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Focus Robert M. Epstein, M.D.

Robert M. Epstein, M.D., is now emeritus professor at University of Virginia, Charlottesville. By any standard, he has had an exemplary career, prompting this interview by AUA Update Editor W. Andrew Kofke, M.D. In reading his story, I expect that most, if not all, AUA members will be able to identify some aspect of his life that has impacted their own. The interview is much longer than most newsletter articles but is being published in its entirety without editing because of its unusual historical value.

— WAK

The Formative Years ...

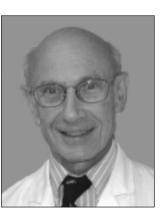
Could you provide some basic demographic information regarding your family and upbringing?

I started life in New York City as the fourth and last child in a loving family. Dad was a businessman who came from a professional background as a civil engineer. He had come to the United States alone as a boy of 15 with no English and no money because he was unable to further his eighth-grade education in what is now Belarus. Eight years later, he spoke unaccented English and had attained a B.S. in engineering. He was a cultured man who loved to read poetry and attend the theater and the symphony. Mom was the devoted wife and affectionate mother.

A major change in my life resulted from a devastating myocardial infarction that my dad suffered at 51. This resulted in his retirement. Dad, mom and I moved to Florida where I completed elementary and high school. Reluctantly I state that my precollege education became rather laissez faire.

Are there any aspects of your formative years that contributed to your future success as an academic anesthesiologist and physician?

My siblings were all much older, and all were accomplished. Closest was my brother, Morton, 11 at my birth. I remember long sessions from my preschool years when we would play games together, checkers and chess, that sort of thing. We would tinker with machinery —



Robert M. Epstein, M.D.

my contribution, of course, being to hand up the tools (first "scrub" experience?). My brother taught me to read at 4 1/2 because he was tired of reading to me. This caused my first-grade teacher great consternation, and my mother had to come to the principal's office because of Mort's "dereliction." But I had had a library card for over a year by then.

Mort left to go to graduate school when I was nine, did a Ph.D. in chemistry and had two careers. The first, as a physical and colloid chemist, led him to be head of basic science chemistry for the Colgate company. In the second, he switched to clinical chemistry and wound up as head of chemistry for a large hospital system in Illinois and as a founder and first president of the National Academy of Clinical Biochemistry. We never lived together again, but our visits, whether months or years apart, were as an uninterrupted dialogue. I admired him greatly.

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Who influenced you the most to pick a career in medicine, a career in anesthesiology and, finally, a career in academics and research?

The sequence is probably wrong. I think I "always" intended to be a scientist and an academic, doubtless from the influences described above. I toyed with the idea of medicine in high school, influenced in part, I am sure, by the doctoring I witnessed that kept dad going for 16 years. When I was off to the University of Michigan for college, this had morphed into an intention to major in physics that continued through my junior year. Several "push factors" then operated to make me switch to medicine: I was 18 and contemplating graduate school, for which I was most certainly not ready. World War II had just ended, and physics had become linked with mass destruction, government involvement and looming McCarthyism. Medicine appealed to me as a profession with a great variety of pathways to satisfaction in which I was sure I would find a niche and in which I would have the time to do so. I managed to complete both the biology and chemistry requirements and to get my degree in the remaining year. Michigan allowed me to remain at their medical school, for which I have been ever-grateful. I am not sure that anyone else would have with that history.

In the end, I discovered anesthesiology in second-year pharmacology and confirmed the attraction to the specialty in an early fourth-year elective month on service. This was considered a bizarre choice by the faculty in 1951. One future distinguished professor asked why I wished "to throw away my medical education," but, fortunately, I looked beyond their concerns.

The University of Michigan ...

Could you describe the anesthesiology environment at the University of Michigan, Ann Arbor, and name the decisive factors for the choices you made early in your medical career, as influenced by your Michigan mentors and other faculty or opportunities there? I am particularly interested in the roles of Maurice H. Seevers, M.D., the longtime chair (1952-76), and chair Robert Sweet, M.D.

I can't say that the anesthesiology department at Michigan was what attracted me. In fact I do not really know what it was when I started medical school, but it was probably under surgery. In the pharmacology course, the class was exposed to a variety of faculty who had strong interests in cardiovascular medicine (Gordon K. Moe, M.D., to be chair of physiology at the State University of New York Syracuse, by 1951) and in anesthetics (Dr. Seevers, later principally a toxicologist). Maynard Chenoweth, M.D., was another favorite, who moved on to Dow Chemical in Midland, Michigan, where he supported work on enflurane and volatile anesthetic metabolism.

Dr. Seevers was the chair. He had been pharmacology faculty at the University of Wisconsin during the Waters era and had some clinical anesthesia experience. (He is seen in a 1937 photograph of the Waters department.) We did not see much of him, but he had organized a strong course. At one point, there was a film of (I believe) John S. Lundy, M.D., from Mayo performing multiple trans-sacral blocks for anesthesia, doubtless for rectal surgery. I found this fascinating.

My laboratory bench instructor was Robert Peterson, M.D., who left at the end of that year to do a residency in anesthesiology at the Hartford Hospital. He was a strong influence on me. One of the things that happened right at the beginning of the course stuck with me. Alternate benches were assigned to etherize a dog with or without atropine premedication. The demonstration was to be that atropine reduced airway secretions. Unfortunately "our" dog did not get the atropine and did secrete so thickly and copiously that he drowned. Since the dog was supposed to be ours for the entire semester, this caused a great stir another dog had to be provided for the remainder of the term, and I am sure this cost someone's research budget. The event made a profound impression on me all the same, so I never did regard the experiment as a failure. I remember protesting that we had proved the point.

Sometime early in my clinical years, a chair, Warren Wilner, M.D., had been appointed to head a new department. At first he was the only physician. Nevertheless, after my elective, I was naïve enough to ask to stay with his department after internship. So I remained at Michigan for that year. By the time my internship began, Bob Peterson had returned from residency and was the second faculty member.

