



The visible ingredient

JOHN E. MURPHY

Am J Health-Syst Pharm. 2014; 71:1395-403

I am honored to be the 65th person recognized with the Harvey A. K. Whitney Award. To be counted among this small group representing many of my pharmacy heroes is truly humbling. I have been influenced in large and small ways in life and career by 40 of the 64 previous recipients, and though this high percentage says something about my age, of much greater meaning and value is the willingness of these stellar individuals to impart wisdom and vision to virtually anyone prepared to ask. The legacies of the Whitney Award recipients live on through their desire to advance the profession and their eagerness to support the careers and hopes of others.

The visible ingredient

Do pharmacists make a difference in the lives of patients? If so, do patients know? What is our reason for existence as a profession as we move toward the future? Over the next bit of time, I hope to answer these questions, address some concerns, and issue a few challenges.

In addition to scouring past Whitney Award lectures in preparation for my comments, I searched the Internet for mentions of the “role of the pharmacist.” The search yielded over 12.8 million hits on such topics as

the role of the pharmacist in a wide variety of disease areas, in managing the supply chain, in adherence coaching, on home care and palliative care teams, and even in breastfeeding support. Two comprehensive reviews of pharmacists’ clinical roles and their roles in a changing health system had also recently been published; both attempted to identify the many patient care services provided by pharmacists now and into the future.^{1,2} It appears safe to say that the education we receive prepares us for countless types of work activities and that we are obviously good at creating new roles. However, I want to affirm as clearly as possible that all of these translate into only one role that each pharmacist must live by: caring for our patients. No matter where we practice our profession, save a few isolated job functions, our focus must be on caring for our patients. This is our professional reason for existence today and into the future. This caring, somewhat like marriage vows, must exist whether patients are rich or poor, sick or healthy. Patients’ skin color, religious or sexual preference, and whether they have lived a healthy lifestyle or abused themselves in so many of the ways possible to damage health . . . none of these must interfere with our caring, compas-

sion, empathy, and efforts to improve their quality of life.

Although the term *patient-centered care* is popular these days, our mission has always been about the patient; it was never about pharmacists—not about nurses, not about physicians, and certainly not about insurance companies. It really isn’t so complicated either. As early 20th-century physician Francis W. Peabody³ said, “The secret of the care of the patient is in caring for the patient.” Do pharmacists demonstrate care? Do they have compassion and empathy for their patients? I think so and also believe we regularly make a difference in their lives, even when they don’t know it.

Although student pharmacists don’t repeat the Hippocratic Oath at graduation, there are three key areas of the oath I believe should be considered a pact with patients by all of our graduates. First is the *covenant with patients*, which is the pledge to use our best ability and judgment in their care. The second is termed *appropriate means*, which requires the use of established and accepted practices to treat patients. Last is *appropriate ends*, which means to do what is best for the patient rather than what is best for the pharmacist. Focusing on these three aspects of a

JOHN E. MURPHY, PHARM.D., FASHP, FCCP, is Professor of Pharmacy Practice and Science and Associate Dean, College of Pharmacy, University of Arizona, Tucson (murphy@pharmacy.arizona.edu).

Copyright © 2014, American Society of Health-System Pharmacists, Inc. All rights reserved. 1079-2082/14/0802-1395\$06.00.
DOI 10.2146/ajhp140319



John E. Murphy

John E. Murphy is Professor of Pharmacy Practice and Science and Associate Dean for Academic and Professional Affairs at the College of Pharmacy and Professor of Family and Community Medicine at the College of Medicine, University of Arizona, Tucson. He is also Honorary Professor at the University of Otago School of Pharmacy, Dunedin, New Zealand. Dr. Murphy received a bachelor of science degree in pharmacy and a doctor of pharmacy degree from the University of Florida in Gainesville, where he received the Distinguished Pharmacy Alumnus Award in 1998.

Dr. Murphy is a pioneer in the field of clinical pharmacokinetics. He helped develop and directed one of the first formal pharmacokinetic monitoring services, at Georgia Baptist Medical Center in Atlanta. His research on the extent and impact of pharmacokinetic services provided by hospital pharmacists has been instrumental in broadening their use in patient care.

Long active in pharmacy organizations, Dr. Murphy was president of the American College of Clinical Pharmacy (ACCP) in 2008–09, of the American Society of Health-System Pharmacists (ASHP) in 1997–98, and of the Georgia Society of Hospital Pharmacists in 1990–91.

Dr. Murphy has published over 200 papers, 100 abstracts, five editions of *Clinical Pharmacokinetics*, and the *Resident Survival Guide*. He is coeditor of the Pharmacotherapy Self-Assessment Program (PSAP 8) for ACCP with Mary Lee and is currently writing a new basic and applied pharmacokinetics self-assessment textbook for ASHP. He is a frequent speaker at international, national, and statewide continuing-education meetings.

Among various professional and teaching awards received over the years, Dr. Murphy received the Award for Sustained Contributions to the Literature of Pharmacy Practice from the ASHP Research and Education Foundation in 2003 and the Education Award from ACCP in 2012.

pharmacist version of the oath would help ensure we are truly caring for the patient to the best of our abilities and for the purest of reasons.

