

---

## PROFILES OF EXCELLENCE

---

### A Link in the Chain

Walter Steven Pray

Far better it is to dare mighty things, to win glorious triumphs, even though checked by failure, than to take rank with those poor spirits who neither enjoy nor suffer much, because they live in the gray twilight that knows neither victory nor defeat.

—Theodore Roosevelt

As I began the study of genealogy, eventually I developed the overwhelming understanding that I am no more than a link in a long genealogical chain, stretching back

*This series will provide the reader with personal information and a career road map of those individuals recognized for their skills as teachers. The intent is that this perspective will help us understand how others achieved their successes and allow us to expand our pool of role models.*

*Professor Walter Steven Pray is recognized for his ability to meet the challenges of teaching, research, and service by focusing his efforts on an area of expertise. The ability to stay focused is a difficult requirement for many, especially when there are so many tantalizing diversions to tempt us. Pray's approach to choosing a topic area and then working in it is a useful object lesson and one that deserves consideration and emulation.*

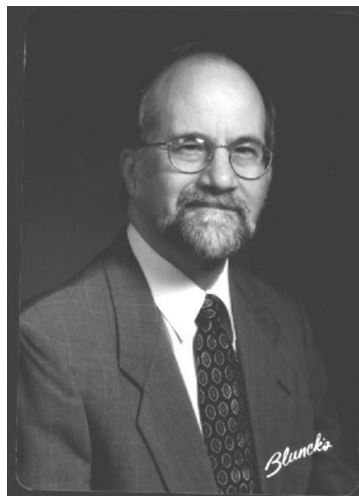
*Steve Pray concentrates on keeping his efforts relevant to the reality of the practice that his students will face. This is an important reminder that, at the end of the educational process, students will be practitioners and must be prepared to be good ones. This is an important insight even for those who teach basic subjects that appear to have little relevance to everyday practice. What can we do to make even these courses have relevance for our students?*

Dennis B. Worthen

---

Walter Steven Pray, Ph.D., R.Ph., is Bernhardt Professor of Pharmaceutics at Southwestern Oklahoma State University College of Pharmacy, 100 Campus Drive, Weatherford, OK 73096.

Journal of Pharmacy Teaching, Vol. 10(2) 2002  
<http://www.haworthpress.com/store/product.asp?sku=J060>  
© 2003 by The Haworth Press, Inc. All rights reserved.  
10.1300/J060v10n02\_06



through my many ancestors—and stretching uncountable millennia into the future through my descendants. Any impact I make in this life is limited by the strictures of time. My papers and books will eventually be forgotten, and my very existence will be known only to a few of my distant kinfolk who might share a similar interest in genealogy. That said, it is vital to share briefly the circumstances under which I came to be, since it is my firm conviction that I was shaped (as we all are) by the actions, thoughts, and experiences of all of those whose genetic heritage I carry.

I was born in Holdenville, Oklahoma, on September 21, 1949. My precious and beloved mother, Flossie Wynema Withrow, is the Scottish descendant of two Revolutionary War patriots, a Confederate soldier (Private Stewart English Withrow—defender of Vicksburg; killed at the battle of Jenkins' Ferry late in the war, leaving behind a widow and twin sons), a Tuckahoe Cherokee Native American, an original Chisholm Trail-riding cowboy, and many other pioneers with equally captivating stories. My dear and devoted father, Walter Leroy Pray, was the descendant of Tory sympathizers in the Revolutionary War (who were forced to move to Canada after they backed the wrong side), Swiss and French settlers of the Republic of Texas in the 1830's, Confederate and Union soldiers, territorial peace officers, gunsmiths, and German pioneers. Several of my ancestors participated in the Oklahoma Land Run of 1892, living on the prairie in sod houses lit by oil lanterns, deathly afraid of Indian raids.

Dad enlisted as a Marine in 1943. During his basic training in California, a film crew shot exterior scenes for the patriotic Wallace Beery movie, "Salute to the Marines." In the closing scenes of the movie, Dad's confident 19-year-old face marches resolutely toward the camera. Dad was stationed on the small Pacific island of Emirau and served as a ground crew for bombers, replacing ordnance dropped on the Japanese-held islands. He was also a bombardier, sitting in the B-25 bomb bay while bombing runs were underway. He had been told that they would be among the first wave to invade the Japanese homeland. Hiroshima intervened to save his life.

My mother was a secretary in a medical clinic in Holdenville in the mid-1940's. Mom and Dad were introduced by Dad's grandmother. They exchanged letters, met, and married in 1946. I was their first child, born in 1949 when they felt financially able to support a child. A sister, Sheila Wynema Pray, was born on January 2, 1953. Our family was complete.

After the war, Dad searched for jobs that would bring financial security. He had moved around Texas so frequently as a young boy that he felt unable to take advantage of the G.I. bill and attend college. However, he vowed with my mother that nothing would stop his children from getting a college degree.

Dad painted, laid tile, and became a dump-truck hauler in 1955, while Mother gave us her devoted love at home. Eventually, Dad scouted a location and leased land to develop the Pray Sand Company, selling sand to haulers who were building the Oklahoma highway system. Mom became prominent in activities of the PTA, Boy Scouts, and Girl Scouts. Dad drove our band bus. We regularly attended the First Methodist Church of Holdenville, where I had been baptized in 1950. Mother began work in a Holdenville credit agency in 1962.