One can imagine the shock of being called in to Wilner's office in May, with residency to start in July, to be told that he was leaving for Stanford (then at the Presbyterian Medical Center in San Francisco, California). I first assumed that Peterson would still be in Ann Arbor, but he was also going — to Columbia. So after he discretely inquired on my behalf with Emanuel M. Papper, M.D., I found myself choosing between Presbyterian in California and Presbyterian in New York.

Dr. Sweet did not become chair at Michigan until about six months after my departure. Perhaps if that had been arranged earlier, my original desire to live out my career in Ann Arbor might have changed all that happened subsequently. Serendipity does color our lives so very much!

Time at Columbia ...

What was the impact of the Columbia environment of your time, in terms of your personal career development and the perspectives you developed on anesthesiology education and research?

As suggested above, my desire to be in academic medicine long preceded my interest in anesthesiology. I found

at Columbia, however, the ideal environment to favor its realization. Dr. Papper had come out of a strong academic background at New York University, both from his fellowship with Homer Smith, M.D., of renal function fame, his relationship to his chief, Emery A. Rovenstine, M.D., and his contacts with Bernard Brodie, M.D., and Julius Axelrod, M.D. (later Nobel Laureate) in pharmacology, leading to many studies of anesthesiology physiology and pharmacology. After a couple of years in Columbia's department of surgery, he had become chair of an independent depart-

"In the end, I discovered anesthesiology in second-year pharmacology and ... One future distinguished professor asked why I wished 'to throw away my medical education,' but, fortunately, I looked beyond their concerns."

ment of anesthesiology only six months before my arrival. Yet he had already gone far in establishing the new department as a strong research enterprise.

My first days in the O.R. were with Jack M. Frumin, M.D., who became a mentor and friend. I can give you some of the flavor: I had arrived a day late (on call in Ann Arbor on my last night) and was thus thrust directly into an O.R. where Jack was giving anesthesia. His first words after a brief introduction were "what is apneustic respiration?" He may have thought I would know because Robert Gesell, M.D., was chair of physiology at Michigan, where he was best known for work on central respiratory drive. But it might as well have been Greek to me (as it is). Frumin and S.H. Ngai, M.D., had been working with Professor S.C. Wang of the pharmacology department at Columbia on the organization of the respiratory center, a program that resulted in short order in three or four papers in the American Journal of Physiology. These folks did not fool around! I learned quickly that there was much more to anesthesiology than O.R. performance, important as that is as well — as was always emphasized to us all by Dr. Papper.

How did people at Columbia such as Dr. Papper, Richard J. Kitz, M.D., Ronald L. Katz, M.D., Duncan A. Holaday, M.D., B. Raymond Fink, M.D., Virginia Apgar, M.D., et al., impact you? Could you briefly reminisce on the contributions of Shih-Hsun Ngai, M.D., Arnold St. Jacques Lee, and Dr. Frumin to you and to anesthesiology? Were there others I have failed to mention?

Papper was, after all, an extremely inspiring and charismatic leader who remained my mentor, confidant, supporter and advisor throughout the subsequent 50 years. It was a privilege to be asked to speak at his memorial, and I cherish his memory. He certainly dominated the environment

at Columbia until he left after 20 years to become dean and vice-president at the University of Miami, and he continued to be a leading force beyond that time in our specialty. He had personal contacts and working relations with the likes of James Shannon, M.D., Director of the National Institutes of Health (NIH), Michael DeBakey, M.D., Mary Lasker, John F. Kennedy and Lyndon B. Johnson (who appointed him to the Presidential Commission on Heart Disease, Cancer and Stroke). These, as well as his year at NIH as principal consultant to the National Institute of General Medical Sciences, were levers for the development of anesthesiology and especially of opportunities for anesthesiology research and research training. His "impact" on our field and my career was nothing less than total.

Duncan Holaday was a fine man with a strong background in neurophysiology that led him to studies of anesthetic effects on respiratory control as demonstrated in alterations of acid-base balance. He was not involved in anesthetic care at Columbia, although that changed when he went on fairly soon to be chair at the University of Chicago. His work demonstrated to many of us the degree to which O.R.s could serve as a laboratory for the study of human physiology.

Ray Fink and I arrived at Columbia at the same time, he as first-year faculty, and his scientific career really developed its full flower later. He was a man of tremendous imagination and perception from the beginning. Ray was able to identify the phenomenon of "diffusion anoxia" in his first year. The observation of recovering patients, and his deep sense of wonder about the mechanism of a seeming transient color change, led to the studies that demonstrated it. This, remember, before there were pulse oximeters and when blood oxygen measurement required laborious chemical analysis. Ray became a neuroanesthesiologist, and his interest in the nervous system (and in early EMG studies of respiratory and laryngeal muscles) led to a sabbatical at the marine biological laboratories in Monaco, where he really learned to study nerve conduction, etc. But much of that was later.

Ronald Katz became a resident after I joined the faculty, as did Richard Kitz. I was an O.R. first-month mentor for each, and hope I may have contributed to their interests in academic pathways. But, in reality, Papper was the prime mover for them as for so many others. I did have a role to play in Dick Kitz's interests in neuromuscular pharmacology, because as junior faculty assigned to planning the "Thursday night lectures," I had invited Irwin B. Wilson, M.D., to participate. "Ernie" was the designer of 2-pyridine aldoxime methiodide (2-PAM) as the antidote to organophosphate poisoning of acetylcholinesterase, and that lecture inspired Dick to become his fellow.

Ron Katz was the first resident I had invited to my home for dinner, and we became good friends as he moved on to the faculty himself. My departure for Virginia about 15 years later, and his shortly after for the University of California-Los Angeles, made it hard to see much of each

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other. Kitz and I still see each other regularly in Massachusetts.

