"Every pharmacist must be a leader in their practice or on their shift. Each must connect with their inner drive, their passion for what they do and for making things better."

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At the time of her presentation, Sara J. White was a recently retired director of pharmacy and serving as a health care consultant and frequent lecturer.

Leadership: Successful alchemy

"I would prefer to spend... time discussing briefly our greatest need in hospital pharmacy—leadership." This is a quote from Gloria Niemeyer Francke's 1955 Whitney address, which is still appropriate. Leadership is just as critical today to our future success as it was in 1955. As a profession we need to thrive in order to continue to protect patients from medication harm and ensure the desired therapeutic outcome so they can resume their lives.

Recent survey data indicate that in the next decade we will need 4000–5000 new directors of pharmacy and middle managers, primarily because current leaders will be retiring. These numbers do not take into account the expected expansion of health care needs as the baby boomers age. These same survey data indicate that only 44% of

the pharmacy directors who will be leaving their position have a staff member who they would recommend to replace their position when they leave. It is unclear if these pharmacists would accept the position. Only 30% of current practitioners indicated any interest in seeking a leadership position during their career; however, 62% of pharmacy students indicated an interest in pharmacy leadership.

If an organization cannot fill a vacant pharmacy leadership position with a pharmacist, it will likely fill it with a materials manager, a nurse, a physician, an M.B.A., or an M.H.A., as it must have pharmacy leadership. Boards of pharmacy can only require a pharmacist be identified as "in charge" and cannot dictate that the person be the director. Would a non-pharmacist director of pharmacy be in the best interest of patient care? I think not. This leadership gap needs to be viewed as a stimulating challenge, not as dismal despair.

So how do we ensure that we will have enough pharmacist leaders for the future? We cannot remain just innocent bystanders. I believe that every pharmacist is a leader. There are "big L" leaders—those in formal leadership positions, such as director, associate director, assistant director, supervisor, clinical coordinator, and operation manager. However, every pharmacist is a "little L" leader in his or her practice or on his or her shift, whether this is recognized or acknowledged. Some must be willing to take the "big L" positions as they become available if we are to continue to have an adequate supply of future pharmacist directors of pharmacy. This potential leadership crisis cries out for commitment and involvement by each pharmacist.

Every day, all pharmacists make decisions that affect the way they think, live, interact, react, and learn. Regardless of what we may believe, no one else leads us through life. We must take the initiative. Leaders make decisions, provide direction, develop plans, guide and nurture themselves and others, seek opportunities, and make choices. In the absolute truest sense of the word, each of us is a *leader*, and everyone, at some point, exhibits leadership. What we do with the opportunities presented to us determines what kind of leaders we are.

Leaders have an inner drive, a passion, for what they do and for making things better. Leaders realize that hard work, sacrifice, and persistence will allow them to achieve their goals and dreams; they are uncompromised in their level of commitment and continuously challenge the limits of their knowledge. They view change as a friend and welcomed opportunity. Leaders are disciplined, patient, assertive, confident, and accountable. Leaders know that nothing of value comes without being earned. Leaders do not place their priorities on earning money, fame, or success; they lead because they see a need and want to address it.

To demonstrate how every pharmacist is a leader, let us examine how we arrived at our current level of health-system pharmacy services and practice.

Past leaders and their legacies

A sincere debt of gratitude is owed to past pharmacy leaders, many of whom were "little L" leaders, who paved the way for us to provide our unique drug knowledge to benefit patients. Obstacles had to be overcome, physicians and nurses and other allied health professionals had to be convinced of the value of the pharmacist, and pharmacists

had to overcome their own self-doubt to show their value as an integral part of the provision of high-quality patient care.

The significant contributions of our predecessors that highlight the evolution of the specialty of hospital and health-system pharmacy are described below. These contributions are divided into three areas: hospital pharmacy professional development, innovations in drug distribution systems, and the pharmacist as a drug information resource.

Hospital pharmacy professional development

Hospitals have not always had a pharmacist practicing onsite. Past leaders recognized this need and began working full-time in hospitals. These practitioners soon had a need for a community of like-minded pharmacists and thus formed a hospital subsection within the American Pharmaceutical Association (APhA). They wanted to share their experiences and learn from each other, so they developed continuing-education programming specifically related to the evolving practice of hospital pharmacy. The need for a central office soon became evident to the volunteer leaders, and, in the face of much opposition, they formed a division of hospital pharmacy within APhA. In 1942 this section became the American Society of Hospital Pharmacists (ASHP), a separate organization affiliated with APhA. At the same time, leaders in state and local areas were developing similar groups to provide forums for leadership training, continuing education, and sharing among themselves. These state and local groups have evolved into ASHP-affiliated state chapters. Without ASHP leaders, ASHP's *Bulletin* (journal), minimum standards of practice, continuing-education programs (institutes), networking, governmental affairs, and voluntary pharmacy leadership positions would not have evolved.

