Mack: An autobiography

Key words: American Association of Nurse Anesthetists executive director, autobiography, ether, history of nurse anesthetists, Mayo Clinic.

Introduction
The following article is a reprint of a letter written by Florence A. McQuillen, CRNA (affectionately called Mack by AANA members), to Sister Mary Arthur Schramm, CRNA, PhD, on February 21, 1972. Sister Mary Arthur asked Mack (Figure 1) to write her memories two years after her retirement as the first CRNA Executive Director of the AANA (1948-1970). The letter follows Mack's childhood from 1910 until the time of accepting the position as AANA Executive Director on March 1, 1948.

Sister Mary Arthur presented the letter to the AANA Archives as a gift while attending a History/Archives Focus Session at the 1996 AANA Annual Meeting in Philadelphia, Pennsylvania. Mack's early accomplishments included serving as the staff anesthetist and instructor of anesthesia under Dr. John S. Lundy at the Mayo Clinic and co-editor of Anesthesia Abstracts (1937-1965).

Letter from Florence A. McQuillen
“As I mentioned in my letter to you, I will put down for your use at some future time the basic facts of my professional life. I have taken the liberty of interjecting a few comments as I have recalled some of my past experiences. I was born in Matawah, Minnesota, a small town near Duluth. In 1910 my family moved to Aberdeen, where my father supervised the building of the Street Car System, later becoming superintendent of that short-lived venture. It folded during the depression of 1922.
I attended Monroe Grade School and later finished High School at Central High in Aberdeen.

I left Aberdeen and enrolled at the University of Minnesota in its first class under the combined Central School. This school at that time was a combination of the Schools of Nursing from Minneapolis General Hospital (now Hennepin County Hospital), the University School of Nursing, Great Northern Hospital in St. Paul and the Charles T. Miller Hospital, St. Paul. The students also had experience at Hopewell Sanitarium and later the patients were transferred to Glenlake Sanitarium. However, I was assigned to Hopewell for my training in the care of patients with tuberculosis. I was graduated from the University School of Nursing in 1925.

I had been offered a position as Superintendent of Nurses in a small hospital in Glasgow, Montana, but one of the prerequisites to that employment was that I know how to give ether. I was given an opportunity to spend two months at Minneapolis General Hospital during the last months of my make-up time in nurses training, and during those two months, I gave several hundred anesthetics. This seems like a big load at the present time, but I was eager to learn and there were a great many tonsils done with the old Sluder Method which necessitated a team of two people to keep the surgeon satisfied. The induction took longer than the operation. Part of my training was learned from an orderly by the name of Adam. He would hold the children on the operating table, and in my uncertain way, I would give an ethylene induction and change over to ether. Adam would tell me when the children were ready for transferring to the operating table when he would raise the child’s arm and if it was limp, he would tell me I was ready. However, my basic training was given by a Miss Price, who did not remain in the Field of Anesthesia, although she was one of the best [anesthetists] I had ever known. At the time of that experience, I learned to use only ethylene as a gaseous agent. The drug was so new on the market that the machines had not been converted to more than one anesthetic gas and the nitrous oxide was displaced with ethylene. Consequently I had no experience with nitrous oxide at the time I completed that two months’ experience and left for Montana.

I stayed a very short time in Montana, spending less than six months there, although the experience was invaluable. There were two surgeons, one of whom was a great surgeon and a great teacher. He preferred using chloroform which even then was not a popular drug and which was not used in Minneapolis General Hospital. He taught me how to use this drug and since we did not have a gas machine, nor even a tank of oxygen, I look back now and think the good Lord took a liking to me when I survived several hundred experiences with chloroform. There were two other unique pharmacologic items in that experience; one was that we still had available the last remaining supply of heroin as a legal drug for preoperative care. It was tremendous for pre-tonsillectomy medication. There was a special kind of ether that had been manufactured earlier in the century and a small supply of this was still on hand. It was known as “Cotton Ether” but there was such a small supply on hand and the surgeon was saving a certain amount of it for his own use should he have to have an anesthetic. I did use it in a few cases and for some reason it was tremendously easy on the patient for induction. I should spend some of my retirement time in researching what that ether really consisted of. It was made in New Jersey and as I understand it, the name “Cotton” was the name of the doctor who devised it.