I credit Dave Angaran with starting me on the path of writing reflections about our profession. In one of his early musings (1975), Dave described attempting to help his mother and family understand what he did for a living.⁴ Dave depicted an uncle who enjoyed teasing him by saying, “Any patients ever ask for just you—like, Quick! Quick! Get a pharmacist, I’m dying!” or, “Is there a pharmacist in the house? . . .” Dave posed a question in the article that is pertinent to my lecture tonight. He asked if it was important to worry whether his family understood what he, as a clinical pharmacist, did. He responded in the affirmative by saying, “Because when they understand, the whole world will understand, and the clinical pharmacist will have come of age.”

During my ASHP presidential address in 1997, 22 years after Angaran wrote that article, I destroyed a copy of the ASHP videotape “The Invisible Ingredient.” This entertaining production showed that pharmacists were providing many important services that impacted the lives of patients, but they were delivered behind the scenes and not routinely recognized. My purpose in tearing up the video was to advocate that we could no longer be invisible participants in patient care if we were to fully capitalize on the value pharmacists could bring to patients’ lives. The Joint Commission of Pharmacy Practitioners (JCPP) 2015 vision statement (created in 2004) stated, “Pharmacists will be the health care professionals responsible for providing patient care that ensures optimal medication therapy outcomes.”⁵

While I understand that all professionals deliver many important services behind the scenes without glory or recognition, I do not believe we can accomplish JCPP’s vision

without becoming a highly visible ingredient in healthcare.

Pharmacists have long been described as overeducated and underutilized, but we have also accepted this underutilization too easily at times despite hundreds of studies showing we can make real differences in the lives of patients. And, though there have been many important successes that have moved the profession forward, we have not always been bold enough in tearing down obstacles that prevent full participation in caring for patients and ensuring their optimal use of medications. We have not always aggressively sought the places where care is not delivered appropriately and figured out how to assist. And even when we know how to improve care, it has not always been done consistently within and across all practice settings.

It is clear to me what pharmacists do well. We are educated about the optimal use of medications to a very high level yet too often continue to perform tasks that could be done by others with less training, sometimes at the expense of those activities only we are best prepared to perform. To serve patients to the best of our abilities, this must not continue.

After reviewing past Whitney Award lectures, I believe nearly all focused on changes that would enhance our value to patients. Although it was not always specifically stated, it also seemed that nearly every discourse focused on pharmacists becoming more visible through their actions. To continue my focus on visibility, I would like to now provide examples of scenarios where we appear to be more visible since my presentation in 1997, as well as others where we remain behind the scenes to the potential detriment of our patients.

Visibility report card: Visible ingredients

Here are several examples demonstrating recognition by others of our role in health care:

- In 2011, U.S. Surgeon General Regina Benjamin provided written support for a report on the benefits of advanced pharmacy practice.⁶ The report presented data objectively illustrating the contribution of pharmacists in the U.S. Public Health System and supported healthcare reform through pharmacists' delivery of expanded patient care services. The report suggested that "pharmacists, especially those practicing in community settings, are accessible and trusted health providers to the public, and as such are excellently positioned for opportunities to promote public health and wellness."
- The director of the Centers for Disease Control and Prevention (CDC) recently stated that the drug expertise and leadership of pharmacists are crucial to effective antimicrobial stewardship.⁷ This followed CDC reports indicating that poor antibiotic prescribing in hospitals is putting patients at risk for deadly diarrhea and drug-resistant infections.
- In a National Public Radio (NPR) interview of Lucian Leape about medication errors, he described the pharmacists' role in preventing problems with medications in the intensive care unit (ICU) and then stated that pharmacists should be available in every ICU. That Dr. Leape, an internationally respected physician, was advocating for pharmacists told me we are making headway.
- Consistent with Dr. Leape's suggestion, regulations now require that programs applying to become a Clinical Transplant Hospital must identify one or more pharmacists who are "responsible for providing pharmaceutical care to solid organ transplant recipients."⁸
- Authors of a 2014 analysis for the State of New Jersey on opportunities to enhance prevention and management of type 2 diabetes mellitus indicated there was inadequate use of pharmacists as members of case teams for these patients.⁹ Two recommendations were to "reimburse pharmacists

