

Special Feature

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Pharmacy's societal purpose

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The changing societal purpose of pharmacy is discussed.

Historically, the societal purpose of pharmacy has been to make drugs and medicines available. While this core function of pharmacy remains unchanged, the profession's purpose has evolved with new medical and pharmaceutical knowledge and technological advancements. The traditional role of dispensing medications has been expanded to include developing and managing drug distribution systems that provide access points to consumers and assure drug safety and compliance with legal and professional standards. These new responsibilities have required pharmacists to acquire expertise in the storage of data, distribution, and inventory control functions, and the management of data for drug histories, patient records, quality assurance programs, and drug information services. Pharmacists and support personnel who are qualified to perform the physical and scientific aspects of drug distribution and control must also be able to handle the interpersonal relationships required at the interface of the pharmacy system and the ultimate consumer.

Today's pharmacists must provide services that transmit the knowledge and skills they have at their command to physicians, other pharmacists, and patients. The service component of pharmacy should supplement and complement its core function.

Index terms: History; Pharmacy; Sociology

The Professions Serve

The professions exist to serve society. They serve in ways defined by the scope of the knowledge and skills that they command, and the needs of society for that knowledge and those skills. At the risk of oversimplification, permit me to suggest that the professions serve in two ways. First, they serve through the practice of a technique—the technique of pharmacy, law, medicine, and theology. When we use the term "practice of technique," we refer to the minimum standard of professional behavior. Sometimes we see professionals performing a set of routine skills with little visible concern for those follow-up services that the client may need as a consequence of the "technique." Here we see the pharmacist dispensing medicine, the physician conducting a routine office visit and finishing it with a written prescription for medicine, and the dentist probing the patient's mouth and examining the teeth. In each case, the practice of technique seems to be an end unto itself, and the encounter often terminates with a flurry of hastily given and poorly comprehended last-minute instructions. We may see the practitioner in a pattern of behavior that suggests self-interest and a concern for the rewards of practice. All too often cer-

tain inner, basic needs of the patient are not fulfilled. This is one of the reasons why the professions today are in such trouble. The practice of technique has dominated professional behavior and commitment.

The second way the professions serve is by practicing what they profess. Palmer¹ sees a professional as one who professes, testifies, or bears witness to some sort of faith and "... it was only because he did so that he merited being called "professional." The ideology of the professions is based on their profession—the statement of the faith that they profess. The true professional weaves what he professes into the practice of his technique resulting in a fabric of professional behavior that embodies both ideas—technique and profession or commitment. His life is the epitome of a professional ideology. This professional ideology for the classical professions of theology, medicine, and law has been highly visible to society from the earliest times. It has created a pattern worthy of emulation by other occupational groups seeking professional status. But even the images of these historical professions have been tarnished by the changes brought about by the scientific and industrial revolutions, by the expansion of knowledge and technology, by the growth of materialism, and the dominance of the practice of technique over client concerns and needs. The public has lost much of the confidence it once held for the commitment of professionals, often seeing them as shallow and self-serving practitioners seeking financial rewards, status, and social and political influence. Palmer¹ continues:

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My definition of professional—as one who professes a faith—is anathema to the engineer, the chemist, the business manager, the academic. They see themselves not as bearers

of a faith or of proclaimers of a confidence, but as practitioners of technique . . . pure, empirical, pragmatic marketable technique. And the world of technique admits of no ambiguity, no tragedy, no demons; that is, technique admits of no need of faith.

We must remember that our profession lends itself exceptionally well to the practice of technique. Some would say that we are victims of our own technique. It is common knowledge that consumers often see only a bottle of pills. Many of our practitioners see the boundaries of their professional responsibility circumscribed by the practice of technique—the dispensing of medicines. The mission of clinical pharmacy is to move that boundary toward the patient. There is controversy today in the field of pharmaceutical education about where that boundary should be. The boundary is a dynamic one—it is ever changing and will continue to be so as new knowledge and new technology evolve and our understanding of human health-behavior increases. We must realize that we will always be seeking to interface with a boundary that actually is never there. We are left agonizing with the fact that we are not in complete command of that knowledge that is uniquely ours. As professionals, we are forced into a pattern of life-long learning as a condition of our survival. We help determine where that boundary is for our profession. The decision hinges on the answer to the questions "What do I profess?" and "What do we profess?" After these questions, "What is our professional ideology?"

Societal Purpose

The idea of a service role identifies one of the generic purposes of the professions. To this we might add a pattern of professional behavior that assures continuity of concern for clients' welfare, accountability, integrity, reliability, and a commitment to the common good. Most people will associate "societal purpose" with the stereotyped pattern of professional practice that they have observed and experienced. They associate medicine with healing, theology with salvation, and law with justice, and "purpose" is seen in light of these associations. The perceived needs that society has developed for the services of each of these professions provide the basis for the societal purpose to which each is committed. But the needs of society change, and they have and are changing markedly in our time because of the enormous advances in knowledge and technology. In his *Uses of the University*,² Clark Kerr said:

The production, distribution, and consumption of "knowledge" in all its forms is said to account for 29% of gross national product (figures credited to F. Machlup), and "knowledge production" is growing at about twice the rate of the rest of the economy. Knowledge has certainly never in history been so central to the conduct of an entire society. What the railroads did for the second half of the last century and the automobile did for the first half of this century may be done for the second half of this century by the knowledge industry: that is, to serve as the focal point for national growth.