I left Montana because I could not get control of the narcotics or the alcohol. During prohibition, the dispensing of alcohol was almost in the same category as marijuana is nowadays. Being the only registered nurse in the hospital, I felt that I was taking a great chance when I could not account for some of the narcotics and alcohol. I was too young to jeopardize my career, and I returned to Minneapolis where I did private duty nursing for six weeks.

During my training, a great black smallpox epidemic—1925—took place and senior nurses were put in charge of the contagious wards since graduate nurses were reluctant to be confined as we were during that horrible experience. My private duty experiences were with contagious cases in the home and in hospitals.

I returned from a case one day to find two letters in the mail: one from the Minneapolis General Hospital asking me to come and relieve their anesthetist for a prolonged leave of absence and the other from the University of Minnesota asking me to join the staff there. I was interested in both and eventually tossed a coin and anesthetics was the choice; however, I felt incapable of handling the General Hospital work without additional training and returned to Minneapolis General Hospital and to Asbury Hospital where I learned the use of nitrous oxide, which was still not available at the General Hospital.

When I completed this relief job at Minneapolis General Hospital, I was offered a job by Dr. Heidbrink—if I could take the job on a weekend notice. The company put a gas machine on the
same train that I took out of Minneapolis for Fargo, North Dakota, and I arrived in Fargo at six o’clock in the morning on Monday and gave my first anesthetic at eight o’clock. I was the only anesthetist in the hospital. There were excellent surgeons in the hospital.

I was privileged to work with one group of surgeons who were exploring some of the earlier barbiturates with Dr. Jacob Fjelde. We worked up a series of 125 cases using intravenous Somniﬁene. This drug was administered 60 to 90 minutes pre-operatively and the anesthesia was then carried out with ethylene and oxygen, usually without the addition of ether. It was effective and with very little experience we found suitable doses. Somniﬁene had come out of Germany on an experimental basis and the cases were written up in a report submitted to a magazine for publication. The magazine to which this was submitted was the only one then available in the United States, and they refused to accept the paper with the name of a nurse anesthetist as author, or even as co-author. With my full blessing the paper was submitted then under the authorship of Dr. Fjelde alone and did appear in Current Researches in Anesthesia and Analgesia.

After one year in Fargo, I was offered a position as staff anesthetist at the Mayo Clinic [Rochester, Minnesota]. I was not too anxious to leave Fargo but realized that I had set up a good functioning department and had trained two nuns in anesthesia so they were in a much better position than they had been when I came there the previous year.

I came to the Mayo Clinic on November 1, 1927. Dr. John S. Lundy had been in charge of the department for only a short time and there were many excellent anesthetists on the staff, all of the general anesthetics being given by nurses.

Shortly after I arrived in Rochester, the Senior Anesthetist for Dr. William Mayo became ill and I was assigned as relief anesthetist. It was my very great privilege to work for both Dr. Will [Mayo] and Dr. Charlie [Mayo] and later I worked for many years with Dr. Charles W. Mayo, son of Charles H. Mayo. It was during the early years at the Clinic that we experimented with many barbiturates—Amytal, Embutal, Nembutal, and eventually Pentothal.

Ethylene was the more popular of the inhalation anesthetics, but drop ether was quite common following a nitrous oxide induction. I was privileged to see the Senior Anesthetists who were artists with the drop method. This was truly an art and rarely were the patients subjected to prolonged inductions.