At the University of Michigan Hospital, the director of pharmacy Harvey A. K. Whitney Sr., whose contributions this award recognizes, developed a formalized internship program to train future hospital practitioners. Coupled with the internship program, formal classes in pharmacy education were taught in the new specialty of hospital pharmacy. These internships evolved into very successful one-year residency training programs. These programs received certificates and approval from ASHP, and, through the efforts of the ASHP leaders, residency training standards were developed and a formal accreditation process was established to ensure the uniform quality of these programs. These residency programs have been instrumental in providing a cadre of successful leaders and must continue to do so. The ASHP Resident Matching Program was implemented to ensure fairness in programs' selection of candidates for all residency applicants.

In 1964, the "Mirror to Hospital Pharmacy: A Report of the Audit of Pharmaceutical Service in Hospitals" was published. This reported the results of a comprehensive and introspective study financed by a grant from the U.S. Public Health Service. The report also included recommendations to and described the implications of hospital pharmacy practice. Some of the recommendations have still not been achieved and are very relevant. One such recommendation is

> That the chief pharmacist take greater advantage of their degree of freedom and of the cooperative attitudes existing in hospitals to plan and present dynamic, progressive, and imaginative programs for the improvement of pharmacy service which will, at the same time, improve the attitude of the professional staffs toward pharmacy.

Another major professional development was the clinical pharmacy consensus conference commonly referred to as the Hilton Head Conference. This conference was conducted under the leadership of ASHP and provided recommendations that legitimized and stimulated the expansion of clinical pharmacy practice.

These former leaders, both "big L" and "little L," were pioneers going into uncharted territory, hospital pharmacy practice, and establishing it as a unique practice. This pioneer spirit must be continued by current and future leaders. Thus, a leader is a pioneer, a pathfinder, who continually faces the unknown, exploring new territories, and dealing with unforeseen challenges.

Drug distribution system innovations

Once pharmacists were practicing in hospitals, they recognized the need to improve how medications were distributed from the pharmacy to the patient care areas and better utilize the pharmacist's expertise to minimize patient harm from medication errors. These past leaders provided the leadership to change the systems. The initial efforts were several-fold: Move the medication stock bottles from the patient care areas to the pharmacy; have the pharmacist receive and review a no-carbon-required (direct) copy of the physician's original order before sending only a patient-specific labeled supply, usually three to five days' worth, to the nursing unit; and create a patient-specific medication profile that enabled the pharmacist to screen for allergies and drug interactions.

As more medications were developed by the pharmaceutical industry and administered intravenously, it became evident that having nurses compound these medications did not take advantage of pharmacists' drug knowledge. Nurses would call the pharmacist and inquire about the white cloudy solution that had appeared in the patient's Buretrol. Thus, leaders developed and implemented i.v. admixture programs. These innovations stimulated the pharmaceutical industry to provide minibags and other needed packaged items.

While the number of medication errors had been reduced with these system improvements, they still occurred; former leaders experimented with "setting up" doses for the nurses' major medication administration times. Only individually packaged doses in patient-specific labeled bins that each patient needed until the next cart exchange were distributed. This process resulted in significant reduction in medication errors. Thus, the unit-dose system was coupled with the i.v. admixture system to form the optimal drug distribution system.

With these improvements in the drug distribution system came an increased workload for pharmacy. Veteran leaders recognized that some nonjudgmental, routine functions could be delegated to a trained pharmacy technician as long as a pharmacist provided the final check before the medication left the pharmacy. Subsequently, on-the-job and formal pharmacy technician training programs were instituted. To ensure the consistency

and quality of these training programs, ASHP developed training standards and an accreditation process for pharmacy technician training programs.

Continuing the evolution of safer and more efficient drug distribution systems, computerization was applied, which enabled the printing of labels and unit-dose cart-fill lists, patient charging, and profile maintenance. Likewise, the application of automation, such as unit-based cabinets, carousel technology, and total parenteral nutrition compounders, has reduced order turnaround time and provided a safer system by ensuring pharmacist review of physicians' orders. Continuing improvements include computerized prescriber order entry and bedside bar-code technology.

Each of these innovations significantly changed how physicians, nurses, and pharmacists organize and process their work. Leading and managing these changes required a great deal of fortitude and stamina from these leaders, and we owe each our thanks.

