"We need to broaden our past definitions, perceptions, and expectations."

ROGER W. ANDERSON

(1992)

At the time he received this award, Roger W. Anderson was head of the Division of Pharmacy at the University of Texas M. D. Anderson Cancer Center, Houston.

Of Perceived Value

"There is a need for pharmacy to actively demonstrate and communicate its value in health care."[1] This statement received almost unanimous agreement at the 1989 Pharmacy in the 21st Century Conference. On a similar theme, the attendees at the historic Hilton Head Conference held in February 1985 expressed consensus that "There is a lack of consumer demand for clinical pharmacy services based on a poor understanding by the public of services pharmacists can offer," and "There is an inadequate substantiation of the value (cost effectiveness) of clinical pharmacy services." They recommended that "Pharmacy should seek diligently to establish an image in the public's eye that conveys the message that we are their advocates in all matters related to their need for and use of drugs."[2] This theme was amplified by ASHP Past President Thomas S. Thielke, who, in his presidential address, challenged the profession to "Reach out to other health-care professionals, hospital administrators, standards-setting bodies, legislators, and our patients."[3]

While many other issues are also critical to the profession as we approach the

beginning of a new century, I have chosen to direct my attention in this lecture to the notion of demonstrating the value of pharmacy in health care. As defined in the dictionary, to value is "To rate according to relative estimate of worth or desirability." It should be apparent that such worth or desirability is not a property of the entity itself but rather the perception of the possessor. It is within this context that I chose the title of this lecture, "Of Perceived Value."

First, I want to explore the level of perceived value that exists within the profession itself. Then I will focus on the public's perception of the value of pharmacy in health care today. To begin, I will review a few selected issues in pharmacy education and practice that we face today and make some personal recommendations.

As we consider educational requirements, we should first ask, What does it take to be a pharmacist today? In answering this question, I want to focus on what we, as a profession, perceive as valuable in the basic education and training of pharmacists. This should be the critical and fundamental question as the debate continues over the transition to an entry-level Pharm.D. degree. Too often, this question is obscured by claims of a pharmacist shortage and misconceptions about the basic competencies that are required today in all practice settings.

The insightful "Joint Statement on the Entry-Level Doctor of Pharmacy Degree," issued last November by ASHP, APhA, and NARD, was a historic milestone for the profession. In addition to supporting the Pharm.D. degree as the single entry-level degree, the groups also proposed a degree-transfer process, in which colleges of pharmacy could provide a mechanism for their alumni to obtain the Pharm.D. degree. If such a process is not available at all colleges, they suggested that an institute be established by the professional organizations to grant pharmacists a certificate of Pharm.D. equivalence. While the degree-transfer and equivalence processes are not well defined and are open to some skepticism and legitimate criticism, I firmly believe that the profession must not lose sight of the principal goal of elevating the basic competencies of all pharmacists.

The National Association of Boards of Pharmacy has endorsed the concepts of a single entry-level degree and a degree-transfer process. As expected, the National Association of Chain Drug Stores has reaffirmed its support for continuation of the current B.S. and Pharm.D. degree programs, claiming that community pharmacists can be adequately educated in a five-year program.

Students in B.S. degree programs are both confused and concerned. Their principal concern is that they will be disadvantaged as they compete with entry-level Pharm.D. degree graduates for pharmacist positions. Today, with the considerable shortage of pharmacists, most graduates have little trouble obtaining positions. However, students are taking notice of the increasing number of employers stating a preference for pharmacists who hold the Pharm.D. degree.

ASHP, which since 1978 has strongly advocated the entry-level Pharm.D. degree, recently sent another signal of support in the requirements for residency accreditation. While it does not rule out B.S. degree graduates, the new standard for pharmacy practice residencies specifies that residents should have experience equivalent to that

of a recent Pharm.D. degree graduate.

There is no question that students see the value of both the advanced training and the academic credential. In a recent survey of pharmacy students at the University of Texas at Austin, approximately 94% of the respondents indicated that the college has an obligation to offer a part-time Pharm.D. degree program and 85% indicated that they would apply for such a program.[4]

I hope that the debate over the degree will soon be concluded so that constructive efforts can be committed to education programs that meet the public's current and future health care needs. It is important that students not become disenchanted with what the profession as a whole considers valuable in preparing pharmacists for expanding roles in today's demanding health care environment.