Harvey A. K. Whitney Lecture Award

Recipients

2014	John E. Murphy	1981	Kenneth N. Barker
2013	Jannet M. Carmichael	1980	Donald C. Brodie
2012	Rita R. Shane	1979	Milton W. Skolaut
2011	Daniel M. Ashby	1978	Allen J. Brands
2010	Charles D. Hepler	1977	Herbert S. Carlin
2009	Paul W. Abramowitz	1976	R. David Anderson
2008	Philip J. Schneider	1975	Sister Mary Florentine, C.S.C.
2007	Henri R. Manasse, Jr.	1974	Louis P. Jeffrey
2006	Sara J. White	1973	George L. Phillips
2005	Thomas S. Thielke	1972	William M. Heller
2004	Billy W. Woodward	1971	Sister M. Gonzales, R.S.M.
2003	James C. McAllister III	1970	Joseph A. Oddis
2002	Michael R. Cohen	1969	Leo F. Godley
2001	Bernard Mehl	1968	Clifton J. Latiolais
2000	Neil M. Davis	1967	Paul F. Parker
1999	William A. Gouveia	1966	Robert P. Fischelis
1998	John A. Gans	1965	Sister Mary Berenice, S.S.M.
1997	Max D. Ray	1964	Albert P. Lauve
1996	William A. Zellmer	1963	Vernon O. Trygstad
1995	Paul G. Pierpaoli	1962	Grover C. Bowles
1994	Kurt Kleinmann	1961	Herbert L. Flack
1993	Marianne F. Ivey	1960	Thomas A. Foster
1992	Roger W. Anderson	1959	I. Thomas Reamer
1991	Harold N. Godwin	1958	Walter M. Frazier
1990	David A. Zilz	1957	Sister Mary John, R.S.M.
1989	Wendell T. Hill, Jr.	1956	George F. Archambault
1988	Joe E. Smith	1955	Gloria N. Francke
1987	John J. Zugich	1954	Evlyn Gray Scott
1986	John W. Webb	1953	Donald E. Francke
1985	Fred M. Eckel	1952	Edward Spease
1984	Mary Jo Reilly	1951	Hans T. S. Hansen
1983	Warren E. McConnell	1950	W. Arthur Purdum
1982	William E. Smith		

Harvey A. K. Whitney (1894–1957) received his Ph.C. degree from the University of Michigan College of Pharmacy in 1923. He was appointed to the pharmacy staff of University Hospital in Ann Arbor in 1925 and was named Chief Pharmacist there in 1927. He served in that position for almost 20 years. He is credited with establishing the first hospital pharmacy internship program—now known as a residency program—at the University of Michigan in 1927.

Harvey A. K. Whitney was an editor, author, educator, practitioner, and hospital pharmacy leader. He was instrumental in developing a small group of hospital pharmacists into a subsection of the American Pharmaceutical Association and finally, in 1942, into the American Society of Hospital Pharma-

cists. He was the first ASHP President and cofounder, in 1943, of the *Bulletin of the ASHP*, which in 1958 became the *American Journal of Hospital Pharmacy* (now the *American Journal of Health-System Pharmacy*).

The Harvey A. K. Whitney Lecture Award was established in 1950 by the Michigan Society of Hospital Pharmacists (now the Southeastern Michigan Society of Health-System Pharmacists). Responsibility for administration of the award was accepted by ASHP in 1963; since that time, the award has been presented annually to honor outstanding contributions to the practice of hospital (now health-system) pharmacy. The Harvey A. K. Whitney Lecture Award is known as "health-system pharmacy's highest honor."

for medication therapy management in the Medicaid program and . . . reimburse pharmacists for Patient Self-Management Programs for Diabetes services.”

- *Forbes* published an article this year titled “Fixing Healthcare Can Be as Close as Your Neighborhood Pharmacy,” wherein it reported that “70% of consumers would go to a pharmacist for health services if their insurance covered them”; the article went on to note, “Twenty-one percent of that 70% say they’d still go to a pharmacist even if they would have to pay \$75 out of pocket.”¹⁰
- In the United States, collaborative practice acts exist in at least 47 states and the District of Columbia, and laws now allow prescribing by pharmacists in countries such as England and New Zealand.¹¹ I don’t believe we have taken sufficient advantage of these opportunities to date but expect that will change as the need for primary care explodes secondary to healthcare reform initiatives.
- Legislation recently passed in California¹² and Wisconsin¹³ designates pharmacists as healthcare providers and allows them to deliver a variety of healthcare services. The California legislation also created a new class of provider: the “advanced practice pharmacist.”
- The quality of pharmacy research continues to improve and become more impactful relative to improving patient care, with hundreds of studies available on cost-effective changes in patient outcomes due to pharmacist services.¹⁴ Pharmacy researchers are also frequently part of multidisciplinary research teams, thereby expanding the influence of the profession.
- The provision of immunizations by pharmacists has increased dramatically. A recent story on NPR reported that only one third of eligible girls receive the human papillomavirus (HPV) vaccine.¹⁵ Immunizations in pharmacies were suggested as a way to get the vaccines to girls as conveniently

as possible to help prevent cervical cancer. Although I believe we must do more to track patients and recommend immunizations routinely for those in need, we are gaining visibility as a profession that can improve public health through these services.

- Pharmacists are impacting the lives of millions of patients through medication therapy management services created as part of the Medicare Part D legislation.

My final example is a local and patient-level anecdote: Last month I received notice of a call from one of the residents at a nursing home where our pharmacy students go for introductory pharmacy practice experiences in geriatrics. The patient wanted us to know she loved having the pharmacy students visit her, felt like they really helped her understand her medications and disease, and truly cared about her. This patient said that the program had positively impacted her life. Stories like this, told among patients, will help ensure that pharmacists are visible ingredients in healthcare.

All of the activities I’ve mentioned are indicators of trust placed in pharmacists by consumers of healthcare, legislators, and other healthcare providers. They also demonstrate that pharmacists *can* and *do* make a difference in the lives of their patients.

There are also a number of other signs signifying steady progress toward high visibility for the profession. For example, we continue to receive high ratings by the public for honesty and ethical behavior,¹⁶ and the profession has been ranked as one of the top careers to consider for students entering college.¹⁷ Pharmacists serve in leadership roles of interprofessional organizations like the Society of Critical Care Medicine and the American Society for Parenteral and Enteral Nutrition and are recognized members of prestigious and influential organizations like the Institute of Medicine (IOM).