The pharmacist as drug information resource

Past leaders realized that the pharmacist's drug knowledge was only partially being used through the innovations in the drug distribution system. As the number and diversity of new medications increased, so did the need by physicians, nurses, and pharmacists for specific drug-related information.

At the University of Michigan, Whitney compiled a drug information card file to help him answer physicians' medication-related questions. Under Donald Francke's leadership as the director of pharmacy at the University of Michigan, this drug information resource evolved into the American Hospital Formulary Service (AHFS), making unbiased drug information available in the patient care areas.

Larger hospitals developed an organized drug information center or service that provided answers to specific medication-related questions from physicians, nurses, and pharmacists. These services utilized the original, peer-reviewed medical and pharmaceutical literature. Because the exact answer to a question was not always found in the literature, pharmacists applied their knowledge and expertise to provide enough information to resolve the patient-specific issue. Along with the development of these services, the need evolved for a cadre of specially trained pharmacist drug information specialists. Specialty residency standards were developed by ASHP, and programs were implemented and accredited.

To ensure rational drug therapy, hospital-specific formularies were developed in concert with medical staff and pharmacy and therapeutics committees. The initial formularies allowed only the stocking of one product when multiple products were available. A pharmacist was generally the committee secretary, and pharmacists provided unbiased reviews of the peer-reviewed medical and pharmaceutical literature regarding a medication for the committee's consideration.

Past leaders recognized that they could assist physicians in selecting the best drug products and monitoring the drugs' effects if they were present when these decisions were made. Pharmacists began to attend rounds with physicians and apply their drug knowledge to optimize therapeutics. To prepare future practitioners, clinical pharmacy classes and clerkships were integrated into formal pharmacy education, and students

participated with the clinical pharmacists in patient care rounds. These students experienced firsthand the contribution that pharmacists make to patient care.

While innovations in the drug distribution system changed how physicians, nurses, and pharmacists process their work, these innovations were tied to handling the actual drug product. By branching into the provision of drug information only, these former leaders risked their creditability and professional reputation. They

had high professional pride and gave selflessly of their time and talent to improve pharmacy services.

The question is, what specifically did these "big L" and "little L" leaders do to achieve these professional changes? I propose that these leaders used successful alchemy.

Leadership as successful alchemy

It is thought that alchemy developed in Egypt and China, with Alexandria generally considered its center. The purpose of alchemy was to change base metals, such as lead, into decay-immune gold and produce an elixir of longevity to cure disease and restore youth. This practice was the forerunner of the science of chemistry. The key ingredient in changing these metals into gold was the philosophers' stone, which served as a catalyst for the transmutation. A catalyst is often needed for a chemical reaction to work. In a chemical reaction, the catalyst may be temperature, pressure, or a special ingredient in a small but a critical amount. Without a catalyst, there may be no reaction. Without the catalyst of pharmacy leadership, patients would not fully benefit from pharmacists' unique drug expertise. Without the pharmacy leaders that came before us, our profession would not be where it is today. In the pharmacy profession, leaders are the alchemists or catalyst, and leadership is the philosophers' stone that combines all the components of health-system pharmacy into the most perfect pharmacy services, equivalent to gold, on behalf of our patients. Leadership may appear like alchemy to nonleaders, but there are very specific things that successful leaders do, all of which can be learned.

What motivated this alchemy and is responsible for the evolution of health-system pharmacy? What was the catalyst for the advances that have been made? In some cases, it is "creative dissatisfaction"—when someone uses his or her unhappiness with the status quo to bring about change, regardless of the ridicule or barriers that may be encountered. Gloria Francke[1] indicated that a good leader "faces opposition creatively." Pharmacists would not be where they are today without past leaders and leadership having been successful in taking the raw material, base metal, of pharmacists' drug expertise and developing and organizing services for the benefit of patients. Leaders, both "big L" and "little L," play an important role in the history of the profession. Current and future leaders must continue this professional evolution through their leadership.

Seven elements of leadership

The purpose of assuming either "big L" or "little L" leadership must be for honorable reasons: improving pharmacy services on behalf of patients, helping pharmacy staff to grow and develop satisfying careers, and more fully applying our unique drug

knowledge in every available opportunity across the continuum of care. Gloria Francke stated that the leaders must operate not for themselves but for the profession; they "take pay for their work, but they do not work for pay." Leaders place purpose above personal interest or purity of purpose. History is full of leaders who did not work for the best interest of those they led.

There are seven key elements to leadership: (1) have a written work group vision and mission, (2) work effectively to accomplish actual results, (3) persevere and persist, (4) influence through attitude and approach, (5) work well with others, (6) lead oneself so people want to work with the leader, and (7) invest in the future. A detailed description of each element follows.