Virginia Apgar was a full-time obstetrical anesthesiologist by the time I joined the residency. I had my month or so with her, but the interruption of my residency at midpoint for Army service in Korea and Japan, and her departure not long after my return for the Johns Hopkins Public Health school and then the National Foundation, meant we did not have a great deal of contact. I have nothing to add to her well-publicized story.

Ngai had little to do with my training at Columbia, although we became fast friends as faculty colleagues. He was actually in the Army during my first year of residency, and then a student at Cornell to meet American licensure requirements on my return from my own military service. I had the pleasure of knowing him after that through the rest of his life, and our families were and are still close. Ngai was a first-class scientist. We collaborated on one project to study MAC in mice (like good pharmacologists, we called it ED_{50}) after replacing their body water with deuterium oxide. This project, intended to examine Linus Pauling's clathrate theory of anesthesia, had to be abandoned because the mice became visibly abnormal when the D_2O levels became significant.

Arnold Lee was a physicist and engineer who had joined Jack Frumin's quest for automated anesthesia delivery during my years in military service. When I returned, he and Jack had developed a device that came into experimental use. Although I was extremely skeptical about Jack's idea that automated anesthesia would make anesthesiology an unneeded discipline, I found the device a marvel. I also found Arnold to be a wonderful person, very smart, very creative and extremely ready to become involved in the research ideas of his clients to their great assistance. Thus it was that Arnold invented the first anesthesia oxygen failsafe when he was made aware of certain O.R. accidents. He was at the time an entrepreneur with a company he called "Invengineering."

Later the company failed and was sold at an auction. Jack Frumin (by then at the Albert Einstein College of Medicine in the Bronx) committed his own funds to buy all the laboratory instruments, machine tools and large inventories of parts and supplies to keep them from being dispersed. I in turn convinced Papper that we should put up the funds to repurchase the laboratory from Frumin, and so it happened. One of our senior surgeons, David Habif, M.D., had funds from the Milstein family that he contributed to renting an industrial site across the river from Columbia. So was born the Milstein Laboratory of Medical Instrumentation, and Arnold came on the faculty. He continued for perhaps a dozen years until Dr. Shirley Markee, his wife, and he moved to California. Readers may wish to consult the article on Mr. Lee by Mrs. S.H. Ngai (Hsueh-

Hwa Wang, M.D.) in a recent issue of the *Bulletin of Anesthesia History** for further insights into this delightful and creative man.

Is it fair to reflect that this Columbia experience contributed to your preparation to become chair at Virginia?

Without question. As a young anesthesiologist, I was totally convinced that a life in the O.R. and in the laboratories was everything and that a chairmanship was something I would never choose (nor be good at). The change in this thinking began to occur at the usual time in mid-life (although I would not say it felt like a "crisis") and to some extent followed on the decision of Dr. Papper to leave New York. So after routinely refusing to look at chairs for many years, I finally began to do so and accepted Virginia after passing on a number of others. My experience at Columbia had by then given me enough of an idea of what I would wish to accomplish in that role and how to go about it. Manny Papper made a point of grooming his inner circle for leadership roles by giving assignments he thought matched their interests and talents. I rather suspect he thought I may have had more analytical than experimental talent, and he may have been right, but I know that the tasks I did for him prepared me exceptionally well for those of the chair I later filled.

On Fellowships ...

While you were at Columbia University, you actively collaborated with Henry Price, M.D., at the University of Pennsylvania with multiple visits to Philadelphia for this work. Can you tell us about these research collaborations?

This is true. I had finished a research fellowship after residency with Stanley E. Bradley, M.D., in the department of medicine at Columbia. There, along with Roscoe R. Robinson, M.D. (later vice-president at Vanderbilt), we studied liver blood flow and splanchnic blood volumes in shock models in dogs and anesthesia effects on splanchnic circulation in patients.

Henry (Hal) Price was interested in pursuing the liver blood flow studies in human volunteers at the same time as the laboratories at Columbia were undergoing extensive renovation and a new laboratory building was getting into construction. I was then on the faculty but found myself without laboratory space in New York. By chance I sat with Price at dinner at the AUA meeting in Charlottesville that year, and he asked me what we were doing with the liver studies at Columbia. From that conversation grew the idea that we could collaborate. I had a lot of technical expertise on the pitfalls in this methodology, and he had the laboratory, the coworkers (including Stanley Deutsch) and the opportunity to recruit subjects. This collaboration lasted most of the year 1963-64 and produced three publications. It was made possible by Papper's travel funds, Bob Dripps' acceptance of me as a visiting scientist, Hal's willingness to

Wang HH. Remembering Arnold Lee, a colleague and a dear friend. *Bull Anesth History*. 2003; 21(3):10-13.

have a weekly house guest, and especially my wife's forbearance at my absence for two days each week.

Please discuss how research fellowships in other medical disciplines benefit anesthesiology and how you have promoted such research fellowships in your own program.

Research, particularly as biomedicine has advanced, is not possible without extensive education dedicated strictly to the creation of a qualified investigator. Rigorous thinking and technical skill requires as much commitment to that process as does development of clinical ability. It is most efficiently and effectively accomplished by a period of full-time devotion to research that is made possible only by funding of the prospective investigator. A discipline that does not commit resources to the process will find its source of new ideas languishing.

Moreover, to a large degree, contemporary research demands a high degree of specialization. Although not always, it is frequently the case that such specialized techniques and disciplinary knowledge do not exist in the clinical department. Sometimes they may be represented by the presence of a single individual. To a great extent, therefore, the young investigator is better off in the milieu of scientific study and research that can be provided by a department committed to this as its fundamental function. Even the Ph.D. investigator may well need such a connection after surviving the absence from research required by five or six years of medical school, internship and residency.