I recall as a first and only child (until Baby Sis came) that life was good. I had an abundance of toys, a terrier, and playmates and peers among whom I felt accepted. Then Sis came, and I was forced to bow to the inevitable sharing of my parents' affections.

Even worse, in 1955, at the age of 5 years, I began first grade at Diamond School in Holdenville. This was without the benefit of kindergarten, preschool, baby-sitters, or transitional first grades. We were suddenly thrown in with 25-30 other strangers, ranging from compliant to unruly, 5-7 in age, large to small, and kind to nasty in demeanor. I had the misfortune to be the smallest and youngest of my class. The first six years of school were for me a time of intense struggle because of the tendency of grade school students to bully those who were younger or smaller. I was the designated butt of much of the aggression of the older boys. I only mention that six-year trial to point out the means by which it shaped me into the person I am today. Inherently peaceful, I was forced to defend myself with fisticuffs to prove that I should not be pushed around.

One of the good things that occurred during my stay in Holdenville was a talk given to the new seventh graders by our junior high school principal, a kind, white-haired gentleman named C. T. Bronaugh. He told us that we were all starting even at the starting line like a big horse race. He said that we would begin the race, and some would fall behind,

some would draw into the lead, and some would eventually win. Then he said the race was a metaphor for life. Our goal should be to decide where we wanted to be in this race and to begin to run to accomplish that objective. I will never forget his meaningful introduction to life. In junior high, I began to play clarinet, developed talents for Spanish and English, was pretty decent in science and math, but hated history and social studies. Even then, I questioned the objective of each class I was in. I could see the value of algebra but could not understand why I had to learn the average rainfall in Peru or the principal export of Uruguay. Although life in Holdenville was a trial, it was a town steeped in traditional values, prayer, saluting the flag, and reverence for family and church.

My parents bought a Honda 50 motorcycle for me in 1962, and it was a struggle to make me stop riding it and concentrate on school. It was the first of its kind to be seen in Holdenville. My friends all rode the older, slower Cushman Eagles.

In 1963-64, my father entertained an unusual job offer. He had not wanted to move us around in the way he was moved during the Depression, but this was a tempting proposition. His younger brother, Glenn Pray, had recently acquired the Auburn-Cord-Duesenberg (ACD) company, a famous manufacturer of prewar automobiles that had not survived World War II. Glenn had made a living restoring old automobiles from the original stock he had purchased but had decided to market a new Cord automobile. He hired Gordon Beuhrig, the original Cord designer, the "wonder kid" of ACD during the 1930's. They created a Cord with axles that were 8/10 the length of the original wheelbase (hence the name "Cord 810") that was to be a sporty, hand-built automobile. However, Glenn needed a plant manager to help ensure that the assembly line hummed. Dad was asked to undertake this tremendous challenge. He and mother decided jointly that it offered a better future than life in Holdenville. Dad shut down his sand company, and in the summer of 1964, we moved to Broken Arrow, Oklahoma, the site of the plant (it remains there today). Glenn sold Cords until his venture capitalist backers ejected him from the company (see the movie *Tucker* for a similar scenario), eventually going on to re-create the 1937 Auburn. Dad parted ways with Uncle Glenn in the late 1960's, becoming a building engineer for the Union (Oklahoma) School District, laboring there until he retired. Upon our move to Broken Arrow, mom became a secretary for the large Tulsa cemetery, Memorial Park, a position she retired from when she reached her 60's.

When we moved to Broken Arrow in 1964, no one knew me. I had left the bullies behind. I seized the opportunity to make new friends, and finished grades 10, 11, and 12 as a happy, well-adjusted student. I did not stand out in my class and had not yet developed leadership skills. I worked part-time at the automobile plant, delivered *Grit* newspapers, and obtained a job as sack boy at a Humpty Dumpty supermarket. The only class for which I displayed any special aptitude was Spanish. For some reason, it seemed to be a natural for me. I briefly entertained the notion of a job as an interpreter in some government capacity (e.g., an embassy).

However, when it was time to seriously consider my career choices, Dad related to me that when he was a boy in the Depression, he had made deliveries on his bike for the local drugstore, and sometimes received a nickel tip. The only businesses in his small Texas hometown that prospered were the pharmacy and the local brothel (to which he frequently delivered medicines). I vividly remember his voice, "Steven, when the *next* Depression comes, you'll have a job!" Mom's quiet counsel was equally strong in helping ensure that I kept my grades up through high school. Youth today must remember that the Depression was the shaping event for parents of the baby boomers. They were absolutely sure that it would happen again. It was a foregone conclusion, and their lives were spent preparing against the return of sudden financial ruin.

Mom and Dad also constantly watched the ads in the *Tulsa Daily World* and *Tulsa Tribune* to be sure that pharmacists were in demand. They were absolutely floored to learn that 1966-67 salaries for pharmacists were \$1,000 monthly. They said with amazement, "Steven, do you know *how much money* that is?" Their wisdom in choosing pharmacy for me seemed validated because their own salaries fell far short of that magical figure.