Or consider a more recent statement by Dr. Donald S. Fredrickson,³ then Director of the National Institutes of

Health. He was delivering a paper entitled, "Biomedical Research in the 1980s," before the Royal College of Physicians in London and introduced his address with the thought that the present state of the biological sciences is one of "revolution." He went on to say:

The current revolution . . . is not a simple, linear projection of the growth curve in knowledge for the past century. A striking perturbation of that growth has occurred, amounting to a geometric progression of available information. Achievements of research in chemistry, physics, and many allied disciplines . . . have led to new technologies contributing to a flood of discovery in biochemistry, physiology, and medicine. Our ignorance is still vast, but we are on the threshold of some unusual transformations in health practices, agriculture, and industry.

Using the above statements to focus our attention on knowledge, we can ask what impact the knowledge explosion of the twentieth century has or will have first, on society's needs for the services of health-care providers, and second, on the purpose or purposes for which the health professions exist. Let us consider the biomedical and pharmaceutical knowledge and the resultant technology that has evolved during the past 50 years. This takes us back to the 1930s in France when the golden age of therapeutics started with the discovery that sulfanilamide (para-aminobenzenesulfonamide) had remarkable antibacterial action against both gram-positive and gram-negative organisms. Penicillin was discovered in the 1940s, followed by many other antibiotics, and, in succession came the corticosteroids, anticoagulants, tranquilizers, oral diuretics, oral contraceptives, poliovirus vaccine, and others. Add to this list of drugs the biomedical discoveries such as organ transplantation, open heart surgery, and successful drug treatment of hypertension, elucidation of the structure of DNA and, now, genetic engineering. During this relatively short period, infectious disease came under control for the first time in history because of the availability of anti-infective drugs, and ". . . today, only 1% of people who die before age 75 in the United States die from infectious diseases."⁴

Impact on Societal Purpose

Has this period of spectacular biomedical and pharmaceutical accomplishments modified, changed, or even increased pharmacy's societal purpose? Has it added a new dimension to our respective societal purpose? I suspect that with the classical professions of theology, medicine, and law one might argue that societal purpose remains constant in relationship to time. The reason for their existence—healing, salvation, and justice—in each case is so all-encompassing that new knowledge and new skills can be accommodated within the traditional boundaries of perceived purpose. But in the case of pharmacy, our perceived purpose, by comparison, is "narrow" and "specific" and will not accommodate the expansion of the knowledge base without a conscious recognition that our purpose is or may be changing, however small or subtle the changes may be.

In a historical sense, the societal purpose of pharmacy has been one of making drugs and medicines "available."

Available meant two things: first, the actual making or preparing of medicines, and second, distributing medicines to consumers at community practice sites. Although both forms were the pattern well into the twentieth century, the industrialization of pharmacy since World War I has minimized the pharmacist's role in making medicine. For all practical purposes, this role of making medications available means dispensing and distributing medicines and health supplies in community and institutional settings. Within the context of societal purpose, this function remains central to pharmacy's reasons (purpose) for existence, and there is no reason to believe it will change, although the process of distribution will be subject to changing technology and innovation.

While the core of pharmacy's societal purpose remains unchanged, the scope of the profession's purpose appears to have broadened, and now, in my opinion, may be visualized as consisting of three parts. The first responds to the need for all health professionals to serve a dual role—the role of a health generalist and the role of a health specialist, the specific role for which each is trained. In their role as health generalists, physicians, nurses, dentists, and pharmacists share actively in the responsibility for directing people into the health-care system. This is a broad public-health function, and it includes offering advice on community and personal health matters, counseling to increase compliance with drug and other therapeutic regimens, referral to sources of treatment including public-health clinics, and participation in community planning for health education and allocation of resources. Although pharmacists have performed many public-health functions in the past, they have not been particularly visible in this role, nor has the profession promoted it with any apparent conviction. Certainly, pharmacy education has not designated a great deal of time in the curriculum to this role, a point underscored by Bush and Johnson.⁵ In 1980, however, the American Public Health Association⁶ adopted a position paper that recognized pharmacy as a profession with major responsibilities for public health. It defined the pharmacist's role broadly in a set of five public-health functions:

1. Planning for health care for wide geographic areas or communities;
2. Managing, administering, and evaluating health-care programs, systems, and facilities;
3. Providing direct personal health-care service (including health education, maternal, and child health, etc.) and environmental health;
4. Developing and promoting legislation, and deriving regulations pertaining to the public's health; and
5. Training health-care workers needed to carry out these functions.