I brought this model, as best I could, from Columbia. As was true at Columbia, I deemed it important not only to provide fellowship opportunities for postresidency candidates but also to continue a mentoring process for junior faculty. It was often necessary to modify the model, and in the early days, it really applied more to new faculty than to fellows.

For example my first faculty recruit, Richard Wiklund, M.D., came from a Columbia residency and a year in England with John Nunn, M.D. He went half-time into the pharmacology laboratory of future Nobelist Alfred G. Gilman, Ph.D.

David E. Longnecker, M.D., arrived in 1974 with solid research experience, but was briefly assisted during his take-off phase here by a link to physiology's Brian Duling, Ph.D. He went on to be chair at the University of Pennsylvania by 1988 and later a senior leader in the school of medicine.

William P. Arnold, M.D., on the other hand, finished his residency with us and went full-time in medicine for three years into the laboratory of future Nobelist Ferid Murad, M.D., Ph.D. He was supported by a fellowship from PHARMA and then joined the faculty.

Edward D. Miller, M.D., came to us with a previous fellowship experience, but he gained the equivalent of a couple years of additional postdoctoral fellowship while on the faculty. Active clinically, he also spent half of his time in the pharmacology department in the laboratories of Michael J. Peach, M.D., an important investigator of antihypertensives. He became chair at Columbia, later the

same at Johns Hopkins, where he is now vice-president for health and dean.

Roger Johns, M.D., also worked with Peach, starting in his CA-3 research track and continuing to be mentored as faculty while simultaneously starting up his own laboratory. He was a "natural" and also a dynamo in pushing his research. Roger left to follow Ed as chair at Johns Hopkins.

Marcel E. Durieux, M.D., in contrast, completed his residency and then spent three years as a fellow with Kevin R. Lynch, Ph.D., also in pharmacology. His work there, along with faculty-level research in his own laboratory, eventually led to award of the Ph.D. Durieux was recruited to the chair at Maastricht in the Netherlands, but found he preferred the research opportunities he had left and is back at Virginia.

Carl Lynch, M.D., Ph.D., now chair of our department, started as an intern with a fresh electrophysiology Ph.D. During his time as house staff, he had a bench in the physiology department with Nicholas Sperelakis, M.D. The nature of his research made it possible to complete experiments in carefully controlled blocks of time, mostly on weekends. He presented research at the Biophysical Society each year of his residency and had essentially a somewhat curtailed postdoctoral fellowship to boot. This sufficed to move him on to his own laboratory soon after joining the faculty, and he quickly obtained grant funding.

Thomas J. Gal, M.D., had had a fellowship year at Penn, largely devoted to the study of drug effects on respiration. During his first few years in the department, he was given time and an attachment to the division of pulmonary medicine under Dudley F. Rochester, M.D. This made it possible for Tom to master the field of respiratory mechanics and dynamics. His knowledge in an area that is unfortunately often slighted in today's training environments gives the specialty an outstanding teacher of pulmonary physiology in clinical anesthesia and an expert editorial reviewer of papers in that field.

The University of Virginia, Charlottesville, Experience . . .

In retrospect, what are your thoughts on "replicating" the Columbia model at the University of Virginia? What are the unique similarities and differences and your most notable accomplishments at Virginia?

Better to leave to others any judgment about whether any of my accomplishments here are particularly notable. I am content that with wonderful colleagues, we made it a good place to be. It is more difficult to replicate the Columbia model anywhere today because of the pressures for clinical production and the limitations of reimbursement

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that have diminished the pool of funds available to provide supported time for faculty development. Those considering jobs as chairpersons should decide whether their goals include the establishing of a truly academic department. If they do, the recruiting institutions should be asked to provide seed money in ample amounts to support faculty development efforts. Realism also demands that these commitments not be open-ended. Measures of success, such as achieving external funding, are necessary to justify continued assistance to newcomers. Finally it is well that the chair have some willingness and talent at fundraising. The more liberal flow of clinical income of the 1970s and early 1980s made it possible for me largely to neglect this. I probably should have paid more attention to it, although I am not certain it would have changed a lot at the time.

How did you continue the Eastwood legacy (Douglas Eastwood, M.D., who is now retired and lives in Cleveland, Ohio) and carry forth your own vision in an entirely different and changing world?

I was blessed that Dr. Eastwood encouraged me to look at this department and also with the strong core of faculty that I inherited from him. Three of the 11 are still active in the department. I do not believe that the world changed very much for us during the first 15 years or so of my tenure into the late 1980s. The evolution of managed care came quite late to Charlottesville. By then we had more than 30 clinical faculty, a going research cadre and substantial reserve funds, so the impacts were very much softened.

Your department at Virginia has been called an "academic incubator." There are many people who are or were in your department at Virginia who later emerged in significant leadership roles in anesthesiology and medicine in general. People like Drs. Longnecker, Miller, Bedford, Berry, Lake, Johns and Hoyt. Can you comment on the factors that you think led to this remarkable productivity of leaders in anesthesiology from such a small community/department?

Well it depends on what is "remarkable." There is no question that we attracted wonderful people, some of whom left us and had great achievements. On the other hand, there have been departments that produced dozens of chairs, so perhaps we weren't that prolific. The communities of the University of Virginia, Charlottesville, and Albemarle County are exceedingly attractive. This helped in recruitment of the people we sought and helped in retaining accomplished leaders in our field. We also did not succeed in recruiting many others who have had equally brilliant careers. I should point out that with a large medical center in a population of well over 100,000 and large numbers of visitors, we are not exactly "small town."

What did you do specifically to foster the success of these folks?

My personal view is that people will respond to high expectations of their potential, joined to the freedom to accomplish what they can and want to. At a farewell department gathering for Manny Papper at Columbia, Allen Hyman, M.D., gave him a football jersey with the number "55," traditionally the number of the center linebacker. He called him "a linebacker who can really carry the ball." I thought often of that image over the years, conceiving of my new job as clearing out the barriers and making it possible for others to accomplish and fulfill their potential. Perhaps that helped. Of course the opportunities I described above for collaborations, etc., did not just happen.

