



“Accept the challenge and develop it.”

===== SISTER MARY JOHN =====

(1957)

At the time she received this award, Sister Mary John, R.S.M., was the Chief Pharmacist at Mercy Hospital, Toledo, Ohio.

Hospital Pharmacy— Past, Present, and Future

Iwould like to talk to you informally about hospital pharmacy as I have known it in the past and in the present—and about my aspirations for its future. Although unbelievable progress has been made through the years, I remember hospital pharmacy when there was little progress.

After graduating from a school of pharmacy, I was assigned to one of our 150-bed hospitals. I was to serve an apprenticeship under a retail pharmacist who was to spend part of the day in the hospital. Strange to say, when this pharmacist, who filled the hospital's prescriptions, was asked to supervise my work, he refused. He said that “hospitals should not have a pharmacist.” Even when we had another registered pharmacist coming in, the doctors would request that their prescriptions be filled by the first mentioned pharmacist. Well, since I also did X-ray and clinical laboratory work, I came in contact with the medical staff and soon won their confidence. Without my

mentioning the subject, the monopoly in prescriptions ceased to be a problem.

At that time, there was little to do in the pharmacy, or rather I did not know how to do it. It was taken for granted that the surgery would make both the surgical fluids and intravenous solutions. I taught pharmacology and chemistry to the student nurses and attended summer school sessions to complete requirements for a degree.

One day, after Mother Provincial heard Dr. Crile extol the nurse anesthetist, she asked me if I knew anything about anesthesia. Without knowing what she had in mind, I remarked that I had had a course in anesthesia in France but never received a certificate. Another sister and I were soon starting our course at the University Hospitals of Cleveland, and we enjoyed it immensely. The Director of the School of Anesthesia said: "Sister, as long as you are a pharmacist, I will give you permission to spend your free time in the pharmacy because Dean Edward Spease can teach you how to save money for your hospital." I appreciated this opportunity and learned much about hospital pharmacy during the year. For instance, only three barbiturates were stocked: phenobarbital, sodium pentobarbital, and sodium amobarbital. No new drugs were stocked without permission from the therapeutics committee. I saw intravenous and surgical solutions prepared where they should be—in the pharmacy. I know, possibly as well as anyone, the monumental work that Dean Spease has accomplished for hospital pharmacy in the Cleveland area.

To the younger members of ASHP, I would like to say, 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. When Dean Spease started his career in hospital pharmacy, he said:

I visited hospitals whenever I could . . . I expected to see true professional pharmacy in hospitals and was disappointed that it did not exist there.

He spent a year observing hospital pharmacy and then accomplished the following. He appointed a pharmacist to work under him who took notes of good and bad points. He visited the University Hospitals two or three times a week as the administrator had suggested. He then gave the seniors practice in the hospital pharmacy. He established a manufacturing and control laboratory in the School of Pharmacy and made tablets and liquid preparations for the hospital's use after an agreement was drawn up between the hospital, the School of Pharmacy, and the University. Hospital pharmacy was then taught with supervised instruction to undergraduates and later to graduate students. Dean Spease then selected a pharmacy and therapeutics committee and wrote up a drug policy for the hospital and also a formulary. His formulary worked because drugs in the formulary were covered in the inclusive per diem rate and any drug sent out for was charged above the inclusive rate. These developments greatly increased pharmacy's prestige with the medical and administrative staff.

When Mr. Harvey A. K. Whitney developed internships in pharmacy, Dean Spease did likewise, as he did in developing professional stores and research. Dr. Malcolm MacEachern had requested that he write the first minimum standards for hospital pharmacy, which were adopted by the College of Surgeons. This great pharmacist

and Mr. Whitney have done so much to stimulate the hospital pharmacy movement that is responsible for much of its prestige and standards today; they deserve honorary doctorates for the legacy that they have left to hospital pharmacy. Few of you present here know of the blood, sweat, and tears that went into this work.