I spoke to my high school counselor, Fred Gesin, who confirmed that pharmacy would be an excellent choice, given my grades, interest areas, and results on standardized tests. He recommended Southwestern State College in Weatherford, right off Route 66 and Interstate 40, two hundred miles away from home. He assured me that it gave one of the most practical educations around. I applied and was accepted to the college. I began in 1967, but there was no money for a car. To visit my parents, I carried my packed suitcase a couple of miles from Parker Hall to the Weatherford bus station on Friday afternoon, rode the Greyhound through the infamous Oklahoma City bus station, and was picked up in

Tulsa by my parents. On Sunday afternoon, I reversed direction and went back to Parker Hall.

At Southwestern, I invented myself again, discovering a group of lifelong friends, most of whom came from small rural high schools. Many of us were the first of our family to attend college, carrying all of the hopes and dreams of our postwar, Depression-surviving parents on our shoulders.

We were determined to succeed. Mr. Bronaugh's speech still rang in my ears, along with the compelling fact that my attendance at college was wholly dependent on my parents' sacrifices. Many years later, my father said, "Steven, there were times when we paid your tuition, that I didn't know how we were going to eat that month." My dear mother's economy and ingenuity, coupled with my parents' absolute determination to get us through college, made it possible. Dad and Mom seldom bought themselves new clothes during that time, and Mother patched, sewed, and mended. Together, they managed to send me \$10 weekly for spending money, in addition to paying every expense associated with college. Being a typical, self-absorbed college student, I never fully realized the extent of their loving, uncomplaining sacrifice.

I never really wavered from pharmacy. I was originally scheduled to finish pharmacy school in four years, rather than five, which would only have been possible if I went to summer school each summer and took 18 hours of solids virtually every semester. After my freshman year, I began my first summer. Since we were required to have three years in pharmacy school, I applied for pharmacy school in the summer of 1968 and was admitted at the age of 18 years, perhaps one of the youngest pharmacy students in the nation before or since. The next semester, I pledged and joined the Alpha Omega Chapter of Phi Delta Chi and began to attend Wesley Foundation, the United Methodist collegiate youth group. My grades continued to be acceptable; the alternative was becoming a statistic in the rapidly escalating Vietnam War.

After a second summer school in which I took Physiology I in June and Physiology II in July, I was approaching burnout, even though I had set curves in both physiology courses. I asked my parents if I might not be able to slow down, and they agreed that I would no longer attend summer school. I lightened my load considerably, took electives, and participated more in college life. My first summer off (1970), we realized that I had to get a pharmacy job. At that time, in Oklahoma, we were forced by the State Board of Pharmacy to obtain 2,000 hours after graduation before we could become registered pharmacists. We could obtain 1,000 hours in summers before graduation (as "externs"), but we

were required to take another 1,000 hours after graduation (as “interns”). This onerous law was a method by which retail pharmacists ensured a steady supply of cheap help while paying lip service to the old apprentice system. In light of that, taking two summers off to work seemed a good idea. By working the maximum allowable 40 hours a week for 12 weeks during 2 separate summers, we could barely complete the 1,000-hour requirement.

I was unfamiliar with Tulsa driving, so Dad and I set out to find a job. My first stop was a local pharmacy, Jones’ Drug of Broken Arrow. Haskell Jones, the owner, said, “I don’t really have anything, but if you can’t find anything else in Tulsa, come back here.” We drove all over Tulsa, and I trudged wearily into independents, hospitals, and chains. There was simply nothing because so many students had lined up jobs before me. (These were the days of capitation grants, when enrollments in pharmacy schools became considerably bloated.) I returned to Mr. Jones, where he made me the following offer, “I can only pay you \$35 a week, but you only need to work as much as you want, and we’ll teach you pharmacy!” I accepted on the spot and started to work at 8:00 a.m. the next morning. I had to start from absolute zero knowledge base: “Here is the phone. Doctors call us with new prescriptions. This is what a prescription looks like. These are the refill files.” In spite of a *steep* learning curve, I began to feel more comfortable day after day. Eventually, phone calls started to come in, asking for Steve (I changed from Steven to Steve in junior high) to help them. Haskell explained that he had graduated in 1940, before the era of antibiotics or of any modern medicine. He stressed the value of lifelong learning, as he had been forced to do. The other pharmacist was a recent graduate, Larry Walker. We bonded because he had also been in Phi Delta Chi. He spent hours showing me the differences between the medications and walking me through the process of filling prescriptions. To maximize my learning, I worked about 70 hours a week most weeks, bringing in the princely sum of 50¢ per hour. I made deliveries to the nursing homes in my own car, a 1970 Ford Maverick my parents had bought for me the previous semester. In the front of the store, I listened to patients’ complaints, relayed the information to the pharmacist, and showed patients the nonprescription products the pharmacist recommended. I had my foot in the door. And, when I returned to pharmacy school in September, things made sense.

However, I experienced a work-related awakening in other ways. As I began to listen closely to my teachers’ lectures, I (with the benefit of three months’ experience!) began to question the value of the material I



was forced to learn. Did I really need to know whether old chemicals were official in the U.S.P. or N.F.? Was there a reason for me to memorize structures? Were any of us in the pharmacy ever asked to provide a chemical structure? I had lost the passivity that characterized my pre-work class days. As a result, I organized a mini-revolt my senior year (more about this stellar aspect of my career later).