I also always told the faculty in our meetings that I respected them as professionals or they would not be with us. So it was up to them to set their own high standards and not have them dictated. Most responded to the challenge that represents, but of course, not all did.

Can you tell us about your Harold Carron Professorship?

Harold Carron, M.D., was a remarkable clinician with a great feel for people. He came to Virginia from two decades in private practice and had enormous technical skills. His passion was for pain management, when the words were not even defined, and I believe his "Pain Management Center" was really the first strictly outpatient model for dealing with chronic pain. (The University of Washington was, of course, the first, but largely then an inpatient pain service.) He started it in the anesthesia prep rooms in the O.R. My role was purely in finding him space and saying "go to it." Harold had many fellows who now have important positions in the field, and he engendered their affection. The Harold Carron Chair was assembled from substantial contributions from the Carron family and from a large number of his residents and fellows, faculty members, grateful patients and a modest amount of departmental reserve funds. Joyce Carron, Harold's widow, continues to support the chair.

David Longnecker was made the first Carron Professor. After he left for Penn, the chair was empty for a while. When Harold died, I gave up the endowed chair I then held and assumed the Carron Professorship as departmental chair in his honor. Of course I am now the Harold Carron Professor Emeritus, and the chair is open for a suitable individual. In the future, the holder should be drawn from the community of academicians in pain-related disciplines, which I was not.

On Work With AUA, ABA and Editing Anesthesiology . . .

Can you briefly describe your role and experience in each of them and your most salient memories for each?

I was elected AUA Secretary, and Thomas F. Hornbein, M.D., was elected Treasurer back around 1969. Someone had earlier described the purpose of AUA as "to get in." At

the time, AUA was a closed club, originally limited to 100 members. Tom and I concurred that this was inappropriate for an organization devoted to developing academic strength in a growing field. For better or worse (and there are those who considered it the latter), we made our principal goal the opening up of membership to qualified persons who could achieve election, in any number. This happened. Tom, Henrik H. Bendixen, M.D., and I — and to my best memory, Lawrence J. Saidman, M.D. — were also responsible for adding the Scientific Advisory Board and Educational Advisory Board to provide focus to the activities of AUA. The details were elaborated while dining out during one of the AUA meetings and promptly adopted by the AUA Council. I believe this was a good contribution to AUA that added substance to its meetings, which previously had been focused mostly on the activities of the host department.

Both Tom and I subsequently became presidents of AUA, of which I was very proud, but that was largely an honorific position. I was always fond of AUA, pleased to have been elected and now principally regret (but am delighted) that the numbers of superb young academicians it recognizes have gone far beyond any ability to know and befriend each individually.

ABA was, of course, a 12-year blast. Anyone who has a passion for excellence in our specialty could not be happier than when participating in continually raising the standards and recognizing the good doctors who meet them. We were particularly blessed at having a highly accomplished and sensible group who knew how to struggle and disagree while striving for consensus, while at the same time keeping the perspective that made us collegial and socially close-knit. With turnover of membership, I served with about 25 individuals, and each was a true friend.

I remained on the editorial board of *Anesthesiology* for only five years, finding that the incessant flow of manuscripts was interfering with my ability to do the job I was responsible for and paid for at the university. Although I enjoyed learning early who and what was innovative, in conscience, I could not persist in being late with reviews. It was a principally solitary activity with one meeting a year at the American Society of Anesthesiologists Annual Meeting. The board was, of course, a group of highly respected doctors, and these, too, one regarded as friends.

How did your work in these groups facilitate implementation of your own vision and ideals?

The purposes and goals of these august bodies are congruent with my ideals for our specialty. If not, I would not have accepted these appointments. Commitment to accomplishing those purposes, and not personal recognition or ambition, should be the reason for anyone doing so. The recognition is just an enjoyable byproduct, if it occurs. At the same time, I think it all helps in creating a reputation for the department that facilitates recruitment and healthy growth.

You were part of a legendary group on the American Board of Anesthesiology (ABA), including Drs. Arens, Siker, Kitz, Bird, Sessler, Slogoff, etc. What was that like?

Legendary? Some titans preceded us: Ralph M. Waters, M.D., and Emery Rovenstine. Drs. Adriani, Stu Cullen, Dripps, Eckenhoff, Hamilton, Keats, Lundy, Papper, Saklad, etc. If we rose to that standard, I am grateful. We had a wonderful, collegial, shoulder-to-the-wheel working group that could disagree and still come together. We enjoyed each others' company and could rely on each others' fulfillment of assignments. We were then followed by new directors such as Bruce Cullen, Hug, James, Longnecker, Owens, Saidman, etc., and they by the current board. Others could equally have been mentioned. They have all done their parts to make the specialty develop and the public safer.

As an ABA board member, what was your role in changing the specialty from a three-year to a four-year training program?

I was for it early, as were a number of others on the board. On important matters, the board acted on consensus only. Unanimity on this change arrived slowly, after much discussion and careful planning. My position was that the specialty had kept adding to itself and that it could not continue to compress new activities into the old format. Specifically we had added requirements in pain management and in critical care, cardiac anesthesia became very important to anesthesia practice, and other subspecialties had arisen and developed growing bodies of information and technique. I was particularly eager to see opportunities for critical care participation since I believed and still believe that the experience in the intensive care unit makes the doctor a more capable operating room anesthesiologist — this, even if one never returns to critical care practice. I believe the current two-month requirement should be lengthened.

On the Role of Anesthesiology in Medicine and Thoughts About the Future ...

You have been a physician leader of the Health Services Foundation at the University of Virginia. How did your roles such as this outside of anesthesiology impact your department and the specialty in general?