The blood, sweat, and tears were also shed by the able leaders who followed them. Mr. Thomas Reamer as secretary and I as treasurer remember the tottering financial structure of the second, third, and fourth years of the ASHP. We all enjoyed reading *The Bulletin*, which at that time was mainly a donation in time and money of Don and Gloria Francke. I trust the time will come when they will be reimbursed for their efforts. According to Samuel Johnson: "Books are tools absolutely necessary to the arts and professions." Well *The Bulletin* is absolutely necessary to us and has undoubtedly given more help and prestige to the ASHP than any other factor.

In reviewing the work done by Dr. Donald A. Clarke during the early life of the ASHP when he was its able Chairman of Minimum Standards, I find that although we have advanced, we have not covered all of his admonitions. He maintained that:

A basic plan must be established . . . The question of salaries must be settled . . . the exchange of students for gaining wider sectional experience . . . certain prerequisite undergraduate training subjects must be included in the four-year pharmacy course . . . the basic training must be sufficiently high to assure to the hospitals of the country pharmacists of sufficiently high caliber. The applicant for a hospital pharmacy internship, in order to meet the needs of the medical and allied sciences, must possess the type of intellect for this proposed advanced training.

Mr. Whitney developed the idea of hospital pharmacy internships, and the young men who spent a three-year training program with him are the dedicated leaders of hospital pharmacy today. What makes them so outstanding is their willingness to impart their knowledge to others. Any newly manufactured product is at once accepted by our medical staff after I inform them that I obtained the formulation from Mr. Phillips. I, for one, am greatly indebted to them. I remember on one occasion when I was admiring the model hospital pharmacy at Ann Arbor, comparing its 100-gallon formulation to be prepared to my 20, Mr. Whitney remarked: "Sister, I started in with only a large spatula."

In 1945, Mrs. Evelyn Gray Scott of Cleveland persuaded me to take an extra intern that she had available. I explained that we were not yet making intravenous fluids and I do not think, as I remember this very fine girl, that I was well prepared for the program at that time. One must have enough help for the routine work without the intern so that the chief pharmacist or educational director is free to mold the intern, as did the preceptor of old, so that at the end of the year the intern has covered the required curriculum and his basic knowledge represents what the chief pharmacist has taken years to acquire.

Although the intern can attend the many useful lectures presented to the nurses and doctors, I think that a textbook covering the theory to be taught would be helpful. Of late I have used the material from Pharmacy Institutes and have ques-

tioned the interns on MacEachern's *Hospital Organization and Management*, Walter's *Aseptic Treatment of Wounds*, and Underwood's book on sterilization, which they are required to read. This work, plus following Mr. Flack's *Manual for Internship*, is a full-time job for both preceptor and intern, but it is stimulating. Because of the time and effort involved, only those who intend to remain in hospital pharmacy for a reasonable time and who are of high intellectual ability—alert, interested, and conscientious—should be accepted.

The intern should be well trained in *professional relations*. He can acquire this training by observing how his preceptor deals with the medical staff, because the physician is confused by the multiplicity of trade names for the same drug. He is glad to learn that the cost of prescriptions to patients can be reduced 30 to 50% by prescribing the generic name. The intern can observe that this problem is placed on the agenda and presented to the therapeutics committee, which he should attend as well as the staff meeting where it is passed on. He can follow you, his preceptor, to the nursing office and see how you convince the educational director that the use of generic names in charting medications will raise standards and that the student will only have to remember one name. The doctor has already given you permission, individually or at a staff meeting, to label medicine generically; if he wishes it, you will include the trade name in parentheses on the label.

Some time ago, the secretary of the American College of Apothecaries stated:

Excessive duplication should be avoided. It is costly and potentially dangerous to all concerned. It raises the cost of medical care and how much more of this increase the public will take without demanding socialization of our health professions is problematical. The use of generic names is completely consistent with the professional training given the modern-day pharmacist and is an ethical approach wherein he may be able to reduce an excessive and in certain cases an unreasonable inventory.

Generic nomenclature is found only in medical literature and taught in schools of medicine and pharmacy.

Education of the resident medical staff in the use of medications should be the duty of the pharmacist. Since substitution is illegal, the doctor must be kept informed, preferably by the therapeutics committee. By all means, the generic name must meet the specifications of the *USP*, *NF*, and *N.N.R.* Stock control is likewise very important, as are the commercial aspects of cost accounting and pricing to sell because the hidden costs of indirect expenses are often ignored:

According to the National Cash Register Statistics, it costs 8% per month to stock any medicine regardless of whether it is manufactured or purchased from a manufacturer. An item doubles in cost if not sold within a year.