The second summer, I applied for a position in Oertle's, a chain store in Tulsa. I drove up and down the Broken Arrow Expressway each day, working in the big city. I quickly learned to fill prescriptions with speed, with the help of a bevy of pharmacists, an intern pharmacist, and technicians. We might fill 400-500 prescriptions a day, stuck in an area in the back of the store, unable to exit the pharmacy for consultations. I missed the previous summer's high patient contact. Nevertheless, the lure of more money had made this job attractive. I was able to save some and help my parents a little. Also, I obtained one of President Nixon's Health Profession Loans, which eased their burden and allowed them to begin my younger sister's pharmacy school savings. After graduation, I dutifully made every loan repayment, right on time, until it was completely repaid.

Working at Oertle's during the summer of 1971 made my senior year easier because I had handled even more medications. Once again, I questioned the value of my education, except now I was to gain the means by which I might do something about it.

During 1970-71, I gingerly began to assert leadership. By one vote, I was elected President of the Inter-Church Council, a campus organization that was attended by two members from each church youth group on campus. In my new capacity, I helped organize a week in which we invited various pastors to address our group. My success in that position gave me the confidence to successfully pursue the presidency of the Wesley Foundation for calendar 1971. Buoyed by my successful campaigns, I was determined that I would achieve something within my own future profession. I spoke with the president of the Student American Pharmaceutical Association about the details of his work and the nature of his time commitment. I resolved that I could handle it and became my own campaign staff. I created signs which read, "Pray for the Future of APhA," and similar slogans that played on my rather unusual last name. I was elected in a race that featured other candidates whose work in APhA was more extensive than mine. The Phi Delta Chi vote helped, as did the fact that many of the departing seniors had known me in their classes when I was still on the accelerated program.



I attended the 1971 San Francisco APhA convention as president-elect and heard various California doctor of pharmacy students declaring that retail pharmacy was a dinosaur whose time was over. I returned with a vow to make retail pharmacy continue to live.

By September of 1971, I was prepared for a year of service, beginning my final semester as president of the Wesley Foundation and beginning the first semester of my APhA presidency. Dr. Bernard G. Keller, who was the APhA advisor, served as my initial mentor. During that first month, we held the first meeting of the Dean's Advisory Council, an organization consisting of all of the organization presidents, representatives from the pharmacy school publications, and representatives from each class. I was nominated for president. I declined, stressing that I would be too busy, but was elected over my protests. I thus began the year with three presidencies. In my capacity as president of the Dean's Advisory Council, I appointed a Curriculum Study Group. It was time to put my ideas about the antiquity of our curriculum into action. I obtained input from students and eventually asked to present my list of recommendations to the School of Pharmacy Curriculum Committee. The Dean, Walter L. Dickison, agreed, and I told the assembled professors what we thought should be eliminated from and added to their courses. The faculty members expressed their gratitude for our input.

I also led a mini-revolt. In the absence of the school's administration (attending a national meeting), an assistant dean posted a notice stating that all students would be forced to undertake a one-semester clinical rotation. I had two summers of retail work under my belt and felt I was already adequately prepared. I also did not feel that my parents' hard-earned tuition dollars should be spent in more forced-labor activity. Accordingly, I held an emergency session of the Dean's Advisory Council. (Teachers and administrators were not invited!) We made our demands simple. Under the terms of our agreed-upon enrollment, we demanded to be allowed to take our additional semester of class in lieu of practice. When the Dean returned, he found an open revolt. He actually acceded to our wishes, and those of us who wished to were allowed to complete class work, while those who wished were allowed to attend rotations. Of course, the wisdom of experiential rotations eventually won, and they became a staple of virtually all pharmacy programs. Thus ended my campus protest days.

After stirring up the troops, I wasn't sure that I would still be well thought of by the faculty. Apparently, all was forgiven. At our senior awards convocation and banquet, I was selected to receive the coveted Eli Lilly Leadership Award for 1972, the APhA Advisor's Award, the

Special Recognition Award, and the McKesson and Robbins Leadership Award. I was the APhA president, so I was the speaker for the banquet. My parents were invited to attend, and one of my proudest moments was receiving awards which validated their sacrifices in sending me to pharmacy school.

After graduation in May of 1972, I was ready to set out to finish the last 1,000 hours of my internship at Oertle's in Tulsa. I worked there for a couple of weeks, when I gave a phone reading to another pharmacist in Broken Arrow, Jack Ross of Ross Drugs. He knew of me and asked if I might consider quitting Oertle's and coming to be his intern. I visited and was excited at the prospect of returning to a store with more patient contact. I gave notice at Oertle's and began work at Ross Drug.

I finished my internship at Ross and completed the state board, becoming R.Ph. #8389 on February 7, 1973. In an unwise career move, I decided to pursue a higher-paying job at a downtown Tulsa retail pharmacy. The salary was the long-awaited \$1,000 per month, but the working conditions were intolerable. For instance, the owner did not allow any reading material in the store because it might interfere with our automaton-like filling of prescriptions. I felt like a filling robot. One night, I read about Neighbor for Neighbor Free Clinic, then operating on a shoestring budget in North Tulsa. I visited and was the first pharmacist to volunteer there. I worked 9-10 hours a week and began to feel like a real professional again. I was in charge of a linen closet full of samples and consulted with physicians about therapy. The retailer for whom I worked discovered that I was doing this after hours and asked that I stop because he was afraid that working with disadvantaged patients would affect the way I priced his prescriptions and that I might be tempted to discount them by a few pennies. That was literally the last straw. I gave my notice and accepted a position as a hospital pharmacist at St. Francis Hospital in Tulsa in the fall of 1973. I took a pay cut to \$825 monthly to extricate myself from the former situation.