My commitment to medicine goes beyond specialization. Of course we cannot be all things to all patients, but the intellectual reach and curiosity we brought to medicine as students should not be allowed to die. Anesthesiology is a

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broad discipline that touches patients of all ages, all areas of pathology, and this makes for much of its fascination. As such I am dismayed that many of our specialty colleagues do not participate in the life of their institutions but confine themselves to their departments. My desire was to influence the development of the school of medicine and its hospital, not only the department. This took time and energy, but I believe it paid off in the institutional recognition of the department's quality and, consequently, in morale, opportunities and the self-respect of the faculty.

You probably have seen many changes over the years, some good and some bad. What would you consider the one or two biggest changes that have occurred that have affected you the most since you began practicing anesthesiology?

The biggest, undeniably, is the reduction of acute mortality rates from anesthesia. The youngest of our members have no institutional memory of a time when the Beecher-Todd study (published in 1954) suggested a mortality rate of about 1:1,560 anesthetics. Today the mortality would not be measurable at a statistically valid level with a denominator fewer than probably a half million subjects. This change is the tip of an iceberg of enhanced patient safety for which the specialty has received accolades, notably in the 1999 Institute of Medicine report To Err Is Human and in the formation of the American Medical Association's National Patient Safety Foundation, mimicking the Anesthesia Patient Safety Foundation.

... for those who seek to be active in research and who are prepared to undertake the long commitment to preparation for serious work, opportunities for academic careers will be available.

Thanks to the efforts of our organizations, the public is more aware also of our role in making possible the advances of contemporary surgical practice, especially in cardiac surgery, neurosurgery and pediatric surgery and in providing enormously improved pain relief in labor and delivery with relative safety. We are no longer that "specialty with a name I can't pronounce." I do not think my professor of 1951 would today ask why I was throwing away my medical education. Unfortunately our names are still remembered by only a few of our patients.

A change that I regret, if it is indeed a change and not the absence of change, is the ongoing hostility between our profession and the organizations of nurse anesthesia. We would both be better off if we were not dichotomized and hostile, but instead could present a united front to the political and economic forces tending to downplay the value of

each of our contributions. The concept of the anesthesia care team is well-established in many locales and seems to work with little friction. Would that the same were true in our organizational structures.

With a distinguished professional career accomplished, how do you foresee the future of the specialty of anesthesiology research and academic anesthesiology in general?

Academic anesthesiology seems to be going through a pinch in the flow of progress. I am only peripherally in touch with the changes, but it appears that the recruitment slump of the early 1990s has come home to create a personnel shortage that is reflected in two ways. First is the availability of enormous economic opportunity to the young anesthesiologists, steering them away from fellowships. Second is the unavailability of time to the young academic for study, preparation of teaching content and research. The latter is compounded by the economic climate of reduced reimbursement for medical direction of anesthesia care. I am hopeful that as the workforce expands to meet the load (and there is evidence that help is on the way), these problems will correct themselves. I doubt that any return to the "old" freedoms will occur, but for those who seek to be active in research and who are prepared to undertake the long commitment to preparation for serious work, opportunities for academic careers will be available.

You were inducted into the Institute of Medicine (IOM). What is that?

The Institute of Medicine is one of the three arms of the National Academies, along with the Academies of Science and of Engineering. The National Academy of Sciences was formed during the American Civil War by an act of Congress, a congressionally chartered, quasi-public organization intended to provide outside expert advice to the government and others on matters of national importance. The IOM, founded in 1970, is divided into 12 sections, representing various clinical specialties, social scientists, nursing, law, public health, basic medical sciences, administrative medicine and others. The total membership is about 1,500 with 50 to 70 elected annually. Anesthesiology is in a section with surgery and its specialties, radiology, nuclear medicine and ophthalmology. The section has about 90 members, of whom currently 11 are anesthesiologists. Members are expected to contribute their time and expertise to addressing the current range of problems before the institute. Ad hoc advisory committees selected for specific skills address most projects, and many of their meetings are open to the public for those interested. In general, project reports are published at the conclusion of the process. An example is the *To Err Is Human* report referred to above.

You were known for coming to the operating room with a lanyard and stopwatch around your neck. Did you really do that? Why?

Yes, I did that in early days both at Columbia and at Virginia. My purpose was to let residents know how long they were permitting patients to remain apneic during difficult intubations, etc. It also helped me to time the interval following nerve blocks before anesthesia could be expected. I gave up the practice when digital watches became available, but not the timing of events. It just was less flamboyant when I used the stopwatch built into my wristwatch.

What are your personal plans for the future?

Currently I spend about two-thirds of the year in Charlottesville, where there is so much going on that it is impossible to keep up with half of what I would like. I continue to attend departmental conferences, but not patients. The time freedom allows me to attend medical grand rounds and cardiology grand rounds as well and also our "Medicine and Society" conferences that deal with social and ethical issues. These programs provide me with the continuing medical education credits needed to maintain a license. That in itself is dear to me, but the range of these indicates something of the substance of my interests. I have done some editing-type work for IOM. Another passion I try to indulge is attendance and participation (as questioner and occasional lunches with speakers) in the forums of Virginia's Miller Center of Public Affairs. These bring many of the finest minds in the nation to the university to discuss various contemporary problems, from the future of Medicare to the dangers of nuclear proliferation. Reading is another pleasure, of course.

I take a reasonable part of my week to work out in the athletic club, and am happy to say I can still maintain a healthy pace. One of these years that will no doubt change. Concert series and university theater are both part of our lives and very enjoyable; Washington is an easy trip for the weekends. I also attend the RODEO: Retired Old Doctors Eating Out!