Long hours were the way of life at the Mayo Clinic. The Brothers Mayo believed that the work should be done until all of the patients were cared for and it was not uncommon for an anesthetist to give as many as 12 anesthetics a day, often with major surgery. The goiter operations were being done in great numbers since the benefits of iodine had not yet become effective in the general population. During the 30’s, the introduction of cyclopropane took place, and the use of intratracheal anesthesia became more common although it was not used to the extent that it is used today. During one phase of the experience with intratracheal anesthesia, we made our own tubes from red rubber tubing; a bevel was cut into the tubing and smoothed out with a buffer using a sponge and chloroform which resulted in a very smooth tip. The tubes were then put in coffee cans into which holes had been punched and put into the autoclave. This shaped the tube with an appropriate curvature.

It would take a separate sketch to report on some of the physicians and surgeons with whom I worked during those years. During the depression, the amount of work was greatly reduced and also the number of persons on the staff. Although the daily workload was less, the service still had to be covered but there were long periods of waiting and on call. It was during this time that we became interested in the anesthesia literature. We had a few brochures and reprints in the anesthesia room where we spent our waiting time, and one day I suggested to Dr. Lundy that we ask the library to send newer material from time to time. He in turn suggested that we have a Journal Club and Dr. Lloyd Mousel, who was then a resident, and I were assigned to the task of going to the library at the clinic and finding references for use by members of the department.

The Journal Club was a most unpopular event. The group met for one hour once a week and there was much resentment about this time for preparing an abstract and reporting it to the Club as well as the time spent at the meeting. The Journal Club collapsed after a very short time, but after a year we had a group of abstracts having accumulated in the Anesthesia Office. The suggestion was made that the abstracts be filed, and it was my suggestion that this was a waste of time—I had been spending some of my stand-by time in cleaning out files at the office and this seemed just a case of putting it away to be thrown away tomorrow. I did suggest that we might get more interested in the Club if we would have the abstracts duplicated and distributed to the participants, and it was this suggestion that prompted Dr. Lundy to arrange with the Editorial
Department to have someone publish the abstracts. After the first volume, there were names attached to the abstracts; but eventually this subterfuge was discontinued, and I prepared all of the abstracts and had them prepared for publication by Burgess Publishing Company. In one of the prefaces to an earlier volume of abstracts, there is an account of Dr. Lundy’s recollection of the experience.

We continued to publish *Anesthesia Abstracts* and when I left the clinic in 1948, the name of the Mayo Clinic was dropped and the publication continued under the co-authorship of Dr. John S. Lundy and Florence A. McQuillen. However, Dr. Lundy lent his name only to the publication. When Dr. Lundy chose to have his name appear as co-editor on a new publication, *Excerpta Anesthesiologica*, the publishers and I agreed that we could not compete with our co-author contributing to two abstract journals. It was my decision then that I would discontinue publishing the abstracts although I did continue to provide the abstracts for the *AANA Journal* and continued to survey the literature.

In 1946, following the very busy war years at the clinic, I found that I could become more active in the American Association of Nurse Anesthetists. I served as associate editor, a member of the Editorial Committee, provided the abstracts and book reviews, and served on the History Committee. It was during the time of the meeting of the History Committee in Cleveland, Ohio, in December 1947 that I was offered the position of executive secretary which was then vacant, my predecessor having been relieved of her duties in October.

My first reaction was to decline the opportunity, but in January of 1948, a personal problem made it necessary for me to change the long schedules of major surgery and teaching in which I had become involved, I made the decision then to accept the offer of the position as executive director of the American Association of Nurse Anesthetists, the position which I assumed on March 1, 1948.”

**Mack and the AANA**

As AANA Executive Director, Mack was responsible for increasing membership from 3,200 to 14,539, creating an accreditation program (1950), creating the Council (Assembly of States), and developing an optional continuing education program (1969) (Figures 2 and 3). In 1968, she oversaw the publication of the ASA-AANA Joint Statement. Mack assumed the title of “director emeritus” and served as a consultant to the AANA Board of Directors after her retirement in 1970. In 1981, she was bestowed the Agatha Hodgins Award for Outstanding Accomplishment for dedication to excellence in the nurse anesthesia profession.
Book Reviews
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The purpose of Practical Procedures in Anesthesia and Critical Care is to provide a text outlining practical aspects of clinical procedures associated with anesthesia and critical care environments. The intended audience includes the paramedic, medical student, registered nurse, specialist in training, and physicians who are unfamiliar with common or not so common procedures utilized in anesthesia and critical care medicine.