I was again on a steep learning curve because I had not been prepared for hospital pharmacy in college. Everything I learned was new, from IV admixtures to hospital packaging. I enjoyed the camaraderie and professional interactions in the hospital pharmacy. Unfortunately, I became too ambitious and began to realize that there were 11 pharmacists in front of me in seniority. By the time I might be considered for Chief Pharmacist, I might be 30- or 40-years-old, a veritable eternity to a 24-year-old.

I decided to pursue my newfound interest in hospital pharmacy by writing to St. Anthony Hospital in Oklahoma City about a residency in

hospital pharmacy. Several days later, the Director, Mr. Kelly Dougherty, asked me to visit him. I was impressed and accepted a position, to start in July of 1974. My residency occupied me from July 1, 1974-June 30, 1975. I made \$550 monthly.

I enjoyed my residency and decided that the clinical practice of the Indian Health Service might be an appropriate goal, allowing me to combine hospital work with patient contact. I explored the possibility of a graduate degree with the help of Dr. Keller and was accepted to the Master in Public Health (Health Administration) program at the University of Oklahoma College of Public Health, to begin in August of 1975.

I didn't want to attend graduate school and have to work, so I decided to work at several other jobs to save enough money to allow me to take the school year of 1975-1976 off. I worked Saturday mornings at a retail pharmacy in Midwest City and weekends and nights at a Target store in Norman.

Working at Target allowed me to amass sufficient savings to enjoy graduate school without having to work and had another unexpected benefit. While working in the pharmacy, I began to notice a lovely young nursing student who was the head of the cosmetics department. She asked for my help in moving her displays, such as a large fish bowl in which she had immersed waterproof cosmetics to catch her customers' eyes. Neither of us was attached at the time, and eventually she succumbed to my repeated requests for a date. We met in May, and on December 20, 1975, Carole Lynn Grayson and I were married.

After the relative difficulty of pharmacy school (memorizing endless structures), the atmosphere in the College of Public Health was a welcome change. We were asked to mull over such matters as managerial styles, epidemiological puzzles, biostatistical methods, human ecology, environmental health methodologies, and hospital/health maintenance organization matters. Every day was an absolute joy.

Although I had originally intended to enter the Indian Health Service with my M.P.H., I gradually began to understand that I would also be qualified to teach at my alma mater. There, I could right some old wrongs. I would be able to reemphasize retail pharmacy and give the students practical information. I would be able to begin an emphasis on hospital pharmacy as another real career choice.

I asked about a job and was called for an interview. It went well, and I was offered an Assistant Professorship at the grand sum of \$13,640 for 9 months. I finished my master's paper (on the problems in staffing and funding free clinics) and all other M.P.H. requirements and received my

M.P.H. in July of 1976. My parents arrived with a U-Haul, and Carole and I moved our few belongings from our apartment at 28th and Walker in Oklahoma City (now a high-crime area) to an apartment in Weatherford. I taught my first classes in late August of 1976. I was assigned a required course in hospital pharmacy products, an elective in hospital pharmacy, one dispensing lab, and was to help in a sterile products lab. After my residency and master's, these courses seemed to be a good fit. About two weeks into the semester, the Dean came to my office to ask if I could possibly add another course to my load. The original teacher had accepted an administrative position and needed a substitute. Who would turn down his new Dean after only a week on the job? I reluctantly accepted the nonprescription products course. My previous retail work made it seem like I could do it.

I prepared nine hours of lecture each week, was responsible for one three-hour lab, and helped in two more three-hour labs. The spring semester was similar, and in summer, I taught as many as 9-10 sixty-minute periods and was responsible for 1-2 three-hour labs. Having an intense load required me to prepare for my lectures with little wasted effort.

I began to attempt to achieve my goals. I instituted in-class ampule and vial practice. I eliminated needless information from my hospital products course (such as memorizing the naming of fluorocarbons). I designed a lab series that provided intense hands-on work in laminar flow hoods, including piggybacks and TPN preparation. I tried to bring practical information to the students. I worked every other weekend at a local hospital pharmacy to help ensure that I was up-to-date in my teaching.

After three years of being stuck with a master's degree in an institution that did not reward lower academic levels adequately, I realized that it would be in my interest to attend graduate school. During my fourth year (1979-1980), I made plans to further my education. I began discussions with colleagues and decided to pursue my hospital pharmacy interest by obtaining a Ph.D. in Clinical Pharmacy. I discovered that the only two degree programs in that area were at the University of Iowa and Purdue University in West Lafayette, Indiana. My wife and I took a long, cold trip to both sites in the winter of 1979. People at both campuses were very friendly, but it appeared that Purdue's program would be more suited to my career goals. I thanked Iowa for the hospitality and prepared to enter Purdue. Southwestern granted me a sabbatical to allow me to attend Purdue.

In the summer of 1980 (one of the hottest on record in Oklahoma), we packed up the mobile home we had lived in the last three years, and had it hauled 800 miles northeast to Indiana. It arrived shortly after we did, and we moved to Maples Park, to a special cement footing the owner had poured for our 70-foot-long trailer.

My wife had finished her nursing degree at Southwestern in May of 1979 and began to practice as a labor and delivery nurse at Home Hospital across the Wabash River in Lafayette, Indiana. Her income and my savings from my part-time job allowed me to survive on a teaching assistant's salary (then less than \$600 monthly).