In an editorial regarding the joint statement, William A. Zellmer[5] stated:

The joint statement is consistent with the view that pharmacists must position themselves to help people make the best use of medications. This does not mean that pharmacists will abandon their prescription dispensing and drug distribution traditions. It does suggest, however, that over time pharmacists in all practice settings will devote more effort to functions that are designed to foster appropriate use of medications, and that they will assume growing responsibility for the outcome of medication therapy.

It is critical that the entry-level Pharm.D. degree not be construed as an equivalent to the current graduate-level Pharm.D. degree programs. I believe that these graduate-level programs should continue with their excellent advanced academic training, which is essential in specialty-practice, academic, and research settings. While some have suggested that they should become Ph.D. degree programs, I suggest that consideration be given to a two-year, graduate-level M.S. degree. There is precedent for this degree in the dental school model for academic training beyond the D.D.S. degree.

Regardless of the degree, however, let us not send the wrong message to these programs and their graduates by suggesting that the modified degrees will signify the same level of competence as the traditional degrees. At the same time, I respectfully encourage these programs and their graduates to put aside their differences and help the profession, as a whole, to move towards elevated levels of practice for all pharmacists in all settings.

Current M.S. degree programs in administrative practice that are affiliated with hospital pharmacy residency programs have made great contributions to hospital pharmacy practice. However, these and other similar programs are in transition. With the emphasis on clinical practice and the establishment of the new pharmacy practice standard, applications have decreased considerably. In my opinion, this decline may be temporary and these programs may find a new niche in the area of clinical practice management, pharmacoeconomics, and health policy analysis. These are critical subjects that are already having a substantial effect on our practice.

However, I do not believe that the traditional M.S. degree in hospital pharmacy will continue as the best academic credential without major modifications. I suggest that these programs combine efforts with graduate programs in pharmacy adminis-

tration and emphasize contemporary practice, economics, and health policy. This would involve a major change in many pharmacy administration programs, but it would provide an opportunity for students to maintain a pharmacy-specific focus that would not be available in business or hospital administration programs.

Another health care discipline to consider for graduate-level study is public health. The M.P.H. and Dr.P.H. (Ph.D.) degree sequence can be applied to pharmacy practice in the areas of health care economics, public health policy, and health promotion. The future of all health care disciplines will be greatly affected by these topics in years to come as our nation struggles with issues of equity, efficiency, and effectiveness in our health care system. Pharmacists with a public health background will be essential to include pharmaceutical services in reform initiatives and to provide a national presence that demonstrates pharmacists' involvement in global health issues.

The major distinguishing component of any clinical profession is the quality and scope of its postgraduate residency training program. ASHP's residency training programs are the cornerstone of progressive pharmacy practice today. The current implementation of the pharmacy practice residency standard gives dynamic evidence of pharmacy as a clinical profession and positions its graduates for clinical practice or specialty residency training.

In his keynote address at the most recent national residency preceptor's conference, Max Ray suggested that all pharmacists should be trained at the pharmacy practice level in order to enter practice.[6] The concept of a transitional year of postgraduate training also was proposed by Mary Anne Koda-Kimble and Toby Herfindal.[7] While these proposals contain both philosophical and logistical implications, I concur that the future of pharmacy practice demands this commitment and this level of basic training.

We also need to intensify efforts to educate and train a well-defined corps of pharmacy technicians. Even with 30 programs now accredited by ASHP, the number of graduates is still insignificant compared with the number of technician positions in our 6000 hospitals. Also, the quality of training varies dramatically among nonaccredited programs; this situation requires immediate attention. We shall never realize the potential impact of our profession until this situation is corrected.

We need to broaden our past definitions, perceptions, and expectations of what is valuable in pharmacy practice. I am concerned that we limit ourselves more than we are limited by outside forces. When we view our practice potential in the context of traditional practice definitions, we become susceptible to perceptions of limited outcomes and expectations.

Doug Hepler[8] defined professional pharmacy practice as:

a dynamic exchange between professionals and patients (clients) and, in general, between a profession and society. In that exchange, the profession provides essential, complex, and patient-specific services, and society provides authority, from which the profession derives power and money. This authority . . . depends on the profession's perceived social value and unique nature.

Hepler pointed out, and I agree, that "If society's needs and the value of the profession should diverge, that authority theoretically should disappear."

This conceptual base should direct and challenge us as we review what pharmacists actually do today in all practice settings. I believe that this assessment must begin in the location where the vast majority of pharmacist–patient interactions occur (or should occur)—the community pharmacy. This interaction should also occur in those institutions that provide outpatient prescription services.