The book is divided into six sections whereby each procedure is categorized based on a systems framework. Specifically, procedures linked to the cardiovascular, respiratory, gastrointestinal, urological, central nervous, and peripheral nervous systems are detailed. The authors utilize the following format to cover content associated with each procedure: overview, indications, contraindications, equipment, hazards, technique, complications, and key points. The technique for each procedure describes in a stepwise fashion how to "perform" tasks with reasonable explanations. The specific procedures span from very basic, not specific to anesthesia or critical care, to relatively advanced procedures that in some environments may have limited application such as mouth-to-mouth resuscitation, continuous veno-venous hemofiltration dialysis.

Additionally, the section titled "Supplements" includes Guidelines for Adult Cardiopulmonary Resuscitation, Guidelines for Paediatric Cardiopulmonary Resuscitation, Criteria for Diagnosis and Certification of Brain Death and Authority for Removal of Cadaveric Organs, "Advanced Prehospital Care 'working out of a box,'" and "Who Should Be Taught What," which outlines the authors' recommendations as to who should be taught individual procedures they have included in their book. The Guidelines for Adult and Paediatric Resuscitation are based on the recommendations of the European Resuscitation Council and not the American Heart Association (AHA) which makes this a less useful reference for those who work in institutions using the AHA guidelines.

This book is nicely organized which renders it "user friendly" as a quick reference text. A feature that makes this text unique when compared to previously published texts on the subject is the profuse number of superb color illustrations which augment and clarify the material presented. Additionally, the authors provide information differentiating the care of adults, children, infants, and neonates when variations are relevant.

Use of Old English spelling makes reading a bit cumbersome, but overall the text is clearly written. A drawback, however, is that the content is not referenced, although suggestions for further reading are provided for readers who are interested.

Practical Procedures in Anesthesia and Critical Care provides valuable information that is well organized and practical. This book would best serve as a basic quick reference for personal use or as a reference for teaching.

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The Pain Drugs Handbook, by Sota Omoigui, MD; Nadrine Balady, PharmD; and Martin S. Mok, MD, consulting editors. 603 pages, $32. St. Louis, Missouri: Mosby. 1995.

The Pain Drugs Handbook is promoted as a quick access to drug information for the beginning or the advanced practitioner. Although authored by an anesthesiologist, the handbook is written for a wider audience than just anesthesia providers. Some sections, such as the overview of Cancer Pain, treat subjects too superficially for anesthesia providers but are useful for beginning medical or nursing students. The handbook focuses entirely on treatment of pain in adults; guidelines, drugs, and dosages for treating pain in children would be a welcome addition.

The text is organized to provide for easy cross-referencing. Part I of the handbook contains an alphabetical listing of more than 100 drugs with the following information about each: class, use(s), dosing, elimination, preparations, pharmacology, pharmacokinetics, interactions, toxicity (including antidote), guidelines/precautions, and principal adverse reactions. Part I also categorizes and lists the same drugs according to classification (e.g., nonopioid, potent opioid, antidepressants, antiviral). Finally, Part I addresses 16 pain syndromes with suggested guidelines for treatment. The section on Pain Syndrome and Therapeutic Guidelines lacks the depth needed for anesthesia providers, but like the section on Cancer Pain, it may be useful for beginning students. The author recognizes the potential shortcomings in this section and warns that practitioner familiarity with the suggested drugs and therapies is a necessity. He then provides his internet address and invites reader comments.

The Pain Drugs Handbook contains 12 appendices, some of which are very useful to anesthesia providers and some that may be informative for others. One appendix, for example, is a Trade Name List for cross-referencing drug trade names with the generic names. Other appendices cover topics such as relative potencies of opioids and steroids, pain rating scales, flow-sheets for pain, and cardiopulmonary resuscitation algorithms.