I was required to choose a major professor. God smiled on me when I decided to choose two fine gentlemen, Nicholas Popovich and Kenneth Kirk, as co-major professors. Ken Kirk relocated to the University of Texas at Austin after the first year I was at Purdue, and he remains a valued friend. However, I was to enjoy the mentorship and friendship of Nick Popovich the entire three years I was at Purdue up until the present day.

As a teaching assistant at Purdue, I worked in the student dispensary and provided assistance to Tom Wilson, Holly Mason, and Bob Bennett. Each of these fine individuals provided excellent guidance during my time there. I was also a teaching assistant for Dr. Popovich in his non-prescription products course, an experience that was to have important ramifications later in my career.

Because of my past experience with education, I felt the need to take course work in educational technology. I was fortunate that my committee agreed to allow me to take four courses in education-related areas. I was able to learn the principles of teaching young adults, was able to learn about the construction of valid examinations, and was exposed to new educational methodologies, providing insights I had not had during my first four years of teaching.

Purdue proved to be an excellent environment in which to refine the educational philosophy I had begun to develop. In seminar discussions with Dr. Popovich and other Purdue educators, I entered into spirited debate on the age-old question of whether to teach students theory or practice. As I mentioned, my undergraduate lectures had been filled with theoretical discussions that proved to be of no practical significance to a practicing pharmacist. At the same time, many of the matters I needed in practice had not been touched on in my undergraduate journey. In one heated debate on the Millis Report, the esteemed Dr. Robert Chalmers described a mission of education as preparing students for a world that did not yet exist, in hopes that they might create that world

upon graduation. I forcefully expressed the opposite view—that the overriding mission of education was to prepare students to practice competently in the present environment—and stated that the only way to achieve this goal was for all pharmacy educators to practice pharmacy part-time. I explained that no one could predict what shape pharmacy would take in the next decade, so preparing students for a world that did not exist (and may never come into being) without giving them the knowledge and skills to practice in the world that did exist was educational malpractice. I have adhered to that philosophy for several decades, teaching a course grounded in the reality of retail pharmacy practice.

As my course work progressed, we began to consider a research project for my doctoral dissertation. In a meeting, Dr. Bruce Carlstedt shared a difficult problem with which he was dealing. His doctor of pharmacy students were required to take a semester of class work and a semester of experiential rotations. He wondered whether there might be a means whereby their readiness for either could be assessed to ease the process of making the assignments. I explored the issue with a psychometrician, Dr. Ernest McDaniel of Purdue, who suggested that my project was akin to creating a standardized examination. I designed my project to follow all of the steps required in designing national examinations such as the PCAT or NABPLEX. I created a bank of over 300 questions which were content validated by a panel of 18 experts and assigned to 1 of a host of competencies. I gave 2 preliminary versions of my examination to almost 900 pharmacy students from 33 schools of pharmacy. A final examination was given to 91 doctor of pharmacy students at 13 institutions. To my knowledge, this was the first standardized examination created to assess the competency of doctor of pharmacy students that used a control group of B.S. students during the norming phase, yielding concrete data to measure the differences in competency between the B.S. and Pharm.D. student. I successfully defended my 347-page dissertation and was awarded the doctor of philosophy in Clinical Pharmacy/Pharmacy Practice on August 3, 1983.

During our stay at Purdue we increased the population of West Lafayette. Our first son, Joshua Jameson Pray, was born in June of 1981 at Home Hospital. Our second son, Gabriel Elijah Pray, was born in February of 1983 at Home Hospital, shortly before I finished my program. I was blessed to be able to be present at the birth of both of our perfect baby boys.

In early August of 1983, our convoy began the 800-mile trip back to Oklahoma. My parents took the lead in a large rental truck packed with



our belongings and their grandson Joshua. My wife and baby Gabriel were in the middle position. I brought up the rear in a car packed with books, dissertation materials, and odds and ends from the mobile home we left behind.

We moved into an apartment in Weatherford, and I was assigned a three-hour hospital products course, the two-hour OTC elective, and 4 three-hour labs. With Dr. Popovich's example, I began to incorporate clinical insights into the nonprescription elective. I continued to improve the hospital course, creating a laboratory manual for the hands-on lab that met once weekly. In late 1983, I sought a part-time job to supplement my income. There was no hospital pharmacy job open in the area, so I obtained a part-time job at the local Wal-Mart. Each Tuesday night and every other weekend, I counseled dozens of patients on nonprescription products.

We bought a home in October of 1983 and became permanent residents of Weatherford. My wife worked as a nurse. We reestablished ourselves as members of the local Methodist church. Our sons began their journey through the school system. My doctoral research won the Lyman Award for 1985 as the most significant contribution to pharmacy education literature. Dr. Popovich and I accepted the award in Toronto. Sharing the award with my mentor also qualified as one of the greatest moments of my career.

I began to envision extending my dissertation research by asking NABP in 1987 if I might be allowed to conduct taxonomic research on the exam. While NABP president Eugene Argo stated that it would not be possible, he also asked if I might be interested in an assignment on the NABPLEX Review Committee, the prestigious group charged with creating the NABPLEX. I eagerly accepted and began a long association with that august body.