An IOM fellowship specifically for a pharmacist was developed under the direction of Dr. J. Lyle Bootman, demonstrating that pushing the envelope merely requires a leader.¹⁸

Interprofessional education will soon be required of all healthcare colleges by their accrediting bodies, and interprofessional practices are continuing to develop, which will lead to greater understanding of each profession’s value to patient care. Chain pharmacies are examining new interprofessional primary care practice models wherein such pharmacies can be considered places for healthcare delivery. Of note, a recent report of a chain’s program to transition patients from the hospital to home indicated that hospital readmissions were reduced by 46%, demonstrating that coordination of care within and among the professions leads to better patient outcomes.¹⁹

A report on consumer willingness to have healthcare services provided at a clinic in a retail store or pharmacy indicated that about 50% would very likely or somewhat likely have wounds debrided or stitches removed there.²⁰ Others would even consider undergoing dialysis (26.2%) or getting an MRI (34.4%) in such settings. Many more consumers were willing to have a wide variety of services provided at home via applications on their smartphones. These alternative delivery approaches, which were estimated to have the potential to save about \$65 billion annually, can be targets for pharmacist entrepreneurs creating new roles for the profession.

Professional pharmacy organizations are working together and with other healthcare organizations more effectively to advance the profession and improve patient care. Two recent examples include the commitment of major funding to lobbying focused on gaining provider status, which I now believe will occur in my lifetime, and the sharing of a common vision by ASHP and the American College

of Physician Executives for improving the health and well-being of patients.²¹

Visibility report card: Areas of limited visibility

Unfortunately, there are examples of pharmacists not being visible enough.

- There are still pharmacies in community and hospital settings where the pharmacists spend much of their time in dispensing-related roles, unseen by the public. Further, too many pharmacists are apparently content in these roles. I once listened to a presentation by Fred Eckel (the 1985 Whitney Award recipient) in which he talked about why pharmacists were complacent about seeking new clinical roles. He pointed out, “Fat cats don’t hunt.” We pharmacists are, indeed, well compensated these days, and jobs have been plentiful and easy to get. This may change quickly if models of care emerge that don’t value pharmacist services. Pharmacists must be prepared to be creative in creating new roles that are valued by patients and others.
- There is currently no requirement for a pharmacist to address the needs of every patient receiving complex medication therapy in hospitals and health systems. Progress is being made, however, as the Pharmacy Practice Model Initiative (PPMI) by ASHP will track this metric beginning in 2015,²² which will increase the imperative for this to become a requirement.
- Pharmacists generally evaluate medication orders after the fact. One PPMI dashboard item reports data on how frequently pharmacists evaluate medication orders before the first dose is administered (that figure was 79.5% for 2013).²² While this role is clearly important for patient safety, it is not a visible function that ensures ideal therapy prior to the order being written, and substantial rework can be required to correct orders.

- I still hear too many stories of patients reporting never having seen a pharmacist in the hospital, perhaps because pharmacists don’t take the time to introduce themselves to patients or let patients know what is being done for them.
- We are not at the table for many discussions of healthcare reform and often not part of the primary vocabulary of healthcare, where most of the conversation is around physicians and nurses.²³ Considering the pervasive use of medications, their suboptimal use, and the fact that we as a nation pay as much for the problems caused by medicines as for the medicines themselves, this is disappointing. A pharmacist should be in on every discussion of reforms that impact medication therapy. I remember David Zilz (the 1990 Whitney Award recipient) saying that he attempted to find every important committee he wasn’t a member of and then to figure out why not. Dave’s obvious message was that a pharmacist’s input was crucial to important decisions at the medical center. Recent PPMI dashboard results indicate that 37% of hospital pharmacy executives are not at the strategy level in their organizations,²⁴ potentially leading to relegation to roles such as keeping the drug budget low and surviving Joint Commission surveys rather than being viewed as having a clinical role in the use of drugs. This must be avoided.
- We probably still have to occasionally explain to our family what it is we do as clinical pharmacists, and many patients don’t fully understand what we can do for them or ask for the services to be available.
- Finally, we don’t have a pharmacist-centric television show that depicts pharmacists in a positive light with regard to impacting the lives of patients.

The Pharmacy River

To change course slightly away from the report card on visibility, I will now compare our profession

to a river as a metaphor to illustrate how increasing visibility and new pharmacist roles can impact patient care. Rivers often begin as small trickles that are joined by other small trickles, eventually becoming creeks, then streams, then small rivers, and, finally, broad bodies of water seeking the oceans. They start out slowly, become raging torrents rushing down mountains and pushing obstacles as big as boulders out of their way, and finally become more sedate as their influence and impact broaden. This sedate nature can change with fluctuations in weather, of course, and angry floods can occur under the right conditions. The flow of rivers may be impeded by dams that alter their influence on the surroundings, or they can be diverted to create new paths that benefit society. Living in the desert Southwest, I can also say that a formerly magnificent river can become a dry wash under adverse conditions in which its strength is drained away along its course. Without proper care, even the mightiest rivers can revert back to tiny streams or disappear altogether.