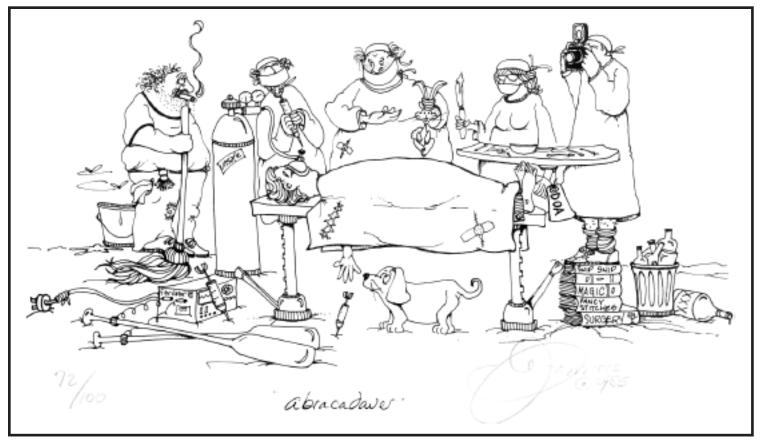
My three children, their spouses and the six grandchildren are all a delight to us. We could not see them enough, but do not see them enough.

Finally, Lillian and I like to get away for the summer (on Cape Cod) and the winter (in Delray Beach) so as to avoid the extremes of climate with which neither of us wishes to cope. So we are in three phone books. In Florida I have the additional pleasure of being close neighbors with Rick Siker and Harry Bird. Thus some of the labors of old times are still being rewarded when we get together.

Is there anything you would like to add to this interview?

Certainly not! I've gone on much too long already. Thank you for the opportunity to leave something for the next generation to think about. Or to ignore.

Special thanks to Lee A. Fleisher, M.D., for submitting this cartoon, which was given to him by a friend.



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EAB REPORT: Watching the Watchers

Randall C. Cork, M.D., Ph.D. Professor and Chair and Director of Pain Medicine Louisiana State University Health Sciences Center Shreveport, Louisiana

A key requirement in maintaining our profession is to set and enforce educational standards. In the environment of educating physicians to perform anesthesia, this setting and enforcing of standards has been effected through the Accreditation Council for Graduate Medical Education (ACGME) and its Residency Review Committee (RRC) for Anesthesiology.

As we all know, over the last 20 years, there have been some significant changes in how ACGME and the RRC set and enforce educational standards. The first significant change that comes to mind for most of us is the emphasis on defining what residents should do and learn and then measuring it. We all now know about the ACGME "general competencies." Most of us believe it is a good thing to quantitate, assess, evaluate and then improve on what we do. In embracing the recommendations set by ACGME through our RRC, however, we may not have noticed the diminished responsibility we have in policing ourselves. *Over the last 20 years, the RRC for Anesthesiology has increasingly utilized nurses rather than anesthesiologists to survey our educational programs.* The reason given is that there have not been enough physician anesthesiologists willing to perform this task.

Over the last five years, I have volunteered to be a site surveyor for the RRC. During this time, I have been asked to review three programs. It has become clear to me that lack of availability of willing anesthesiologists is not an issue. Anesthesiologists have lost control over the evaluation of the training of anesthesiologists. The nurses at the RRC do not believe we are capable of fairly evaluating ourselves; they feel that they can more appropriately serve as "resident advocates." While it is true that the voting membership of the RRC is composed mostly of anesthesiologists, the site surveyor acts as the "eyes and ears" for this committee. Thus the committee receives its information through a second party. Unfortunately this second party may no longer be an anesthesiologist, but rather a nurse acting as a "resident advocate." We have been lulled into believing that because anesthesiologists are on the RRC, we still control the process.

After each site survey I completed, I wrote my report and submitted it to the RRC. There were no performance standards for the surveyor, and there was no feedback regarding my specific performance as a surveyor. Were they not interested in how well I did at the task? Was there no room for improvement?

The concept of a set of general competencies that should be measured could be extended to what the RRC does. It is not a bad way for any organization to improve performance. What we measure, we do improve.

Not all RRCs use nurses as site surveyors. Last week, as part of a site survey of our department of orthopedics, I was interviewed by the surveyor for the RRC for Orthopedics. He was an orthopedic surgeon from a wellknown academic program. He was sharp, to the point, and he knew his way around an operating room. He also knew a lot about the general competencies and how they could be measured. I asked him if the site survevors for the RRC for Orthopedics were generally



Randall C. Cork, M.D., Ph.D.

physicians rather than nurses. He indicated his professional society had determined that it was more appropriate for physician educators to do the surveys, and there was no shortage of volunteers.

We need to regain control over the evaluation of our own profession ... After all, we are the original "resident advocates."

There are some other concerns about how we anesthesiologists have lost control over the evaluation of our training programs. Four members of the Board of Directors for the ACGME represent the American Hospital Association (AHA), which has taken a stand supporting the independent practice of nurse anesthetists. What is wrong with this picture? In fact nurse anesthetists are listed on < www.acgme.org > as part of the ACGME staff. Note that while all the M.B.A. and Ph.D. titles are listed, the RN and CRNA titles are not. One nurse anesthetist on the ACGME staff was relieved of similar duties she performed for the American Association of Nurse Anesthetists after a dispute about who should control the review process. She now works for the ACGME on the Committee for Review of Program Requirements. Most of us are not aware of these problems; we have lost control of the evaluation process.

We cannot fix it if we do not try. Please volunteer to be a site surveyor for the RRC for Anesthesiology. You can do this by calling Judith S. Armbruster, Ph.D., at (312) 755-5043 or by e-mailing her at <jsa@acgme.org>. Also ask her about how the competencies of a surveyor are defined and measured. We need to regain control over the evaluation of our own profession; physician anesthesiologists are no less capable of this than are nurses with Ph.D.s in education. After all, we are the original "resident advocates."

