A Personal View of the History and Future Direction of Drug Information

Dennis F Thompson

Providing drug information has always been a key component of a pharmacist's responsibility. However, the establishment of the first drug information center in 1962 at the University of Kentucky was a pivotal point in the rise of the clinical pharmacy movement. Early articles by Charles A Walton[1,2] and Donald E Francke[3] provided a framework for understanding the training and role of the drug information specialist. Regarding the problems and challenges of communicating drug information, Walton observed that:

> "No physician, pharmacist, nurse, dentist, or veterinarian would disagree…that the drug literature is indeed vast, complex and rapidly expanding, that its effective use by the practitioner offers many difficulties, and that there is no simple or single solution to the complex of problems. By the same token, no professionally oriented pharmacist can ignore the tremendous opportunity and responsibility which pharmacy must accept in the interprofessional struggle for effective solutions."[2]

Dr. Walton insightfully recognized the complexity of problems that the rapidly expanding drug literature presented.

Since 1965, the body of biomedical literature has exploded exponentially to the staggering proportions we see today. Because I was only 10 years old in 1965, I must rely on these early articles for perspective. But I do remember sitting in the office of Donald C McLeod in the late 1970s when he was chair of the pharmacy practice department at Ohio State University. Don would enthrall me with stories about the first clinical pharmacists who dared to venture out of the basement pharmacy to actually take care of patients. I have always admired these early clinicians who pioneered clinical pharmacy. These bold individuals established a new role for all of us who have come after them. Drug information providers were foundational members of these pioneers.

Author information provided at the end of the text.

The practice of drug information rapidly expanded in the 1970s. By 1974, there were 56 centers, which increased to 108 by 1992.[4] Several issues are responsible for this expansion in services. Initially, the acceptance of the clinical pharmacist's role in patient care fueled the need for quick access to current information. Secondly, the explosion of information, access to that information, and perceived ability of drug information personnel to correctly interpret conflicting therapeutic information were also contributory. The 1980s brought the routine use of end-user computer searching of the medical literature to drug information centers. This allowed increased searching of the primary literature by drug information personnel and faster response times. The 1990s brought the introduction of diagnosis-related groups, managed-care challenges, and routine use of computers to drug information practitioners that required expansion of their expertise into areas such as pharmacoeconomics, medication policy research, evidence-based medicine, and pharmacoepidemiology.

Despite the recent decline in the total number of drug information centers nationwide (78 in a 2003 survey), I see 2 reasons to be optimistic about the future of drug information practice. First is the continued explosion of biomedical literature. With an estimated 40 000 biomedical journals published worldwide,[5] it is impossible to keep up with all relevant literature. One of the fastest growing subsections of the drug literature in PubMed is the drug therapy review article, which is approaching 10 000 English-language articles per year.[6] A clinician would have to read 27 articles a day, 365 days a year just to cover all of the drug therapy review articles cited in PubMed, let alone the clinical trials, case reports, editorials, and letters. The often-used analogy is "trying to get a drink out of a fire hose." The problem of information overload will continue to worsen. Drug information specialists must continue to harness the information systems and literature-filtering techniques to be successful with this continued challenge.

The second bright spot I see is in the education and training of pharmacists. Didactic drug information is required in most colleges of pharmacy. Several of the newest colleges of pharmacy have established a drug information center as an early priority. I believe there will continue to be a role for drug information specialists in the didactic and experiential training of students, residents, and fellows. The most recent survey of drug information centers described their increasing participation in the education and training of students and residents.[4] Many drug information centers have developed a primary concentration on either academics or institutional activities. This focus can sometimes determine the major activities of the center. An academic center may have a primary focus on teaching, scholarship, and service, while an institutional center may focus on drug policy management, pharmacoeconomics, pharmacy and therapeutics committee activity, and patient care. Obviously, most drug information centers are hybrids of these 2 extremes. However, I believe the academic component of the drug information center will continue to expand.

The future may depend on how we define ourselves. Like the buggy whip manufacturers of the early 1900s who went out of business because they stayed with their product while the rest of the world was beginning to drive cars, we must broadly define our purpose to remain "in business." If the buggy whip manufacturers had expanded their vision to being responsible for personal transportation, they might still be in operation. Similarly, drug information specialists must broadly define their activities, regardless of how or where they perform that function.

Dennis F Thompson PharmD FASHP FCCP, Associate Dean, Professor and Chair, Department of Pharmacy Practice, Southwestern Oklahoma State University, Weatherford, OK 73096-3098, fax 405/601-2484, dennis.thompson@swosu.edu
Reprints: Dr. Thompson

Published Online, 31 Jan 2006, *www.theannals.com*
DOI 10.1345/aph.1G372

References

1. Walton CA. Education and training of the drug information specialist. Drug Intelligence 1967;1:132-7.
2. Walton CA. The problem of communicating clinical drug information—a challenge and a hope for professional pharmacy. Am J Hosp Pharm 1965;22:458-63.
3. Francke DE. The role of the pharmacist as information specialist. Am J Hosp Pharm 1966;23:49.
4. Rosenberg JM, Koumis T, Nathan JP, Cicero LA, McGuire H. Current status of pharmacist-operated drug information centers in the United States. Am J Health Syst Pharm 2004;61:2023-32.
5. Wyatt J. Use and sources of medical knowledge. Lancet 1991;338:1368-73.
6. Thompson DF, Williams NL. Tracking the growth of drug therapy literature using PubMed (abstract). Presented at: American Society of Health-System Pharmacists Midyear Clinical Meeting, Las Vegas, December 2005.