We even wrote a term paper. Mine was on the topic of John Winthrop, the governor who cured the sick. Although I would not necessarily recommend that schools of pharmacy reinstate required courses in the history of pharmacy, that course which I took some 40 years ago ignited my interest in the history of pharmacy, and gave me better perspective for understanding and functioning within the profession of pharmacy. It remains a matter of conjecture whether I would have taken that course had it not been required. My interest in the history of pharmacy persisted through the years as an amateur interest, so it was natural that I assumed the responsibility for teaching the course in 1992, and have continued to teach it since then.

The course is taught each academic term. The demand for the course has grown, and course enrollments have ranged from 30 to as many as 115 students. The students have been either at the third- or fourth-year level within the five- or six-year pharmacy programs. Students do not have a required textbook, but I provide them with a list of references that are available to them in the library, and which I use as a source of

much of the information I discuss in class. Some of the key references are:

Glenn Sonnedecker, Kremers and Urdang's History of Pharmacy, 4th ed. Philadelphia: J. B. Lippincott Company, 1976.

David L. Cowen and William H. Helfand, Pharmacy: An Illustrated History. New York: Harry N. Abrams, Inc., 1990.

Lois N. Manger, A History of Medicine. New York: Marcel Dekker, Inc., 1992.

Erwin N. Ackerknecht, A Short History of Medicine. New York: The Ronald Press Co., 1955.

John Parascandola, The Development of American Pharmacology. Baltimore: The Johns Hopkins University Press, 1992.

Pharmacy in History (quarterly journal published by the American Institute of the History of Pharmacy).

Calvin H. Knowlton and Richard P. Penna, eds., Pharmaceutical Care. New York: Chapman and Hall, 1996.

Robert A. Buerki and Louis D. Vottero, Ethical Responsibility in Pharmacy Practice, rev. ed. Madison, Wisconsin: American Institute of the History of Pharmacy, 1996.

Miguel A. Faria, Vandals at the Gates of Medicine. Macon, Georgia: Hacienda Publishing, 1994.

Gregory J. Higby, In Service to American Pharmacy: The Professional Life of William Procter, Jr. Tuscaloosa, Alabama: The University of Alabama Press, 1992.

Other valuable resources that are used extensively in the course include slides of the Parke-Davis series in the history of pharmacy and the history of medicine, and the slide presentations that were recently made available through the AIHP ("The History of the Prescription Bottle," "The Evolution of the Drug Jar," "Carl Scheele," "Medicines in the American Revolutionary Period"). Among the resources that are avail-

able to us for this course, we are quite fortunate to have a number of distinguished historians of pharmacy and medicine to provide three to four guest lectures each time the course is offered. Professor Emeritus David L. Cowen provides one or two lectures on the history of pharmacotherapy. Visiting Professor John Parascandola provides a lecture on the history of chemotherapy; and the annual Cowen Lecture is incorporated as one of the required course lectures. The course includes 26 or 27 lectures and two or three exams, so about 15 percent of the lectures are given by professional historians of pharmacy, medicine, or health care.

A chronological approach is taken to the teaching of the course. Timelines are provided for each period or century, showing relevant names and events, with dates, prior to discussing the significance of the events in class. In choosing the topics and the areas for emphasis, a number of guiding principles, which reflect the philosophy of the course, are employed. These include:

- Trends, discoveries, advances, institutions, and diseases with as direct a relationship to pharmacy as possible are emphasized. The impact they have on the development of the practice and the science of pharmacy is stressed.
- Items which are more relevant to medicine than pharmacy are highlighted only if they are defining events of a period or have a significant importance in the development of pharmacy.
- Topics which emphasize the difficulty of truly separating pharmacy from medicine as an independent profession are emphasized.
- Trends which demonstrate pharmacy's positive impact on science, culture, economics, politics, and progress are pointed out.
- Illustrations of resistance to change and the futility of resisting change are noted.
- Every effort is made to point out how an understanding of the history of pharmacy helps the pharmacist to deal with current events in the profession, including the ability to interpret the current literature more intelligently.
- The unique and changing role of pharmacy as an integral part of the evolving health-care system, and the pharmacist's relationships with other participants within that system, are highlighted.

In pointing out the applications of a knowledge and appreciation of the history of pharmacy to the modern pharmacist, articles from the current professional or lay literature are frequently used as handouts or as

homework assignments. The major sources of these pieces include all of the pharmacy publications of the major pharmacy associations as well as Drug Topics, US Pharmacist, Pharmacy Times, plus NEJM, JAMA, the Wall Street Journal, national news magazines and local newspapers. It is surprising how frequently relevant articles employ historical references, symbols, or allusions. Often these are given to the students not only as a reading assignment, but also as a written homework assignment. This approach has allowed us to continue to emphasize writing as an important skill, despite the fact that the popularity of the course has led to an increase in class size to the point where it is no longer feasible to assign a term paper to each student or to engage all students in significant classroom discussion. Written reports (homework assignments) make up about 20 percent of the student's grade; the remainder of the grade is based on the exams. The final exam is cumulative, but emphasizes the last part of the course. The exams all include some discussion questions, short-answer explanations, and a few objective questions (usually multiple choice). The exams do not emphasize memorization of facts, but rather emphasize the student's ability to access information, synthesize and analyze information, and to apply concepts. For this reason, all exams are open-book with a strictly enforced time limit.

Formal student evaluation (mandatory at Rutgers University) of the course is conducted toward the end of each term. Course evaluations show that students generally like the course, finding it both enjoyable and useful to them as they prepare for roles in pharmacy. They sometimes comment that the course should be required and that it has given them a much better appreciation for the profession, and that they will recommend it to their peers. They also generally feel that the course content justifies three credits rather than just two.