Have a written work group vision and mission. The power of a work group's written vision and mission can be compared to a lighthouse or foghorn. A vision is a picture of the future that inspires the passion of the leader and staff. Lighthouses are always visible or use foghorns during bad weather. Without a written pharmacy vision and mission (the lighthouse), pharmacy staff can easily drift and lose focus.

Another way to think of this vision and mission is as a global positioning system (GPS). With a GPS, you enter where you want to go, your vision and mission, and the GPS determines the exact directions, goals, their accompanying action plans, and timelines that you need to achieve to arrive at your chosen destination, your vision. The GPS will give you advice along your route as you progress. As pharmacy staff progress toward their desired future, the vision and mission provide them with direction and goals, so no one gets lost or wastes time.

In developing the vision and mission, do not be afraid to dream the big dreams. It is far better to have a large vision and never totally reach it than to have a small one and achieve it. We pharmacists are often our own worst enemies with our self-limiting dreams. Big dreams take no more effort than small dreams, yet the outcomes are different. Every great accomplishment was once the "impossible dream" of someone who simply refused to quit when the going got tough. Obviously, the pharmacy vision needs to fit within each organization's vision. It is important that all staff have input into the vision and mission. They should be reviewed and updated frequently, perhaps every two months. Employ the vision and mission in staff meetings and with individual staff members to keep them in front of people, and ask staff members how they have recently contributed to them. This exercise provides the recognition of individual staff contributions on an ongoing basis, excites others, and gets them involved.

When the leader serves as the catalytic lighthouse, there is no question among staff members regarding the pharmacy service's direction. However, direction alone is not enough for a successful leadership alchemy. There must also be the accomplishment of actual results.

Work effectively to accomplish actual results. Successful leaders realize that they, like gardeners, must constantly attend their pharmacy services garden. Gardeners cannot expect a harvest if they do not plant the appropriate seeds and care for them. Last-minute programs do not work in the garden environment. Leaders must manage their time to achieve actual results, not just talk about the desired goals. Leaders must constantly tend the garden.

How leaders get their work done affects everyone. Managing time is the challenge of consciously establishing priorities, scheduling these priorities, and constantly answering the question, what is the best use of my time right now? It is important not to get overwhelmed by trivial e-mails and voice mails. Leaders must have a bias for action or constant sense of urgency versus being constantly busy and not really achieving actual results. Accepting outcomes that are less than perfect is the key to being productive in leadership. Leaders must be willing to delegate all tasks that can be done by others and reserve their time for those that they have the expertise to complete. Constantly asking, what can be done to accomplish this task more effectively and efficiently, is leadership. Leadership is maintaining a balance, so that no one person or task is neglected, such as balancing time spent in an office with time out with the staff who are tending the garden.

Persevere and persist. A persistent leader is one who has the strength of bamboo, able to constantly bend and bounce back. This bending is required in dealing with differing circumstances, adjusting to changes, overcoming adversity, and meeting every challenge with courage and compassion. Another way to envision this leader is a palm tree that is still standing after a hurricane has passed through. This leader always gets up one more time and does whatever it takes to achieve the goals and move the pharmacy toward its vision and mission.

The leader needs to remember that the strongest oak of the forest is not the one that is protected from the storms and hidden from the sun. It is the one that stands in the open where it must struggle for its existence against the winds and rains and scorching sun. Being a leader is not necessarily easy, but the outcome of better patient care is worth the effort. Leaders cannot change the direction of the wind; leaders must adjust their sails.

The key to persistence is consistently having multiple plans for achieving success, and never giving up. Strategies and methods for reaching the necessary results may need to be adjusted or changed, yet leadership is understanding that being consistent in the desired outcome is extremely important. Power comes from just making steadfast progress through actual results.

Influence through attitude and approach. Being an influence catalyst means that staff would follow the leader through fire because of the leader's positive, optimistic, and enthusiastic attitude. The wisest leaders' approaches are like water, fluid yet infinitely strong, able to reach their destination and overcome the rocks along the way. Leaders know they are clearly responsible and hold themselves accountable for their work group's success. These leaders accept being in charge and continually demonstrate initiative. There is an earned trust between the leader and his or her staff.

If someone has not told the leader lately that his or her ideas are crazy, the leader has not been doing much independent thinking. Problems are opportunities in disguise. Successful leadership is seizing or making opportunities. Defeat is not failure. Failure is when the leader lets defeat become final. There is never failure but significant learning, and the leader must model this approach.