In 1988, I was contacted by Dr. Steven Strauss, then the editor of *U.S. Pharmacist*. He asked if I would write a series of articles on hospital pharmacy topics for the hospital version of the journal. I completed several on deadline, at which point he asked if I would undertake the authorship of "Consult Your Pharmacist" for the general circulation version of the journal. I accepted, realizing that the ability to reach 107,000 pharmacists would be an incredible opportunity to raise awareness of nonprescription product therapy.

Eventually, I no longer felt up-to-date in hospital pharmacy and asked that the hospital courses be assigned to another faculty member. I was left free to concentrate on nonprescription products. I labored with great difficulty to move the course from a two-hour elective to a



three-hour required course, and eventually to a four-hour required course.

At this time, my various self-care activities began to achieve a certain synergistic effect:

- My work in the retail pharmacy allowed me to expand my skills in nonprescription counseling. Further, each morning, I was able to bring to class counseling scenarios drawn from the previous night's patient encounters. Encountering actual patients also sparked ideas for topics that I might cover in my monthly columns.
- By writing 12-15 articles each year, I was forced to make an intensive investigation into self-care issues and minor medical conditions by examining thousands of articles written for the physician literature. The principles and assessment methods I learned were put into use in my retail experience as I questioned people closely about their conditions. I also used my articles to create a class packet that allowed my students to gain an expanded awareness of appropriate care of minor medical conditions.
- To my knowledge, all other pharmacy schools only teach nonprescription products once yearly. Our school is the single exception, allowing me to teach sizeable classes three times yearly. Thus, within a few short years, I rapidly amassed the equivalent of several decades of teaching nonprescription products. (Teaching for the last 12 years has given me the equivalent of 36 years' experience at any other university!) To date, I have taught nonprescription products in one form or another over 60 times, far more than any other faculty member will ever be able to teach at a once-a-year pace, given the present life span of the average professor. While many would balk at such a schedule, it has numerous benefits. The class sizes are smaller, and their greater intimacy seems to give the students a freedom to ask questions during lecture. In a typical class period, we cover wide-ranging issues of interest to students. Also, covering the class three times yearly forced me to continually keep updated in the area of OTCs. Finally, teaching this course alone three times yearly constituted my entire didactic burden, freeing me from the necessity of preparing didactic materials for other courses that covered prescription products. My classroom experience supported my other activities because I was forced to closely examine each minor medical condition before lecture in order to present it clearly to the students. This allowed me to more clearly prepare articles covering those conditions. I

also took the methods I taught in class to my work site, putting them into practice.

- My work on the NABPLEX Review Committee allowed me to help set the national standard by which prospective pharmacists would be judged competent to practice pharmacy in the area of nonprescription products. I was the only nonprescription specialist on the committee for many years, charged with the responsibilities of creating new questions and checking all questions for accuracy and validity.

These four activities merged until they assumed the shape of an interlocking, tightly constructed, self-reinforcing specialty dominated solely by nonprescription products and minor medical conditions.

In the early 1990's, I realized that my accumulated knowledge would be lost unless it was shared. I felt the need to provide a blueprint by which the pharmacy student and pharmacist might clearly understand the realm of nonprescription products and devices. I had developed a philosophy of the pharmacist as a "triage specialist," being the only health care professional able to advise retail pharmacy patients in minor medical conditions.

In the mid-1990's, I became determined to write a nonprescription product text that would meet the needs of students and practitioners by focusing on minor medical conditions and their appropriate treatment. It would be the only single-author nonprescription products textbook ever attempted—a daunting challenge. As I discussed my project with fellow professionals, I met widespread discouragement. The general feeling was, "You'll never make any money writing a textbook. You can't possibly write every chapter yourself." However, I felt that my long practice experience would give the book the grounding in reality missing in books written by those who did not work in retail, and I was determined to persevere. Further, a single author would give the book a vision missing in books written by a committee of authors, each with his or her own unique vision of the triage role of the pharmacist, often at odds with other authors in the same book.

I began writing chapters in 1995. The long process of book production culminated in the appearance of *Nonprescription Product Therapeutics*, published by Lippincott Williams & Wilkins in 1999. It has become a standard in the field, being widely adopted by schools that agree with the philosophy of the pharmacist as a triage expert.

In the early 1990's, I also began to work with industry on a widespread basis. I became a consultant in the areas of new product launches,

patient publicity efforts, pharmacy continuing education lesson production, and other matters. I provided live satellite continuing education lessons for thousands of pharmacists; wrote copy for new product launches; helped with patent applications; created copy for ad campaigns; became a national spokesman for product campaigns; gave countless media interviews for radio, television, newspapers, professional and lay journals; and advised industry officials on many confidential matters related to issues such as Rx-to-OTC switching.

In the 1990's, I also began to provide legal advice and to serve as an expert witness in several areas, including misfills, resistance to pediculicides, and dangerous nonprescription ingredients (e.g., ephedrine, phenylpropanolamine), working with firms across the nation.

In the late 1990's, I was challenged by my friend and mentor Dennis Worthen to explore the possibility of writing a book that would explain the means by which nonprescription product laws came to be. I accepted and began a plan of attack for my second book. I retrieved hundreds of articles from period newspapers and journals to gain a sense of history from firsthand reports. The compelling stories behind the passage of the 1906 Pure Food and Drug Act, the elixir of sulfanilamide tragedy, and the thalidomide incident came alive as I became deeply engaged in research. I read extensively in the Congressional Record to discover the facilitating or obstructionist views expressed by the senators and representatives who passed the laws. I took an in-depth look at the machinations of Orrin Hatch in passing the retrogressive 1994 Dietary Supplement Health and Education Act. This book, *A History of Nonprescription Product Regulation*, was published in July of 2003 (Pharmaceutical Products Press).