The intern must be taught how to spend the hospital dollar and that placing orders once monthly in larger quantities will lower the price. As Sister Mary Florentine of Mount Carmel Hospital stated:

After checking Abbott, Lilly, Parke Davis, and other manufacturers, we found that the average price of capsules or tablets stood like this:

5000	100%	\$100.00 (\$20.00 per 1000)
1000	100%+20%	\$24.00 (\$24.00 per 1000)
100	100%+20%+50%	\$3.60 (\$36.00 per 1000)

In other words, you can purchase 10 brands of 100 for \$36 or one brand of 5000 for \$20 per 1000. With permission of the doctor, duplication can and must be controlled. A shift in emphasis from compounding and dispensing is due, and the pharmacist of today must be equally skilled in imparting comprehensive professional information to the allied health professions. When the doctor learns that the pharmacist is protecting the patient, he is grateful. Public relations is most important.

Central supply training makes the preparation of sterile products easy. Several of our interns have worked part time in central supply during their four years of pharmacy study, which is a big help to an already crowded curriculum. The chief pharmacist and the intern then need only to take a weekly inventory together, with an explanation to the intern of new procedures that have been adopted. Writing out specifications for equipment is also good training for the intern who later wishes to supervise central supply.

The intern must be taught the use of procedural manuals. I agree with Dr. George Archambault that "there is an essential need for the value of establishing and circulating within a hospital, and in particular, within the pharmacy department, a *procedural manual* for a pharmaceutical service, a manual spelling out in detail the Department's administrative policies, regulation, and *modus operandi*."

The intern must also be taught the value of Mr. Kneiff's Point-Rating Plan. According to my dear friend, Evlyn Scott:

We cannot wait for sufficient special formal training such as internships of hospital pharmacists but must turn to self-education. Three aids have been mentioned—first The Bulletin; second, the Institutes; third, Conventions and Meetings; and now a fourth is added—the Point-Rating Plan to implement the Minimum Standards To me, the Point-Rating Plan represents more than a tool to implement the Minimum Standards—rather it represents an opportunity for every hospital and hospital pharmacist to become aware of where he and his hospital pharmacy stand as regards the standards for hospital pharmacy in the United States.

Since we follow the new curriculum, it may seem that the intern is a liability to the hospital, but he is really an asset. With his interest to explore and with the curriculum now to guide, the chief pharmacist is kept up to date. For instance, we eliminated expensive germicides that were not germicidal under actual conditions of use. A survey of the amount of gauze needed to protect a clean wound resulted in saving gauze and adhesive. I remember Mr. Weidle of St. Louis showing me a product in his Olive Street Store that he had made popular because it was good. I remarked that we did not have a need for it and he said "create the need." I have followed his advice. For

instance, we have replaced "Tucks" by adding 1% diothane to witch hazel and 0.05% PCMX, using medium-sized cotton balls. We have an improved anesthetic and bacteriostatic episiotomy dressing covered by Blue Cross. We dispense about 3000 tubes each annually of sterile breast ointment and a diaper rash cream that is effective. We have dispensed about 14,000 bottles of a skin lotion that we think is superior because of its castor oil base. We have developed a sterile placenta paste which is very healing to burns, decubitis, and skin grafts, and we sell it to other hospitals and pharmacies. We also prepare an artificial sterile spinal fluid with the pH adjusted to that of normal spinal fluid, which it replaces; it is used in other hospitals of the city because we created the need.

Research studies pay dividends that would not be possible without the intern's assistance. Our interns learn the value of the hospital dollar by purchasing under supervision. At present, we are both being trained to use Mr. Godley's Pricing Folder, so there is never a dull moment.

I also would like to tell you about my experience with a cosponsored formulary. About two years ago, a former president of the Academy of Medicine of Toledo and Lucas County was complaining about the high cost of prescriptions and was of the opinion that his patients were being overcharged. He was indignant when told by our intern, who had been a medical representative, that doctors were responsible. This intern told him that pharmacists had to fill prescriptions as written and that if the generic drugs could be used the cost to the patient often would be less.