The second part of pharmacy's purpose is making medicines and selected health supplies available to consumers and other providers of health care. Today, it is much more than the traditional dispensing function—the practice of technique. It includes developing and managing systems of drug distribution that provide access points to consumers and assure drug safety and compliance with legal and professional standards. These new responsibilities have required

pharmacists to acquire expertise in the storage of data, distribution, and inventory-control functions, and the management of data for drug histories, patient records, quality-assurance programs, and drug-information services. Included in this area are the personnel to carry on the historic purpose of the profession in an age of changing technology. This means pharmacists and support personnel who are qualified to perform the physical and scientific aspects of drug distribution and control must also be competent in handling the interpersonal relationships required at the interface of the pharmacy system and the ultimate consumer—patient, physician, nurse, or public official. And under the title of "unmet needs" are a number of health services that are broadening the scope of pharmacy's societal purpose. Many of these needs, including kidney dialysis and parenteral nutrition services, can be provided by pharmacists. Certain classes of patients are finding that pharmacists are uniquely qualified to care for their needs, which previously have been unmet. These patients include the disabled, who are in wheelchairs or confined to nursing and convalescent homes, as well as those with impaired hearing and vision. Lastly, there are those patients who need prosthetic and other fitted devices for maintaining their normal level of health.

The third part of pharmacy's purpose is an extension of the second; in fact, it can be argued that it is an integral part of the second purpose. It consists of services that have their basis in the knowledge and skills a pharmacist should have at his command. The pharmacist is unique among health-care providers. He is the only one who has knowledge of the physical and chemical properties of drugs in addition to their pharmacologic and therapeutic properties. The modern pharmacist should be qualified to work with the physician in planning and monitoring drug therapy. When necessary, he can rely on his background in the physical sciences as a special adjunct in solving difficult clinical problems. By understanding the pathways by which drugs are metabolized and the rates at which they are biotransformed in the body, he has a special role as pharmacokineticist in planning and adjusting dosage regimens. As biologist, chemist, pharmacokineticist, and pharmacist, he must be prepared to be spokesman for select portions of the scientific literature. This literature represents a dynamic knowledge system from which he gathers the information he uses daily in consulting with physicians, patients, and other pharmacists. This knowledge system has had somewhat traditional boundaries for many years, but as we approach the era of genetic engineering and molecular biology, the system will increase in specificity and complexity, and the boundaries will be extended. As we anticipate advances in immunology and new drugs for control of cardiovascular disease, hypertension, cancer, and arthritis, the service component of pharmacy's societal purpose assumes larger proportions. The Study Commission on Pharmacy⁷ certainly recognized the need for a service component when it defined pharmacy as:

a knowledge system that renders a health service by concerning itself with understanding drugs and their effects upon people and animals.

The Commission's report continued:

Pharmacy is a generally excellent system for generating knowledge, for translating knowledge into a product, for distributing the product and for dispensing the product; but it is far from an excellent system for transmitting knowledge and information, particularly to the ultimate consumer—the patient.

And then, as if to reinforce its earlier statement, the Commission repeats:

... the greatest failing of pharmacy is its inadequacy as an information transmitting system.

The deficiency in the existing health-care system is at the point where the pharmacist interacts with the patient or client. The report, in turning to clinical pharmacy, said:

... it is clear that there is one common idea which is present in all of the manifestations (of clinical pharmacy); that idea is an emphasis upon *drugs* as they are *utilized* by and in the patient. It is the joining of *drug* and *patient* which is the inseparable and continuing concern of the evolving pharmacist.

These three points—that pharmacy is a knowledge system; that the transmission of information is its greatest

weakness; and that the joining of drug and patient is the concern of the evolving pharmacist—provide a conceptual basis for the service component that must complement and supplement our ability to practice our technique. And the ingredient that binds these three together is knowledge—knowledge of the biomedical, pharmaceutical, and behavioral sciences: knowledge of drugs, knowledge of people.

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Cutting Costs in Publishing

Offices of scientific societies and editors of their journals are becoming apprehensive about the future of scientific publication. A system that has served science and society well is moving into a phase of increasing financial stress. The Royal Society has conducted a study of scientific publication in the United Kingdom. A major conclusion is that 'a combination of pressures will very soon put the scholarly scientific publication system of the United Kingdom, as of other countries, under considerable strain. Journals are increasingly dependent on the international library market for their income; libraries are suffering cuts in their budgets and are looking for ways to economize; they have to cancel subscriptions to some periodicals on the assumption that material from them if requested can be obtained as loans or photocopies under some interlibrary cooperation scheme Scientists themselves assume that the journal and library system will continue and in general do not wish to see restriction on photocopying. Publishers see this as a severe threat to their existence. New specialized journals continue to be launched These new and often expensive journals intensify the librarian's problems.'

. . . The publication of refereed journals is critical to the health of science. If present modes of support are curtailed, costs must be reduced or additional revenues obtained from other sources. The best way of cutting costs is to reduce the number of pages printed. Today many scientists give priority to publishing as many items and pages as possible. If the goal were to cram information into a limited space, the number of pages could be reduced by a factor of 2 to 4

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