In 2002, I was honored at the university by being selected as the Bernhardt Professor, an annual award endowed by a prominent alumnus and his wife. To be considered for the Bernhardt Professorship, one must have amassed a long record of excellence in scholarship, teaching, and service. The Bernhardt Professorship is our campus' equivalent of the Nobel Prize, and I was humbled to have been the 2002 recipient.

At this time, I concentrate my activities on several fronts. I continue to be heavily involved with church activities. I accepted a voluntary position as director of the pharmacy at the Agape Clinic, a local free clinic serving the needs of the medically disadvantaged of our county. I coordinate volunteers and ensure that we have adequate supplies for our patients. I also speak on a voluntary basis to local and state groups on health quackery.

I provide seven-hour continuing education sessions around the state

on nonprescription products and devices. I am completing the fourth series this year and will start the fifth in 2004. At the end of the series, participants will have completed each chapter included in my textbook.

I continue to publish 13-15 articles each year, most directly connected to nonprescription products and minor medical conditions. I still work at Wal-Mart each week, although I gave up weekend work several years ago to spend more time with my family and church.

My industry contacts remain active. I work with several companies on matters related to Rx-to-OTC switching, new product launches, and educational efforts for both consumers and pharmacists.

I am in the process of revising my textbook and overseeing various additional publishing activities connected with it. With the next edition, I am confident that we will continue to increase our acceptance by the nation's pharmacy schools.

### ***SUMMARY***

I view myself as an introvert; in high school I once changed my enrollment because an ancient history class would have required an oral presentation. However, in 1977 I began to provide live continuing education lectures. During the 1980's and 1990's, as my expertise in the area of nonprescription products grew, I was increasingly asked to address state and national association meetings in the area of self-care. To date, this "introvert" has given about 130 lectures to professional groups and almost 50 talks to lay groups, including several keynote addresses and many 7-8 hour live lectures, speaking for hundreds of hours. To ease the process of speaking in front of groups, remember three things:

1. Know your topic thoroughly, research it well.
2. Practice aloud at least twice to get your timing down, and annotate times on the pages so you will know whether you are ahead or behind, allowing an adjustment of speaking speed early in the presentation.
3. Nervousness is a hard emotion to sustain; within a few minutes of beginning, allow yourself to concentrate on giving the best presentation you can give; becoming absorbed in the mechanics of the presentation will assume paramount importance in your mind.

Excellence in teaching, scholarship, and service: is it a realistic goal for faculty? In my experience, if one's career is sufficiently focused, it

may be. Those who aspire to excellence must first choose a specialty area in which there is a critical need for education. My expertise is in a narrow, clearly defined, practice-based area that possesses that quality of critical need. One should be able to teach his or her specialty, conduct research and write review articles that cover that specialty, and design service activities around that specialty. With time, the activities become self-reinforcing and synergistic.

Do not hesitate to become involved in local, state, and community activities. Your expertise and accumulated wisdom should be shared with your colleagues and the lay people of the nation. Choose community or religious activities that allow you to help others through work that has no bearing on your professional life. Doing so lifts you from the self-absorption and self-indulgence of another game of golf or round of fishing. You may choose to deliver meals to the elderly, lead a Sunday school class, sing in a church choir, lead a scout pack, or lead a community improvement group (e.g., Rotary, Kiwanas). A clinical ability to organize information and to see clear alternatives translates well to nonmedical venues.

As I reflect back on my 23 years in academia, I feel that I met my goals of increasing awareness of hospital pharmacy and of practice-based retail pharmacy for our students. I was able to de-emphasize unimportant material previously taught to ensure that the students would be grounded in the realities of present pharmacy practice. I also teach with the viewpoint that my students are my primary constituency. I may be paid and/or governed by the state, the Board of Regents, the governor, the university president, the School of Pharmacy dean and my department head, *but my ultimate responsibility is to my students.*

I also met my personal goals of honoring my parents, wife, and children by working hard at a profession in which I performed useful services for my students, for the institution, and for the people of the country.

In short, I continually strive to live so that, at life's end, I might look back and see the world a little better because of something I've written or done. In the words of Mr. Bronaugh so many years ago, I hope to have run the race well.

As a final analogy, my life is not unlike an ancient galleon. My dear parents laid the keel and loaded the ballast by freely giving me the educational background necessary to start a rewarding professional life. I continued to build the ship by learning at my various jobs and undertaking a residency and master's degree. My lovely wife and amazing children serve as the rudder by which I steered my course, always considering their welfare in any career choice. A galleon cannot move without many

sails. The sails of my life are my mentors, each of whom challenged me to achieve things I would have once considered impossible. I have been the captain, charting the course for the journey. Overlying it all, however, is the final consideration that, regardless of the skills and knowledge of the captain, the mightiest ship is becalmed and helpless without one external factor over which the captain has no control: the wind needed to fill the sails. In my life, God has been the wind. I could have done nothing without His help and guidance.

Received and Accepted: July 14, 2002