The doctor, remembering his training at a great university medical center, had learned the value of a formulary from Mr. Whitney, whose opinion he respected highly. He decided that the Academy of Medicine should have its own formulary, and a committee was formed of four physicians and four pharmacists. The chairman of the Formulary Committee was a pharmacist before he studied medicine. He and the three other physicians were interested in rational therapeutics. One professional pharmacist, one general pharmacist (an officer of the O.S.P.A.), one hospital pharmacist, and one professional-relations pharmacist comprised the committee. The last named, who had completed an internship in hospital pharmacy at Mercy Hospital in Toledo, was assigned the difficult task of bringing medicine, pharmacy, and the hospitals together. This task entailed many obstacles because the 33 hospitals comprising the Toledo Hospital Council have "open staffs." The Academy president, who still was not convinced that the hospitals and drugstores were not overcharging, wanted the Academy of Medicine to retain control. This suggestion proved to be a good one since the Toledo Society of Hospital Pharmacists several years ago had spent a year compiling a formulary which was used by all of the Toledo hospitals. But its only use seemed to be as a reference book. The president requested that a copy of the Academy of Medicine's formulary be on each physician's desk so that he could look up generic names when writing prescriptions, at each nursing station for the same purpose, and also in each drugstore for reference in filling prescriptions generically.

This adamant ultimatum by a brilliant physician, dedicated to his patients, was what made the formulary work. Practicing medicine under pressure, he had found it

difficult to differentiate between the drugs of proven value and the numerous duplications of questionable value. I was informed that I was a member of the committee representing the hospitals, as well as the secretary and treasurer of the Academy's Formulary Committee, and should attend a meeting at the Academy on a certain evening. When informed that I could not attend at night, they decided to meet at the hospital.

After the Academy of Medicine approved the idea of having its own formulary, cosponsored by the hospitals and the Lucas County Pharmaceutical Association, the committee was ready to work. Should we use a formulary already written? A better one was available from Dr. Francke, but the consensus of opinion was that a loose-leaf formulary was needed. We obtained an outline from Dr. Francke and followed it to a great extent. I was asked to assist with the work because I had a formulary almost ready for publication.

The next president of the Academy of Medicine was likewise formulary-minded and wrote the following foreword:

The Academy of Medicine of Toledo and Lucas County is very proud to be cosponsor with the Lucas County Pharmaceutical Association, Professional Pharmacists of Toledo, and the Toledo Hospital Pharmacists, of this formulary which will fill a need of the Doctor, Pharmacist and the Hospitals of this area.

It is devoid of advertising, has been published as a non-profit enterprise and as a public service.

We wish to congratulate the committee of both professions for their tremendous effort.

This professional combination was instituted to bring all professional units together to work as one health and medical team. The objectives were to reduce inventories; pass on economic benefits to the hospitals, pharmacies, and patients; and recommend and urge the prescribing of generic and/or chemical titles as listed in the formulary. Also, its use would influence hospital pharmacists to become associate staff members in their respective hospitals and to discuss various phases of the formulary at general staff conferences. Administrators were interested in our formulary because:

The accrediting and approval body for the nation's hospitals, the Joint Commission on the Accreditation of Hospitals, requires that the hospital have an active pharmacy and therapeutics committee which shall develop a formulary of accepted drugs for use in the hospital. Chief Pharmacists . . . find this responsibility essentially delegated to them.

The task is tremendous. In areas where the physicians are not interested in having their own formulary, I suggest that the *National Formulary* service be used. We may adopt it when a new book is needed.

The hospital pharmacists in our area were not quite ready to assume the responsibility for the public relations work that was needed, so our public relations pharmacist committee member took over and to date has discussed the many ramifications

of the formulary with the following groups:

1. The Toledo Hospital Council represented by the administrators of the 33 hospitals of the area.
2. Nurses and head nurses at different hospitals.
3. Resident staffs of physicians at different hospitals.
4. General staff meetings at the different Toledo hospitals where the use of generic names has been adopted.
5. The Lucas County Pharmaceutical Association and branches of the Ohio State Pharmaceutical Association at local and state levels.
6. Church groups. (Recently, he addressed a Methodist group of women at a luncheon, and not only were generic names discussed but the time-honored profession of pharmacy as well, and the integrity of the retail pharmacists of Toledo.)
7. The American College of Apothecaries.