The Pharmacy River is like many others. We started in small trickles around the world by helping to relieve suffering and treating patients’ conditions with medicinal plants. For example, a book written by Shen Nung in China about 4000 years ago, *The Divine Husbandman’s Materia Medica*, gave descriptions of 365 plant-based drugs. Sadly, he tried the medications on himself first and died of a toxic overdose of a new one (now, that *really* represents commitment on behalf of patients). From these small starts, the profession moved steadfastly toward new ways to provide valuable care to our patients. The aforementioned “role of the pharmacist” articles represent trickles of activity coming together to join the main channel of pharmacy practice. Sometimes the trickles became torrents as everyone took up the roles; in other instances, only

small numbers of pharmacists continued the highlighted activity or the activities disappeared altogether.

The pharmacokinetic service I was part of is an example of a trickle that became a torrent. Therapeutic drug monitoring (TDM) provided many pharmacists with their first chance to get to the floors in hospitals, where we were then able to do things for patients beyond just being the “aminoglycoside pharmacist.” According to 2012 survey results, pharmacists now routinely monitor drug concentrations, can order drug concentration measurements, and have the authority to adjust doses of routinely monitored medications in more than 80% of institutions.²⁵ These results indicate that TDM remains a way to provide direct patient care opportunities for pharmacists, who can then take on expanded roles on behalf of patients. Pharmacists who embrace the utilization of pharmacogenomics to enhance drug dosing should have similar opportunities in the future.

In 1976, when I entered the profession, the time spent on pharmacy practice rotations for students at my college was three hours per week in a community setting for one quarter of the school year. The education of pharmacy students was targeted to the mainstream of the pharmacy River at the time—the importance of drug quality and the “four R’s”: ensuring that the right dose of the right medication is being given to the right patient at the right time. Unfortunately, the time spent actually interacting with patients was quite limited and not focused on knowing what happened to patients after they left the pharmacy. Obviously, there was not much in the way of patient-centeredness. In fact, it hadn’t been that long since the times when pharmacists were not supposed to discuss the purpose of patients’ medications with them.

We have come a very long way since those days, and I have to admit that it was exciting being a part of the

profession’s transition and watching the trickles of newly developed roles for pharmacists become the torrent of clinical pharmacy that swept the profession and created a flood of new opportunities. The clinical pharmacists of the 1970s and 1980s were pushy and expanded the boundaries of the profession.²⁶ To paraphrase a quote from the popular TV series “Star Trek,” they wanted to boldly go where no pharmacist had gone before. To be sure, dams have been and will continue to be erected along the river’s way, both internally and externally, that hamper full utilization of pharmacists in direct patient care roles, but I am confident we can overcome these obstacles.

Prescriptions for increasing visibility and value into the future

Ensuring the four R’s remains an important aspect of our role as pharmacists and may arguably be even more critical today, since we know that many patients are dying each year from adverse effects of the medications they receive. However, we must take full accountability for the four R’s rather than just assuming that a review of the initial medication order is sufficient.

There are many enemies we face as pharmacists, should we choose to take up the battle. Our enemies are not other professionals or patients who don’t recognize our value and not the lack of provider status. They are not the pharmacists who don’t live up to our expectations of accountability for optimal medication therapy outcomes, or the business practices that prevent the opportunity, nor even our apparently dysfunctional political system. These are merely challenges we face on the way to fighting our real enemies. Our enemies are preventable disease and death; lack of adherence to beneficial medications, including fear of immunizations; unnecessary harm to patients by medications; disparities in the quality of healthcare; lifestyle

choices that are harmful to patients; inadequately treated pain; drug addiction; poverty; and hunger.

Donald Francke (the 1953 Whitney Award recipient) once said, “Today’s drugs may be likened to ballistic missiles with atomic warheads, while we prescribe, dispense and administer them as if they were bows and arrows.”²⁷ Patients are harmed much too frequently by medications, and because there is proof from many studies that pharmacists can prevent or mitigate a substantial amount of such harm, it is imperative that we do so. Former Surgeon General C. Everett Koop is purported to have said, “Drugs don’t work in patients that don’t take them.”²⁸ A recent report indicated that approximately one third of surveyed patients with chronic illnesses were unable to afford medications, food, or both.²⁹ Pharmacists could moderate this by working with prescribers and patients around ability-to-pay issues at the initial ordering stage and by helping patients understand the importance of their medications in preventing long-term harm from chronic disease.

Preparing pharmacists: Changing education and training

In my opinion, the vision to have all pharmacy graduates complete at least a postgraduate year 1 (PGY1) residency has the greatest chance to positively impact our ability to provide high-quality care for patients. It was my privilege to chair the committee that crafted the American College of Clinical Pharmacy (ACCP) position on residency training for all graduates who wish to provide direct patient care and, more recently, to serve on the committee that described the need for postgraduate year 2 (PGY2) residencies.^{30,31} I also proposed ASHP’s policy on residency training to the House of Delegates. Since then, other organizations have developed policy on residency training that avoided

suggesting a mandate and rather just supported residency training. I believe the entire profession, including the colleges of pharmacy, must support this vision. With 15,000 students due to graduate annually in the next couple of years and with new schools continuing to open, we have a major challenge ahead that will require a concerted effort. Although tremendous progress has been made and considerable energy expended in the last few years to increase the number of residency programs and positions, the profession must never let up on the accelerator until the number of residency positions matches the number of graduates.