SOAP 1,000-Strong and Growing

Joanne Douglas, M.D., President Society for Obstetric Anesthesia and Perinatology

The mission of the Society for Obstetric Anesthesia and Perinatology (SOAP) is to promote excellence in the research and practice of obstetric anesthesiology and perinatology. Founded in 1968 by six obstetric anesthesiologists who held an organizational meeting at O'Hare International Airport near Chicago, Illinois, it has grown today to a membership of more than 1,000 members. The membership reads like a "who's who" of obstetric anesthesiology but also includes obstetricians, pediatricians and basic scientists, all of whom share an interest in the care of the pregnant patient and newborn.

SOAP's original Articles of Organization state that "this society is dedicated to informality," and that informality continues to be one of the joys of SOAP membership. Residents, fellows and faculty anesthesiologists present original research at SOAP's Annual Meeting and receive the benefit of discussing their research in a social setting with the gurus of obstetric anesthesiology. This unique social structure has led to the feeling of family that many longtime SOAPers and newcomers alike find so pervasive and attractive about this Society. Through the Obstetric Anesthesia and Perinatology Endowment Fund

(OAPEF), financial support is provided for awards at the Annual Meeting and for peer-reviewed grants for research in obstetric anesthesiology. SOAP has been a financial supporter of the Foundation for Anesthesia Education and Research (FAER) as well as a recipient of FAER-sponsored research funding. SOAP is active at the American Society of Anesthesiologists

(ASA) Annual Meeting, where the Sol Shnider Breakfast Panel and other sessions are often oversubscribed. At the ASA 2004 Annual Meeting, obstetric anesthesia (along with critical care) was one of the inaugural featured "tracks" designed to streamline and highlight the offerings of this specialty. The steering committee for this track consisted of the present and two immediate past and future presidents of SOAP.

SOAP's four-day Annual Meeting is generally held in May. Highlights include the Gertie Marx Symposium for research by residents and fellows, with the best six abstracts presented orally. There is the Zuspan Award for the best presentation, where one of the authors is an obstetrician, and the Best Paper of the Meeting Award. There also are two eponymous memorial lectures, the Fred Hehre Lecture and the Gerard W. Ostheimer What's New in Obstetric Anesthesiology Lecture, among other education opportunities. A high-risk obstetric anesthesiology workshop preceded the meeting in 2004, and in 2005, there will be a neonatal advanced life-support course.

We actively encourage collaboration with other obstetric societies with an annual "What's New in Obstetrics" lecture given by a prominent obstetrician, and in 2005, there will be a "What's New in Obstetric Medicine" lecture given by a member of the North American Society for Obstetric Medicine. Chair of the ASA Committee on Obstetrical Anesthesia, SOAP member David J. Birnbach, M.D., sits on the American College of Obstetricians Gynecologists (ACOG) Committee on Obstetric Practice.



Joanne Douglas, M.D.

This is an important role as many recent ACOG opinions have had a direct impact on the practice of obstetric anesthesiology.

Benefits of SOAP membership include a discounted registration fee for our Annual Meeting, a quarterly newsletter and access to the "Members Only" section of the Web site. *Anesthesiology* is our "official" journal. The Web site < www.soap.org > includes archived copies of the newsletter, information on patient and physician education, a list of fel-

lowships available in obstetric anesthesiology as well as items in the news regarding obstetric anesthesiology and SOAP members. Support has been given for the creation of a Repository for Serious Adverse Complications, which will allow anesthesiologists to anonymously provide information regarding the number of deliveries and number of epidurals as well as any compli-

cations. As denominator data are collected, this database will provide an accurate picture of the incidence of some of the common (as well as the more rare) but often devastating complications of obstetric anesthesia.

SOAP is truly an international Society with a membership that reflects the worldwide community of obstetric anesthesiologists. One of the more exciting recent developments has been the formation of an International Outreach Committee, which will oversee the education and dissemination of modern-day obstetric anesthesiology principles to a variety of underserved areas of the world.

Our next meeting will be held in Palm Desert, California, from May 4-7, 2005. We invite you to attend and become a member of SOAP, a very active subspecialty Society. The meeting program and membership application are available at our Web site, or you may request information by calling our head-quarters at (216) 447-7863.

Winter 2004 AUA Up

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Anesthesia in the News

Go to the AUA Update Web page and copy and paste these URLs.

www.auahq.org

"State Probes Antitrust Claims: Tallahassee Anesthesiology Providers Investigated," from Tallahassee.com, written by Diane Hirth. October 3, 2004.

www.tallahassee.com/mld/tallahassee/9822180.htm

"Surgeons Cancel Blue Cross Contract in Protest," from the Missoulian, written by Ginny Merriam. September 25, 2004. www.missoulian.com/articles/2004/09/26/news/local/news03.txt

"Blocking Out Pain Draws Relief," from the Pittsburgh Tribune-Review, written by Karen Roebuck. September 19, 2004. pittsburghlive.com/x/tribune-review/trib/regional/s 252965.html

"White House Is Blocking Dem Donor," from The Hill, written by Bob Cusack. September 15, 2004.

www.thehill.com/news/091604/donor.aspx

"Joint Commission Issues Alert on Patient Awareness," from U.S. Newswire (press release)

releases.usnewswire.com/GetRelease.asp?id=37566

"Group Urges Care in Using 'Deep Anesthesia'," from NPR. September 28, 2004.

www.npr.org/templates/story/story.php?storyId=4051539

"Aspect Medical Systems Announces the Issuance of a Joint Commission 'JCAHO' Sentinel Event Alert Targeted at Preventing and Managing the Impact of Anesthesia Awareness," from Business Wire (press release). October 7, 2004.

home.businesswire.com/portal/site/google/index.jsp?ndmViewId= news_view&newsId=20041007005114&newsLang=en

"Suit Results in \$3 Million for Boy's Estate," from the Wilkes Barre Times-Leader, written by David Weiss. October 5, 2004. www.timesleader.com/mld/timesleader/9836132.htm



AUA 2005 Annual Meeting Baltimore, Maryland May 6-8, 2005

> <www.auahq.org> for details