Director's Corner

Building a New Curriculum for MCW

by Adina Kalet, MD MPH

As you will read in this week's *Transformational Times*, MCW Academic Affairs has been engaged in a process of reimagining the medical school curriculum.

This has been an almost two year-long, deliberative, and creative process. As part of the comprehensive Liaison Committee of Medical Education (LCME) self-study we do every eight years for reaccreditation, MCW launched small group curriculum conversations. Robust discussions in key stakeholder working groups were bracketed by two full-day retreats. We defined key curricular principles and outlined a new three-phase structure and its predominant instructional designs (case-based sessions, spiral weeks, etc.). This is important work and no small task.

I have also been told that MCW has had both successful and unsuccessful experiences with curriculum reform in the past. We are not alone in this, Yet, I have participated in a number of curriculum renewal cycles in medical schools around the world. I can attest that our approach has been well managed. The process and outcomes have been inspiring and the team has embraced a road-tested model for organizational and curriculum change to guide their work. The principles and concepts are evidence-based and well understood. There is a nice balance between ancient wisdom (e.g., "learning from patients") and newer ideas (e.g., Programmatic Assessment of Master Adaptive Learners).

It seems as though everyone is reforming their curricula (again)

The LCME began accrediting US medical schools in 1942. Since then, most US medical schools have engaged in significant changes in their curriculum about every ten or so years. Lately, the frequency of major curricular updates has been accelerating toward - but has not yet arrived at - a robust continuous quality improvement process.

In 2018, only 15% of US medical schools were either **not planning or had recently implemented** a major curriculum change. 35% were in the planning phase and 31% in the implementation phase of a major curriculum reform. The majority of the schools engaged in curriculum change were deliberately moving away from the early 20th century Flexnerian "2 + 2 model," with two years of predominately pre-clerkship basic sciences followed by two years of immersive clinical experiences. On the whole, they were moving toward more integrated models where students spend less time in classrooms and more time learning the foundational sciences while mastering the cognitive aspects of clinical work.

Curricula were forced to change as hospital practices changed

This is *not* a revolution, but more of an evolution. Change, however, has been slow in coming. Why is this? Plenty of schools have attempted the switch. There is ample evidence that students learn best in well-integrated curricula with early and rich exposure to the real-world applications (e.g. written cases, simulated cases, early actual patient experiences). Students demonstrate knowledge and skills when held to very high standards and cultivate their developing medical identities while supporting their well-being as future physicians.

Change is hard because, traditionally, medical educators have been "curriculum agnostic." When I was a resident, Saul J. Farber was both our department chairman and dean of the medical school. He was an absolute legendary bedside teacher who was fond of saying that the formal curriculum was irrelevant. He believed that the most important thing we could do as a medical

school was choose the right “kids” and then engage them (he said, “throw them”) into caring for patients in our large inner city, safety net hospital.

For his time, Dean Farber was not wrong, but he wasn’t right, either. In his era – what we often referred to tongue-in-cheek as, “the days of the giants” (he was chairman of medicine for thirty-two years, after all!) – people were hospitalized for weeks at a time while they underwent diagnosis and treatment. This pace was slow enough that students and teachers could spend a great deal of time together with patients, eliciting their histories and conducting detailed physical exams and bedside maneuvers. The students in that generation before mine witnessed the “natural course” of disease processes, and were able to then spent hours in the hospital library, the laboratories, and reading rooms, reviewing radiological images and having midnight meals where cases were discussed in detail. Using a slow, deliberate, iterative process, their role models showed the students how to integrate all the material and choose courses of action.

This held true for surgical specialties, as well. Patients who were to undergo an operation were routinely admitted to the hospital the afternoon prior to their procedure. This allowed enough time for them to undergo work-ups by the junior medical student, the senior medical student, the intern, and the surgical resident ahead of time. Postoperative patients stayed in the hospital for weeks prior to the development of rehabilitation centers and long-term care facilities.

In that earlier era, many teaching hospital physicians also conducted basic science research. It was common (even into my era) that students would walk to the clinician-scientist’s lab to discuss the relevant physiology, microbiology or biochemistry and receive a quick “chalk talk” about the scientific principles underlying their patients’ condition and treatment.

By the time I was a resident in the early 1980s, the pace of hospital work had revved up, and patients were either very acutely ill or hospitalized very briefly. Most diagnoses and therapeutics moved outside of the inpatient setting and, therefore, outside the view of most medical students. Science was conducted at a distance from the clinical environments. Fewer and fewer scientists were

clinicians and fewer clinicians did science. To ensure adequate preparation for practice, medical schools were forced (they were reluctant at first) to create ambulatory care experiences for students and residents. This was only one of many major shifts in medical school curricula.

Some new and some old elements will create a relevant curriculum for the new healthcare environment

Hospitals now run 24/7/365 and stress the constant downward pressure on "length of stay." While hospitals are exciting, most medicine is practiced in clinics and community settings. New sciences have become critical to being a physician. We are constantly struggling to keep our educational structure, content, process and outcomes relevant.

At the same time, medical school curriculum requirements have become more and more structured and complex. Dean Farber would be aghast. *Where are those "midnight meals"? Where is the time to learn through discussing cases and sitting with patients and families?* It all seems hopelessly romantic and out of touch with modern reality. But I think we do better by holding firm to core principles and innovating.

So, what are the non-negotiables elements as we move forward?

We *can* protect the "baby" (integrative learning processes essential to becoming a physician) as we consider "spilling out the bathwater" (experiences that don't lead to deep learning).

First, we have to build curricula around the knowledge that a physician's most profound and long-lasting learning occurs while thinking about and interacting with patients. Second, we must recognize and support great teachers who care about learning, are knowledgeable, remain optimistic, and know how to motivate. Third, we must set and hold everyone to measurable high standards.

This is where Dean Farber got it right. Take excellent, motivated students and mix them up with great teachers with a range of content expertise and provide them with endless “clinical material” against which to demonstrate their growing mastery. Voila! Medical education alchemy.

Engaging and caring for our stakeholders

Based on educational research and our desire to create new, vibrant approaches, we believe that a strong medical school curriculum will enable groups of students and faculty to learn by puzzling *together* through a wide range of cases. That is our goal.

As we create the new educational environment, the students who are still in the current curriculum will need to be cared for and educated. They will be invited to engage in the planning for, and piloting of, new curricular and assessment elements. If we do this right, our students will be the main beneficiaries, yet some will likely feel and express discontent.

Faculty will need to take new roles, learn new skills and feel like novices again. We will need to work closely with small groups of students across many content domains outside of our own content expertise. We will have more interaction and, therefore, more collaboration between scientists and clinicians. Those of us who are excellent lecturers will lecture on topics best communicated that way. The rest of us will learn new ways. This will be difficult for some.

The bumps in the road will be smoothed out by working together

Like all medical schools, MCW is a complex organization with many missions and complex governance. We will need both design and change strategies as we anticipate and prepare for predictable challenges both within and without.

A strong leadership team and communication plans are emerging. Creating and implementing a cutting edge, locally relevant curriculum will take significant effort, cooperation, forbearance, respectful debate, a wide range of

expertise, and extraordinary program management skills. While I hope we will be doing a lot of celebrating, I also know this will we stressful.

The Kern Institute will be there to support faculty development, administrative savvy, and complex and integrated assessment. In a few years, we will have the infrastructure in place to continually improve the curriculum so that future changes will be incremental rather than revolutionary.

I believe we are long overdue for an upgrade and that the time is now. Even Dean Farber would likely see the wisdom in that.

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