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Charting Progress

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A Monthly Newsletter from Executive Director Richard W. Valachovic, D.M.D., M.P.H. The views and opinions expressed in this letter are those of the author and do not necessarily reflect those of the American Dental Education Association.

In this month's letter, ADEA Executive Director Dr. Rick Valachovic looks at an innovation in medical education and considers its implications for our community.

Just a Matter of Time? Maybe Not.

"If medicine can create a three-year pathway to a doctoral degree, should dentistry consider developing something similar?"

Last month I talked about the growing burden of student debt and the need to introduce greater efficiency in higher education. In this issue, I want to look at one of several proposals for lowering costs: speeding up the curriculum.

In a recent letter to Congress, the Council on Graduate Medical Education (COGME) called on our sister associations in medicine to explore innovative approaches to medical education. COGME specifically mentioned streamlining physician training and accelerating the educational timeframe. As a beneficiary of GME, dental education should also prepare to take a similar look at our enterprise. The interest in speeding up the curriculum goes beyond concerns about student debt. In addition to its potential to lower the cost of professional education, advocates see curricular acceleration as a way to move more health care providers, including dentists and dental hygienists, into underserved areas at a quicker pace. At the same time, the adoption of competency-based education strongly suggests that degrees should be granted based on readiness for practice, not on a prescribed number of contact hours.

In a recent speech on cost containment in higher education, U.S. Secretary of Education Arne Duncan put it this way, "The century-old practice of awarding degrees based on seat time in a classroom, rather than on demonstrated competence, is now at odds with a world in which the Internet offers perpetual opportunities for learning and gaining skills at your own pace."

I agree and would add two other factors that suggest there may be more elasticity in the time it takes to complete our degree programs than we have traditionally assumed:
(1) The availability of high fidelity simulation and other technological advances that have increased the flexibility of how we teach and learn, and
(2) The reconfiguration of professional degree programs, in which students complete some basic science portions of the curriculum in their undergraduate years. An article on the Association of American Medical Colleges (AAMC) website notes that approximately 20 universities offer an accelerated program that allows students to complete both their college and medical educations in six to seven years.

At the same time, a movement is afoot to accelerate allopathic and osteopathic medical education by melding the fourth year of medical school with the first year of residency. Texas Tech University Health Sciences Center obtained approval for the nation's first three-year medical degree program in 2011, the Family Medicine Accelerated Track (FMAT). Two Canadian medical schools also offer three-year programs: McMaster University's Michael G. DeGroote School of Medicine in Hamilton, Ontario since 2005 and the University of Calgary Faculty of Medicine since its inception in 1970.

I recently discussed the growing interest in three-year models with my counterpart at the American Association of Colleges of Osteopathic Medicine, Dr. Steve Shannon. Steve sees a desire among many educators to fully embrace the implications of a competency-based curriculum. As he points out, that could mean some students spend two-and-half years in medical school while others spend five. That said, he acknowledged that some sectors of the medical education community are also eager to explore streamlined programs.

"There is a recognition," Steve told me, "that medical students spend much of the fourth year auditioning for residencies. As we look for ways to stretch the medical education dollars further so we can train more people who can graduate with less debt, this is one place we may be able to cut."

That is precisely what the Lake Erie College of Osteopathic Medicine (LECOM) in Pennsylvania has done. LECOM offers multiple pathways to the DO degree. Students can choose from among several four-year pathways tailored to their learning preferences¬—Lecture-Discussion, Problem-Based Learning, or Independent Study. And, since 2007, those wanting to specialize in primary care have had a new three-year option, the Primary Care Scholars Pathway (PCSP). The accelerated and condensed program was designed to attract more students and counter the waning interest in primary care, such as family and general internal medicine.

How do they do it? In a nutshell, electives have been eliminated in favor of rigorous, year-round curriculum focused exclusively on primary care. Students complete the first two years of basic science and preclinical education in less than 20 months and begin clinical training in March of the second year. Rotations are limited to those that address core competencies. In the final month of the program, students extern at the hospitals where they will continue their clinical training after graduation.

LECOM's Primary Care Scholars Pathway also takes a bite out of student debt. In addition to replacing a year of tuition payments with a year of employment, the program rewards graduates who remain in primary care for at least five years after completing their residencies with a scholarship covering one year of their medical school tuition. You can find a more detailed description of the pathway in Academic Medicine.

