



## The Metamorphosis of Medical Education

Miriam K. Anand, MD

**M**edical education in Maricopa County is entirely different now than it was when I was applying over 20 years ago. At that time there were no medical schools in Phoenix and the only school in the state was the University of Arizona in Tucson. All of the applicants in the state were vying for one of the c. 150 available seats there. Fast forward to today and we now have the Midwestern University (MWU) Arizona College of Osteopathic Medicine (AZCOM), the University of Arizona College of Medicine - Phoenix, and A.T. Still University School of Osteopathic Medicine Arizona (ATSU-SOMA) with Mayo Clinic opening their Arizona campus soon. In addition, Creighton University School of Medicine has a clinical campus at St. Joseph's Hospital and Medical Center. This certainly has created exponentially greater opportunities for students from Arizona, particularly from Maricopa County, to pursue their dream of going to medical school close to home. The greater hope for our state, however, is that this will result in an increased number of physicians in Arizona. Unfortunately, the rate limiting factor seems to be the availability of post-graduate training spots. Over 50% of this year's graduating class from the U of A Phoenix campus, for example, have matched out of state. The challenges of keeping these students here still lie ahead of us.

Graduate medical education itself has also gone through a significant transformation over the decades. Many may not be aware that the terms "resident" and "housestaff" actually referred to the fact that these physicians in training used to reside on hospital property. In the days prior to pagers (and long before cell phones), residents would be on call for 72

hours at a stretch and would have to either be in the hospital or by the phone in their room or apartment so they could respond quickly when needed. Physicians who completed training in those days thought that those of my generation had it easy and I must admit that I sometimes felt somewhat guilty when I heard their stories. I trained prior to the 2003 implementation of the current work hour restrictions, so my guilt has been assuaged somewhat by knowing that those training today have it easier than I did.

Medical education continues to evolve as well. Traditionally, the first two years of medical school were limited to the basic science courses, with the third year often providing the first taste of clinical medicine. My first clinical experience was the second class in my medical school. I was required to take a course called "Problem Based Learning" or "PBL." This was considered unique for medical schools at the time and involved case based learning and a preceptorship in a primary care clinic during the first and second years. We were also taught effective history taking and physical examination skills and to understand

and be sensitive to cultural differences. It was made clear to us that our performance in this class would be weighed equally with that in gross anatomy, histology, and biochemistry, a fact that many of us bemoaned during exam weeks. Ironically, however, 20 years later I must say that I use skills learned in PBL almost daily, whereas I couldn't recite the Krebs's cycle to save my life!

One of the Maricopa County Medical Society (MCMS) board members, **Jennifer Hartmark-Hill, MD**, is the director for the Capstone Course at the UA College of Medicine - Phoenix, another innovative method to introduce medical students to the clinical applications of basic medical science. After completing blocks in neurological sciences, for example, first year students spend a week visiting various clinical facilities that specialize in neurologic diseases. While we enjoy having third and fourth year medical students and residents from various programs in the Valley rotate through our office, the eagerness of these first year students as they come through to learn the clinical application of Immunology is palpable. The audiovisual

## Private Banking *for the Healthcare Professional*

As a Healthcare Professional, you devote your life to helping others.

Arizona Bank & Trust wants to reward you for your service by offering banking solutions designed especially for you. As a Private Banking client, you will experience expedited response to all banking and loan requests and have a single point of contact. Judi will help you manage your deposit and credit requirements with personalized service, customized solutions and quick decisions.



**Judi Whigham**  
*AVP, Private Banking  
 Healthcare Professional Specialist*  
 480.844.4542 p  
 480.980.4919 c  
 jwhigham@arizbank.com  
 NMLS# 885882



Camelback | Chandler | Chandler Village | Gilbert | Mesa | Tempe | Scottsdale Airport



methods of teaching have also advanced greatly over the past 20 years allowing 3D-graphics to demonstrate concepts that those of my generation and prior could often only appreciate within the confines of a printed page. Previously, students at Midwestern University could access audio lectures from iTunes, whereas cassette tapes were the media used to record lectures in my day. Now they can access the entire presentation, complete with Power Point, from a program called Blackboard. Trainees today can also benefit by learning through simulation technology that was

You may have seen the letter to the editor from **Dr. Lino Ossanna, MD, MBA** in the May issue of *Round-up* that was written in response to my April article on practice management. Dr. Ossanna suggested that business courses should be offered to medical students and residents at least on an elective basis. I would take that a step further and argue that trainees should also be taught about the legislative process and advocacy, since this is the level at which so many decisions are made that impact our ability to care for patients.

---

**“...If you mentor medical students and/or residents, please encourage them to join and be active in organizations such as MCMS. It’s easy to understand that their time and focus is greatly accounted for at this stage in their career, but it’s never too early for them to learn the importance of participation in organizations such as ours.”** — Miriam Anand, MD

---

not available a couple of decades ago. I can think of at least one patient of mine from medical school who likely would have preferred it if I had practiced starting IV’s on a simulation model a few times before trying on him.

There have definitely been many significant advances in the past couple of decades in how medicine is taught. Despite this, there is still critical information missing in the curriculums for our medical students and residents today. Unfortunately, as I have pointed out in my prior editorials, our ability to practice medicine the way it was intended to be practiced and the way it was learned in our training is impeded by a number of outside influences. Insurance companies decide what treatments and procedures will be covered, legislators and the government imposes regulatory requirements, and the threat of a malpractice claim looms overhead at the slightest perceived error. These factors interfere with how we practice medicine and are not formally taught in medical school or residency, although the trainees likely hear about these issues from their attending physicians along the way.

I have discussed the idea that employed physicians have a layer of separation from pending and proposed changes that affect how we provide care to our patients. This layer is even wider for those in training. Medical students and residents are relying on the proverbial “they” to fight these battles without realizing that “they” are organizations such as ours. Their membership and early involvement is important not only for us as a profession, but for them especially, as they will be the ones living the consequences of any further decline in how healthcare is provided. If you mentor medical students and/or residents, please encourage them to join and be active in organizations such as MCMS. It’s easy to understand that their time and focus is greatly accounted for at this stage in their career, but it’s never too early for them to learn the importance of participation in organizations such as ours. [ru](#)



**Dr. Miriam Anand** is an Allergy and Immunology specialist practicing in Tempe. She is the Maricopa County Medical Society’s 120th President, and has been a MCMS member since 1998. **Contact her by email to [manand@mcmsonline.com](mailto:manand@mcmsonline.com).**