I have observed many instances where the interaction between the pharmacist and the patient is either nonexistent or superficial. We must ask ourselves, Why is this the case? Is this what pharmacists want? Is this a management directive? Also, is this what leads to claims in the debate over the entry-level degree that pharmacists are already overtrained for what they do?

Although I have spent my whole professional career focusing on improving institutional services, I now believe that this area deserves the attention of pharmacists in all practice settings. If the problem is outdated pharmacy practice acts with rigid dispensing definitions, let us change them. If the problem is a management philosophy, community pharmacists must speak out and demand a practice environment that is consistent with our professional ideals and obligations to the public.

We also need to ask ourselves many of the same questions in the institutional practice environment. We continue to consume vast pharmacist resources in functions that require little or no professional judgment. What percentage of the time is allocated towards the outcome of patients' drug therapy? In economics, the term "allocation efficiency" is defined as the production of goods and services in the most correct or valued mix of outputs. The term "opportunity cost" represents what is forfeited when resources are used in one way instead of in a better way. Let us keep these concepts in mind as we evaluate what we do today and plan for future professional opportunities.

I do not want to give the impression that basic distribution and formulation skills are not important; they will indeed be part of pharmacy's future. Product distribution today requires increased attention not only to efficiency but also to quality assessment. All of us, including the Food and Drug Administration, have been troubled by medication errors and related problems involving pharmacy-prepared sterile products. ASHP's "Draft Guidelines on Quality Assurance for Pharmacy-Prepared Sterile Products" is an excellent document and deserves our most serious attention.[9] I urge colleges of pharmacy to carefully consider these guidelines and to intensify their efforts to provide instruction in sterile product formulation and production. This issue also creates an opportunity for creative and collegial discussion with the pharmaceutical industry, with the goal of upgrading skills related to quality-control measures, facility design and construction, and environmental controls.

Attention to efficiency and quality assessment will become increasingly important as we enter this new era of genetically engineered pharmaceuticals. Many of these products are already being used in acute care practice settings. Currently, 14 biotechnology products are commercially available, but at least 132 additional products are in the pipeline.[10]

In the book *The New Medicine,* Holcombe Noble[11] states:

What is really upon us is the culmination of the greatest revolution in the history of medical and biological science, and it will inevitably bring about more profound changes as this century runs out and the next unfolds. Modern medicine is now holding out greater promise of curing illnesses of many kinds, with many different treatments, in many parts of the world, in ways once inconceivable.

Pharmacy must be positioned to accept a leadership role to meet the sophisticated formulation and distribution requirements of these new therapies.

Within today's dramatically evolving institutional practice environment, pharmacy directors must have a vision that extends the boundaries of traditional practice paradigms. The director must be able to articulate effectively, and convince hospital administrators, that pharmacy can help the institution achieve safe, effective, and cost-conscious use of medications in individual patients. In the past several years, pharmacists have proved their value to selected medical services, and many physicians are now convinced of our worth. However, in most institutions, these services generally benefit only a fraction of the institution's patients. Directors must become much more creative in allocating existing resources and building convincing arguments for expansion.

While administrative skills are important in the management of any organization, I do not believe that most future directors of pharmacy will advance into the position through the traditional management career track. I believe, instead, that they will move into management roles from clinical practice positions and that they will maintain a clinical practice. Our mission, which has evolved toward providing drug therapy management, must be reflected in the leadership position. The new directors, through practice experience, will develop the necessary management skills, including personnel management and program justification. They will need to establish management teams, including a business-trained manager for accounting, forecasting, and other complex management functions.

Another issue statement of the 1989 Pharmacy in the 21st Century Conference was, "The lack of consensus in pharmacy about its mission in health care puts the survival of the profession at risk."[12] Since that conference, professional organizations have engaged in an effort to articulate a mission for pharmacy practice. A draft statement that has emerged through the Joint Commission of Pharmacy Practitioners is: "The mission of pharmacy practice is to help people to make the best use of medications." This simple statement establishes a caring relationship between pharmacists and patients and acknowledges the total scope of pharmacists' functions in all practice settings.