If medicine can create a three-year pathway to a doctoral degree, should dentistry consider developing something similar? As you may know, LECOM opened its first dental school this July. Like its sister medical school, it strives to move students into independent practice in underserved areas as quickly as possible.

"Instead of cutting the length of the program, we've put more in," said Dr. Robert F. Hirsch, inaugural Dean of LECOM's School of Dental Medicine. "We're trying to give the students an extra year of clinic so they feel very confident in going out to practice right away."

To do this, the school uses a year-round curriculum that strives to impart five years of dental education in four. Students are active 48 weeks a year and become increasingly engaged in the clinic. Starting in January of year one, they work in pairs to provide upper and lower dentures, solidifying knowledge gained in a simulation denture course. In the last 10 weeks of year two, students begin providing comprehensive care. In year three, they spend eight hours a day, five days a week in their own individual operatories, providing comprehensive care to patients. In year four, students spend 48 weeks in an outreach clinic, owned and operated by LECOM in an underserved area where they will eventually see up to six patients a day.

Obviously it's too early to predict how LECOM's program may evolve, but I asked Bob if he could foresee a time when the dental school would eliminate topics to move students into general dentistry more rapidly as the medical school has done.

"To meet accreditation standards and LECOM goals, our students need to demonstrate a competency level in all aspects of dentistry," Bob replied. "I think our students need to have even more training because they're going to need a high level of expertise to

be successful in these underserved environments."

To get another view on this, I spoke to Dr. Nader Nadershahi. Nader is Executive Associate Dean and Associate Dean for Academic Affairs at the University of the Pacific Arthur A. Dugoni School of Dentistry, the only North American dental school that currently uses a three-year model. Pacific started its three-year model in 1974 in response to a national shortage of dentists. But rather than condensing the curriculum, they squeezed four academic years into three calendar years to allow for better utilization of physical and human resources. This means running 10-week quarters followed by an exam week and a brief break year-round.

Nader agrees with Bob Hirsch that pruning the curriculum for general dentists as LECOM has done for primary care physicians may not be appropriate. "We need to be able to say that our graduates are competent entry-level practitioners able to handle the diverse demands of general dentistry," Nader told me, "so whether that's preventive care, surgical procedures, endo, restorative, removable, or any other primary dental need, they should be able to treat those patients. To do that, we have to expose learners didactically and clinically to all of those disciplines."

Nevertheless, Nader believes that shortening the curriculum delivery time forces schools to deliver education more efficiently. "Instead of leaving things out, I believe bringing the disciplines together will allow us to deliver the curriculum in less time. If you have oral surgery and endo talking about infections together, they can hit the topic and expose the students to both disciplines at a higher level in less time than if they were doing it individually," Nader added.

And does Pacific's three-year curriculum reduce student debt? That depends on your perspective. Pacific's tuition for three years exceeds what many four-year programs charge, but by one calculation, it may be a bargain. By getting students into the workforce a year earlier, three-year programs give students one additional year of income. As I noted last month, that can run from $225,950 for a general practitioner to $305,820 for a specialist. If you subtract that from the cost of tuition, the savings are substantial.

On the other hand, schools such as LECOM are also limiting student debt within the conventional timeframe. By setting tuition at $48,000 (a figure they hope to increase only modestly in future years), this private school offers its students an education at substantially lower cost than what most other private institutions charge.

Perhaps the lesson here is that speeding up the curriculum may not be the answer per se, but focusing on getting (or giving) value for the time we spend (or require) to earn a degree demands greater consideration than we have given it in the past. Indeed, the pressure to educate our students more rapidly can serve as a catalyst for making our entire enterprise more efficient and more responsive to those it serves. As Steve Shannon pointed out, "Part of the demand for accelerated programs will come from students themselves. They are so adapted to controlling their lives and using information technology to get what they need quickly."

While there is no one formula for producing dentists and other health professionals, a comparison with industrial production seems apropos here. Toyota did not revolutionize auto production by speeding up the assembly line. Instead it engaged its employees in evaluating each process that went into building a car, looking for waste and opportunities to increase customer value. Today a number of innovative health care providers have adopted the same "Lean" production practices as Toyota to streamline and improve the quality of care. I am certain it is only a matter of time before academic institutions also discover more efficient ways of delivering health professions education.

I look forward to seeing many of you in just a few days at the 2012 ADEA Annual Session & Exhibition in Orlando where I'm sure we will continue to discuss this and other topics. I'll be reporting on those conversations in next month's *Charting Progress*.

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