To support this vision, I believe the time has come for colleges of pharmacy to change their focus from preparing students to enter solo practice to preparing students to enter a residency. Obviously, this would appropriately put additional pressure on the colleges to participate at a much higher level in residency training.

In order to adequately educate student pharmacists, colleges of pharmacy must not hire new clinical faculty who haven't completed at least a PGY1 residency and preferably a PGY2 residency if they are to teach in specialty areas. Recently published views by ACCP on minimum qualifications for clinical pharmacy faculty support these recommendations.³² Board certification should also become the norm for clinical faculty and clinical specialists in order to continue enhancing our recognition by others,³³ which then helps increase opportunities to make a positive difference in patients' lives.

The tremendous amount of data gathered on patient interactions with the healthcare system creates opportunities for important research that improves patient outcomes. The efforts by organizations such as ASHP and ACCP to train pharmacy researchers should be continued and increased in order to take advantage of this. Also, all colleges of pharmacy

should do more to develop pharmacist researchers among their practitioner students, and more residency programs should have their residents conduct evaluative research. These efforts, which should create a bigger army of individuals skilled in research techniques, have the potential to both advance the visibility of the profession and improve patient care.

Practice change

I support the development of a consistent approach to patient care using a standardized process that every student and pharmacist knows by heart and uses with every patient.³⁴ Everyone must know what to expect when a pharmacist cares for a patient. If that is clearly visible to all, we will be fully accepted and our contributions fully acknowledged. Until we do what is obvious to all, every pharmacist in every setting should introduce themselves as pharmacists and tell patients what is being done on their behalf. Consistent provision of care and telling of the story will increase our visibility and opportunities to collaborate. I recently attended a presentation by Max Ray (the 1997 Whitney Award recipient) wherein he suggested that pharmacists tell prescribers what they are doing for the patient in order to create a covenant with both patient and prescriber. My first thought was that if everyone already knew what we did for patients, that step could be circumvented and the conversation could go straight to anything that needed to be improved in the patient's care.

Although we are the health professionals most adept in understanding cost dynamics relative to medication therapy, we need to reduce the perception of pharmacists as "pharmacops" for the formulary and insurance companies. Instead, we should function as members of a team working to provide all three of the triple aims of better care, lower cost, and better health.

We should avoid providing "distance" care from the basement or behind the counter. Merely reading laboratory tests or reacting to computer alerts and making treatment decisions without patient and healthcare provider interaction of some sort should be avoided. There is much to be learned when looking directly at or speaking with the patient or provider. I wish I had a time machine that would enable me to see how we will interrelate in the future, since technology will create even more opportunities to communicate synchronously with patients and other healthcare providers to create a form of personal contact when we can't be there physically. Technology also has the potential to help us get to the front of the ordering system when we must practice at a distance and, thereby, reduce rework caused by problems that develop. Perhaps we will have avatars—holographic or other electronically generated manifestations of ourselves—to enable us to interact with patients anywhere in the world, reducing the problems of healthcare delivery disparities in rural and underserved communities. I hope so.

Pharmacists should focus more attention on public health problems that we can do something about. We can favorably impact many public health issues important in today's world, such as obesity prevention and treatment, smoking prevention and cessation, proper antibiotic use, mass emergencies, and healthcare disparities.

Finally, the pharmacy organizations must continue focusing their attention and funds on the important issues that improve the ability of pharmacists to care for patients and create partnerships that benefit overall health. The strength that comes from working together can move mountains.

Concluding thoughts

As the Pharmacy River moves

inexorably toward the sometimes turbulent ocean of overall healthcare, a vast array of pharmacist roles are firmly established due to the efforts of many who have gone before us. I am confident there will be even more roles defined by new pharmacy pioneers as the profession deepens its commitment to being highly visible and recognized providers of direct patient care. There are certainly obstacles in the way, but a recommendation by Sister Mary John³⁵ (the 1957 Whitney Award recipient) still rings true today. She spoke directly to younger members of ASHP in her lecture, saying, “. . . do not be discouraged if you are assigned to an area where the pharmacy service is not on a professional level; accept the challenge and develop it.” While less-than-optimal practices remain today, I am confident new leaders will increase the professional level at every site over time. Our patients should learn to expect nothing less.

I have spent this lecture advocating for the increased visibility of the profession because I believe we can do much more for patients as the visible ingredient. However, it really is less about being visible or invisible and more about truly caring for our patients in a consistent manner that is readily recognized. If each of us continually strives to make the lives of our patients better through efforts on their behalf, we will have fulfilled our purpose and become indispensable ingredients in their care. When we do this, patients will ask specifically for their pharmacists, our families will be able to clearly articulate what clinical pharmacists do for a living, and perhaps we'll even get our own television series.

Acknowledgments

Thanks very much to Bill Zellmer for his considerable efforts interviewing family, friends, and colleagues to prepare a wonderful introduction. I knew he would do a spectacular job representing the past recipients.

I would now like to acknowledge the many individuals and organizations that have sustained me through the years. There are so many people deserving of praise for their influence, support, and friendship, but I can't mention every one individually. I hope you all realize that your impact has been felt and appreciated.