If we are committed to this purpose, our actions will have a major influence on the outcomes of drug therapy in our patients and will be recognized as valuable. When value is perceived and is reinforced over time, a value expectancy develops, motivat-

ing individuals to seek out and demand those things that meet their expectations. The theory of value expectancy is well documented in the psychological literature and is being applied in many state-of-the-art models for predicting a person's personal health decisions and behavior.[13] I believe this theory has direct application to the public's perception of value regarding pharmaceutical services.

To conclude, I will provide an overview of my concerns and recommendations regarding three issues that I believe have not received enough public attention from pharmacy.

The first is our involvement with health care reform issues and knowledge of current reform initiatives. The American public is growing increasingly concerned about the need for major changes in the health care system. We spend more money on health care than any other country (based on percentage of gross national product), yet roughly 35 million Americans have no financial protection from the expenses of medical care—no insurance or other coverage, public or private. Millions more have inadequate coverage that leaves them vulnerable to large financial risks. The uninsured obtain much of their primary care in the outpatient departments and emergency rooms of public hospitals. The deferment of care for conditions such as hypertension and diabetes adds to health risks and can cause much more expensive emergencies later.

Few Americans believe that others should be deprived of needed care or subjected to extreme financial hardship because of an inability to pay. However, most evidence illustrates that we have failed as a society to create institutions that assure all persons the opportunity to obtain needed care, when they need it and without an excessive financial burden. Where does pharmacy stand on this issue? Are we perceived as part of the problem with our high-cost drugs? Or are we perceived as a profession that cares about issues of universal access to health care by all citizens? Active involvement of all pharmacists and professional organizations in deliberations regarding health care reform is a responsibility we must not ignore.

Pharmacy also should be publicly involved in preventive medicine and promotion of healthy lifestyle practices. Americans' preference for curative over preventive medicine is very apparent. This orientation is reinforced by the emphasis on the technological fix, the hesitancy to interfere with individual lifestyle choices, and the powerful momentum of the medical research community. However, evidence suggests that most significant improvements in health have come from prevention, not curative or supportive medical care. Most advances in the prevention of disease have come from areas outside medicine, primarily improved sanitation, nutrition, housing, and education.

A multifaceted preventive approach necessitates that attention be given to reducing environmental pollutants, eliminating unsafe working conditions, improving housing, providing health education, and promoting early-detection programs. The most difficult preventive measures are likely to be those in which the individual has prime responsibility: those that address smoking, use of alcohol and drugs, diet, sedentary behavior, and other lifestyle decisions. Attempts by the government to intervene in

lifestyle decisions are inherently controversial and are attacked as paternalistic and unwarranted governmental interference in behavior that does not threaten the health of others. Nevertheless, we, as health care professionals, have a responsibility to consider more closely and communicate:

1. The role individuals play in contributing to their own health problems.
2. A shift of responsibility for health toward the individual.
3. A renewed emphasis on individuals' obligations to society to do those things that maximize health.

Pharmacists are well positioned in both institutional and community environments to discuss these matters directly with patients and become part of multidisciplinary efforts involving education and health promotion.

The third issue that I believe has not received enough public attention from pharmacy is the drug problem we face throughout the country today. I am not looking for pharmacists to give more lectures on drug abuse, although they are important. What I am looking for is a groundswell of public involvement by pharmacists in promoting the rational use of all medications. I believe that if children and adults alike are taught by pharmacists about how drugs work and what potentially dangerous body function imbalances they can cause, we could greatly increase the public's compliance with prescribed medications and reduce misuse of prescription or illegal drugs.

I recently read a thought-provoking chapter, in a medical text, entitled "Does Medical Care Do Any Good?"[14] It influenced me greatly, shaped several of the thoughts I have shared with you this evening, and prompted the question: Does pharmaceutical care do any good? In answering this question within the profession, we should acknowledge the tremendous progress we have made but constantly remind ourselves of the work still to do. How will the public answer the question? Will the public truly understand the multiple components in our definition of pharmaceutical care and will it perceive them as valuable?

I urge a renewed commitment to the ideals that have served ASHP so well over the past 50 years. As Harvey A. K. Whitney said[15] at the Society's first annual meeting in 1943:

If we can now only roughly sketch the general course to be followed; if we will actively cooperate with the leaders and help all along the way; if we will have faith in ourselves, in each other, in the profession; then, and only then, shall we have made a beginning.

(For the complete list of references cited, please see page 1924 of the *American Journal of Hospital Pharmacy,* Aug. 1992.)

Harvey A. K. Whitney Award Lectures (1950–2005)

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