The utility of The Pain Drugs Handbook was assessed by posing the following four questions which could arise in the typical day of a practitioner who treats acute and chronic pain:

1. A postsurgical patient is nauseated on morphine sulfate 2 mgm/hour IV. What other medications might be tried for the acute postoperative pain?
2. A patient has a definite xylocaine allergy. What drugs might be used for a Bier block?
3. A patient with a positive phentolamine test has probable sympathetically maintained pain. The patient experiences stomach irritation on terazosin hydrochloride and does not like phenoxybenzamine. What other oral alpha blockers might be suggested?
4. A patient has verified trigeminal neuralgia. How much Tegretol® should be tried? How much glycerol should be used for neurolysis?

The book proved to be satisfactory in offering some guidance for each of the four questions. The appendices, various drug listings, and the section on Pain Syndromes and Therapeutic Guidelines were used to find the answers to the questions.

The index is very detailed and is one of the more useful aspects of the handbook. For example, the reader can quickly locate information on 33 drugs excreted in breast milk, 50 drugs that cause adverse dermatologic reactions, and seven drugs used to treat chickenpox.
The Pain Drugs Handbook is a good clinical tool. It should, however, only be used as a quick reference, because it contains very little on the mechanisms and physiology of pain. For the depth of knowledge required by practitioners who routinely treat acute and chronic pain, it should be used in conjunction with other more encyclopedic texts on pain.

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Other books of interest


An accurate assessment of any patient's status requires repeated measurement of physiological variables. In the past, the provider's tools were principally the stethoscope and index finger. Today, these tools also include sophisticated software and hardware (i.e., electroencephalography, somatosensory evoked potentials, and fourier transform analysis) that monitor functional parameters not as intuitively obvious as heart sounds and pulse. While today's anesthesia provider is often ignorant of the scientific underpinnings of these tools, a solid understanding may prevent erroneous conclusions and improve the care a patient receives. In the second edition of this text, Dr. Lake and 38 contributors answer the needs of many in the field of anesthesia by presenting a comprehensive review of the tools currently used in patient monitoring.

Lake's text is both fluent and comprehensible. Not only is the scope of mechanistic engineering explored, but the important facets of normal and pathological physiology are also incorporated. The text is divided into eight sections: Principles of Monitoring, Monitors of Cardiovascular Function, Monitoring Respiratory Function, Monitoring the Central and Peripheral Nervous System, Monitoring in Special Situations, Computerized Monitoring, Monitoring Anesthesia Delivery, and Miscellaneous Monitors.

I found Chapters 18 and 26 to be the finest contributions. In particular, Chapter 18 (Maternal and Fetal Monitoring) provided an extensive discourse on the physiology behind normal pregnancy and a thorough discussion of pregnancy induced hypertension. Chapter 26 (Monitoring Hemostasis) not only discussed the mechanisms available for hemostatic monitoring and their molecular basis, but also provided a comprehensive review of the clotting cascade and the pharmacological means available for interfering with hemostasis. Other highlights from the book include Chapter 17 (Monitoring Peripheral Nervous System Function), which examined the molecular basis for neuromuscular block with a discussion of pre- and postjunctional influences, as well as the means by which this blockade is measured. Finally, the inclusion of Chapters 2 (Human Factors and Alarms) and 3 (Electrical Safety) are commendable as they cover two subjects that generally receive little attention in anesthesia teachings.

The text, in general, had easy-to-use and informative figures and illustrations. Chapter 15 (Electroencephalography) might have benefited from a more in-depth discussion of the basic physiology surrounding this technique. For example, some samples of delta, theta, and beta waves with their corresponding processed representations and interpretations would have been useful for individuals inexperienced with this technique.

In sum, I believe Lake's text would be a valuable addition to any anesthetic library. Not only does it serve as an stimulating text in and of itself, but also the extensive coverage it gives many topics (i.e., maternal and fetal monitoring, peripheral nervous system monitoring) and the inclusion of a remarkably thorough index make this a useful reference source for those who do not wish to read the book cover to cover.

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