I want to begin by thanking ASHP for being my first organizational home and bedrock for more than 35 years. Thanks to ASHP, ACCP and the Georgia Society of Hospital Pharmacists for the opportunity to serve as a presidential officer. These and several other important organizations have helped me grow in many ways and understand the importance of working together with passionate individuals to advance the profession.

Thanks to the University of Florida College of Pharmacy for providing an excellent education that launched my career. I would like to thank the visionary pharmacists who have gone before us and created this amazing profession that I am so fortunate to have made the decision to join. We stand on the shoulders of many strong women and men who have forged new roles and improved our profession's stature along the way. The many students and residents who I have been honored to work with over the years have inspired me in countless ways and made for the best career ever. Thanks to them for the experiences.

Thanks to Harvey A. K. Whitney for being an amazing visionary and to the Southeastern Michigan Society of Health-System Pharmacists for beginning the recognition of individuals in his name. Thanks also to the Harvey A. K. Whitney Lecture Award Committee and the past recipients for giving me this tremendous recognition.

A special thanks to my employers through the years, all of whom provided encouragement to push the professional envelope. First, thanks

to Jerry Hood and the pharmacy staff at Bayfront Medical Center in St. Petersburg, where I was first taught the value of an interprofessional approach to the care of patients. Next, I extend my thanks to Mercer University School of Pharmacy for having the foresight to let a group of faculty start a private practice pharmacokinetic service and run with it. My partners in that endeavor also deserve recognition: Jamie Gilman initially and Earl Ward and Martin Job for the entire duration. Finally, thanks to my colleagues at the University of Arizona College of Pharmacy for providing a wonderful job I look forward to every day and for supporting my service to ASHP and ACCP. These organization activities were very time-consuming, but I always believed the value of serving was recognized. It has also been a privilege to be associated with Dean J. Lyle Bootman over these many years. Few people get access to such a visionary leader of the profession on a daily basis.

Lyle led the nomination of me for this recognition, and for that I am sincerely grateful. Thanks to those who wrote letters of support: Diane Ginsberg, Marianne Ivey, Marjorie Shaw Phillips, Bruce Canaday, Dan Ashby, Kelly Ridgway, and Marie Chisholm-Burns. Your belief in me with regard to this honor is most humbling.

Next and most important, thanks to my family. To my father, whom I observed taking in the thoughts of others in meetings and only speaking when he was ready to say something of great value; I wish had learned to listen as well. And to my mother, who provided whatever gregariousness I possess—my mom would speak to anyone in any setting—I wish that, too, had been passed on better. Dad and Mom would have been very proud today. To my amazingly wonderful and lovely wife, Debbie, who made me a very lucky pharmacist 32 years ago this upcoming Thursday,

thanks for supporting me unconditionally as I pursued professional and outside passions. Thanks to my brother Steve for being the “good brother,” whose practical insight over the years has been inspiring. I have been blessed with three wonderful children. Elizabeth, Cullen, and Patrick, thanks so much for caring about your father and your love. Thanks to Cullen and Jenea for giving me the three cutest grandkids I could hope for. I promise to spoil them beyond belief. Elizabeth and Patrick, I’m expecting more grandkids, and Steve Jr., I’m expecting grandnieces and grandnephews too.

Finally, thanks to all of you for coming tonight and listening to my thoughts about the profession. I am honored by your presence.