Placing blame and making excuses are not part of the leadership persona. Leadership is not asking someone to do something that he or she would not do. Seeing challenges

as opportunities, replacing problems with solutions, and overcoming failure are essential to successful leadership and organizational influence.

Work well with others. Successful leaders think of their staff as plants. To bloom and thrive, staff need to be rooted in the rich soil of a nurturing work environment. They must be watered with care and attention and warmed by the sunlight of appreciation. Too many leaders treat their staff as cacti. These unsuccessful leaders expect their staff to flourish in an arid, remote atmosphere. People tend to exceed expectations when they are led by someone who cares about them and has their best interest in mind.

Every leader should keep in mind that staff are like sticks of dynamite. The staff's power is on the inside. Nothing will happen until the fuse gets lit through an inspiring vision and mission. Highly motivated individuals need rewards, recognition, and responsibility. But most of all, each person needs to be needed. People need to know that their contribution, their best effort, is truly valued.

Leadership is working to make daily tasks easier for all involved through effective teamwork Leadership is viewing staff members as the department's most valuable asset, sincerely caring about them, and recognizing a job well-done. Celebrating staff achievements, encouraging personal and professional development, and providing growth prospects are part of being a successful and well-respected leader. The ultimate test of leadership is the quality of those willing to be led. A leader helps staff to achieve their full potential and provides growth opportunities.

In addition to working well with his or her staff, the leader represents the pharmacy services throughout the organization and, as such, must positively contribute to the organization's teamwork. Helping other departments achieve their vision and mission is critical to successful leadership alchemy.

Lead oneself so people want to work with the leader. Who the leader is as a person establishes the work group culture. Culture is the tone and morale of the work environment. Knowing yourself and understanding what drives your attitude and emotions are the first steps to self-knowledge, self-control, and effectiveness. Effective leaders are like the symphony conductor who combines the various instruments to produce a work of art. Many different personalities, strengths, and weaknesses must be taken into account by the conductor. The musicians are all experts with their instruments but must play together to be truly successful. Achieving this synergy is the conductor's leadership role.

The most difficult leadership experiences become the crucible that forges the leader's character and develops the internal powers and the freedom to handle difficult situations in the future. Leaders must always be a first-rate version of themselves instead of a second-rate version of someone else. If the leader is not enjoying the journey, the destination will be a disappointment. The successful leader must commit to excellence in every task because others are influenced by his or her actions.

Leadership is exhibited by the type of people that others want to be around. Leadership is about conducting oneself in such a manner that attracts others. Leadership is knowing that our greatest battles lie within us and not in the external world. Therefore, managing our behaviors, overcoming fears and discouragements, and turning

those into positive motivators are signs of leadership. Having a sense of humor is key when leading departments, working with staff, and solving problems. Leaders know the importance of mentorship and seeking mentors' advice for ongoing personal and professional growth.

Invest in the future. Successful leaders invest in the development of their staff, students, and residents to prepare them to lead others. Leadership is taking an active role in helping shape future leaders.

Leadership is sharing one's expertise with others, publishing, teaching, speaking at professional meetings, serving as a preceptor for students, and conducting residency programs. Leadership is serving on committees, holding elected offices, and participating in organizations. Leaders understand that their contributions are vital to their profession and community. Leadership is not seeing these activities as a burden.

Closing thoughts

Pharmacists cannot stand by and let health-system pharmacies be led by nonpharmacists.

If you question why things are a certain way and you are not satisfied with "that's the way we've always done it," then forge a new path with answers that are more satisfactory. If you do not know where to start, utilize your network of peers and colleagues to discuss your ideas and create a plan. Look for opportunities to utilize your talents and skills. The profession would not be where it is today without our past leaders, and the profession cannot achieve its full potential without you.

I have been blessed during my career to have worked with numerous excellent colleagues from whom I have learned more than I have given back. I want to acknowledge the managers, staff, residents, and students that I had the pleasure to know during my time at Ohio State, Kansas, and Stanford universities. A special thanks to all the colleagues who have become personal friends through my involvement in local, state, and national professional organizations. I want to give a special thanks to three mentors: (1) Clif Latiolais, Ohio State director of pharmacy, who showed me what could be done with progressive pharmacy services and involvement in professional organizations, (2) Harold Godwin, director of pharmacy at the University of Kansas, who gave me a chance to learn to be a leader, and (3) Gloria Francke who from afar demonstrated that a woman could be successful in a male-dominated profession. One final thank you to Richard Dewayne Caldwell, my associate director at Stanford, without whom I could not have survived being a director of pharmacy. Thank you.

(For the complete list of references cited, please see page 1503 of the *American Journal of Health-System Pharmacy,* Aug. 15, 2006.)