The work is divided among the Academy of Medicine Formulary Committee members. For instance, the medical chairman, who teaches pharmacology to the nurses at Toledo Hospital, has more than 80 books in use in that institution and the Nurses Alumnae Association. He represents the Formulary Committee at Academy of Medicine meetings and has talked to the graduate nurses of Toledo. Another medical member has made the book official for Maumee Valley Hospital by being an active member of its therapeutics committee. A pharmacist member, who is an official of the Lucas County Pharmaceutical Association, is responsible for a copy of the formulary being placed in each drugstore and has the assignment of seeing that the public benefits by generic prescriptions. He teaches in the School of Pharmacy and would like to have the book used there, but I have not had time to write a "teaching supplement." You can see from this report that the public relations pharmacist has had too big a load for a volunteer contribution; now that the groundwork has been laid, other arrangements will be made.

As I see it, the young doctor has a lot of money and time invested in his education and has been taught the use of generic names only in medical school and literature. The hospital pharmacist, in cooperation with the therapeutics committee, should see that the intern's education continues at the same level. Our formulary committee agreed with this suggestion. It obtained the approval of the Academy of Medicine's Executive Committee to sponsor, by its public relations board, four lectures annually at the Academy of Medicine for the resident staffs of the Toledo area. Each lecture will be repeated so that everyone is familiar with the use of the formulary. These lectures will be given in the evening by the public relations pharmacy committee member. The Academy's Public Relations Board is sending letters to administrators and chiefs of staff of the area's hospitals to this effect.

What of the future? It is in God's hands, but He expects us to use our abilities to improve the service for humanity. I predict that autoclaves will become obsolete; sterilization will be done by radiation in a few seconds without heat. We are beginning a new era. The expansionist trends in hospitals of tomorrow and even of today include a separate pavilion for ambulatory cases, which will require less expensive nursing care. There will be patient dining rooms and recreation rooms. More medical cases will increase the volume of drugs dispensed and paid for by a third party who will want prices to reflect costs. Hospital revenue must be equal to expenditures without overcharging, so unnecessary expenditures must be curtailed.

It is the pharmacist's major duty to maintain rational therapeutics in his hospital. He must keep himself well informed about drugs so that he can withstand the flood of unsubstantiated claims often made for new products. A doctor's degree is almost mandatory for the chief pharmacist. He will then be able to evaluate critically and with authority. The chief pharmacist needs more physiological and advanced organic chemistry so that he can explain the pharmacological action of a drug from its structural formula. To challenge scientifically, one needs an equality of knowledge. The doctor, so skilled in the basic sciences, is still vulnerable to the high-pressured salesmanship of even nonpharmacists. The pharmacist, to maintain rational therapeutics, should have a doctor of pharmacy degree. I have a manufacturing pharmacist, a baroness from the royal family of Holland who studied medicine and pharmacy in a seven-year combined concurrent curriculum, which she believes has been increased to eight. According to Baroness I. von Plessen:

In Europe, Medicine and Pharmacy have equal prestige. Medical Technology, but not Pathology, is included with Pharmacy so that the Clinical Laboratory supervision is divided between the Doctor of Pharmacy and the Doctor of Medicine, who has charge of Pathology. Both are on an equal status.

What, may I ask, would be better for our numerous small hospitals than to have a doctor of pharmacy trained to supervise medical technology, central supply, and pharmacy? This highly trained pharmacist should command a good salary. Medical technology is being taught in many universities. After some persuasion, our respected Dean of the School of Pharmacy is in favor of a course in central sterile supply and also in the preparation of parenteral solutions being included in the fifth-year curriculum.

In parting, let me extend my sincere gratitude for receiving the Whitney Award since there were worthier members. Let each of us dedicated to better patient care build up our own area. God willing, hospital pharmacy marches on.

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

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