References

- Albanese NP, Rouse MJ, for the Council on Credentialing in Pharmacy. Scope of contemporary pharmacy practice: roles, responsibilities, and functions of pharmacists and pharmacy technicians. *J Am Pharm Assoc*. 2010; 50:e35-69.
- Avalere Health. Exploring pharmacists' role in a changing healthcare environment. <http://avalerehealth.net/expertise/life-sciences/insights/exploring-pharmacists-role-in-a-changing-health-care-environment> (accessed 2014 May 21).
- Peabody FW. The care of the patient. *JAMA*. 1927; 88:877-82.
- Angaran DM. My son, the clinical pharmacist. *Drug Intell Clin Pharm*. 1975; 9:298-9.
- Joint Commission of Pharmacy Practitioners. Vision statement. www.aacp.org/resources/historicaldocuments/Documents/JCPPFutureVisionofPharmacyPracticeFINAL.pdf (accessed 2014 May 16).
- USPHS Pharmacist Professional Advisory Committee. Report to Surgeon General: improving patient and health system outcomes through advanced pharmacy practice. www.usphs.gov/corpslinks/pharmacy/sc_comms_sg_report.aspx (accessed 2014 Apr 27).
- Traynor K. CDC says pharmacist-leaders crucial for antimicrobial stewardship. *Am J Health-Syst Pharm*. 2014; 71:689-90. News.
- United Network for Organ Sharing (UNOS). Attachment I to appendix B of the UNOS bylaws; designated transplant program criteria. www.unos.org/docs/Appendix_B_AttachI_XIII.pdf (accessed 2014 May 16).
- Katzen A, Condra A. PATHS: Providing Access to Health Solutions. An analysis of New Jersey's opportunity to enhance prevention and management of type 2 diabetes. www.harvard.edu/academics/clinical/lsc/PATHS_NJ_Report_3.18.14.pdf (accessed 2014 May 30).
- Nosta J. Fixing healthcare can be as close as your neighborhood pharmacy. www.forbes.com/sites/johnnosta/2014/04/10/fixing-healthcare-can-be-as-close-as-your-neighborhood-pharmacy/ (accessed 2014 Apr 27).
- Weaver K. Collaborative practice agreements vary among the states (February 19, 2013). www.pharmacists.com/collaborative_practice_agreements_vary_among_states (accessed 2014 May 30).
- American Society of Health-System Pharmacists. New Calif. provider status law expands pharmacists' practice (October 3, 2013). www.ashp.org/menu/News/NewsCapsules/Article.aspx?id=507 (accessed 2014 May 20). News.
- American Society of Health-System Pharmacists. New law allows Wisconsin pharmacists to take greater role in patient care (April 25, 2014). www.ashp.org/menu/News/NewsCapsules/Article.aspx?id=1536 (accessed 2014 May 20). News.
- Touchette DR, Doloresco F, Suda KJ et al. Economic evaluations of clinical pharmacy services: 2006–2010. *Pharmacotherapy*. Epub ahead of print. 2014 Mar 19.
- Neighmond P. Parents and teens aren't up to speed on HPV risks, doctors say (February 19, 2014). www.npr.org/blogs/health/2014/02/19/279609708/parents-and-teens-arent-up-to-speed-on-hpv-risks-doctors-say (accessed 2014 May 16). News.
- Gallup, Inc. Honesty/ethics in professions (December 5–8, 2013). www.gallup.com/poll/1654/honesty-ethics-professions.aspx (accessed 2014 May 30).
- Rapacon S. Best college majors for a lucrative career (September 2013). www.kiplinger.com/slideshow/business/T012-S001-10-best-college-majors-for-a-lucrative-career/ (accessed 2014 May 16). News.
- The National Academies. Institute of Medicine receives \$826,000 gift to establish pharmacy fellowship (October 9, 2012). www.nationalacademies.org/onpinews/newsitem.aspx?RecordID=10092012 (accessed 2014 May 16). News.
- Walgreen Co. Walgreens pharmacists instrumental in helping reduce hospital readmissions by nearly 50% through WellTransitions program (April 4, 2014). news.walgreens.com/article_display.cfm?article_id=5861 (accessed 2014 May 30).
- Health Research Institute. Healthcare's new entrants: who will be the industry's Amazon.com? www.pwc.com/us/healthcare-new-entrants (accessed 2014 May 15).
- Abramowitz PW, Angood PB. A common vision. *Am J Health-Syst Pharm*. 2014; 71:791. Editorial.
- American Society of Health-System Pharmacists. Pharmacy Practice Model Initiative: Goal 1. www.ashpmedia.org/ppmi/goal1.html (accessed 2014 May 19).
- Romano CA, Pangaro LN. What is a doctor and what is a nurse? A perspective for future practice and education. *Acad Med*. 2014; 89(Jul):1-3.
- American Society of Health-System Pharmacists. Pharmacy Practice Model Initiative: Goal 5. www.ashpmedia.org/ppmi/goal5.html (accessed 2014 May 19).
- Pedersen CA, Schneider PJ, Scheckelhoff DJ. ASHP national survey of pharmacy practice in hospital settings: monitoring and patient education—2012. *Am J Health-Syst Pharm*. 2013; 70:787-803.
- Elenbaas RM, Worthen DB. Clinical pharmacy in the United States: transformation of a profession. Lenexa, KS: American College of Clinical Pharmacy; 2009:39-78.
- Francke DE. The interdisciplinary nature of medication errors. *Drug Intell*. 1969; 1:341. Editorial.
- Ostenberg L, Blaschke T. Adherence to medication. *N Engl J Med*. 2005; 353:487-97.
- Berkowitz SA, Seligman HK, Choudry NK. Treat or eat: food insecurity, cost-related medication underuse, and unmet needs. *Am J Med*. 2014; 127:303-10.e3.
- Murphy JE, Nappi J, Bosso J et al. American College of Clinical Pharmacy's vision of the future: postgraduate pharmacy residency training as a prerequisite for direct patient care practice. *Pharmacotherapy*. 2006; 26:722-33.
- Ragucci KR, O'Bryant CL, Campbell KB et al. The need for PGY2-trained clinical pharmacy specialists. *Pharmacotherapy*. Epub ahead of print. 2014 Apr 18.
- Engle JP, Erstad BL, Anderson DC et al. Minimum qualifications for clinical pharmacy practice faculty. *Pharmacotherapy*. 2014; 34:e38-44.
- Saseen JJ, Grady SE, Hansen LB et al. ACCP white paper: future clinical pharmacy practitioners should be board-certified specialists. *Pharmacotherapy*. 2006; 26:1816-25.
- American College of Clinical Pharmacy. Standards of practice for clinical pharmacists. www.accp.com/standards (accessed 2014 May 14).
- Institute for Healthcare Improvement. IHI Triple Aim initiative. www.ihl.org/Engage/Initiatives/TripleAim/Pages/default.aspx (accessed 2014 May 30).
- John M. Hospital pharmacy . . . past, present and future. *Am J Hosp Pharm*. 1959; 16:336-8,340-1.