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MEDICAL EDUCATION

The Family Medicine Accelerated Track Model: Producing More Family Doctors Faster

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In their 2010 book *Educating Physicians: A Call for Reform of Medical School and Residency* [1], timed to coincide with the centennial of Abraham Flexner's groundbreaking report, Molly Cooke, David Irby, and Bridget O'Brien posed the key question of resource use in medical education: *Can we produce competent and compassionate physicians more efficiently and effectively?* Indeed, that quest for efficiency and effectiveness demands an accounting of the costs and products of medical education, including high tuition and student debt and low numbers in the primary care physician workforce essential to meeting the nation's health care needs. In our current milieu, which stresses resource use that promotes *better care, better health,* and *lower cost*, the Texas Tech University Health Sciences Center School of Medicine (TTUSOM) is attempting a new path to all three goals: the Family Medicine Accelerated Track (FMAT). FMAT is a 3-year medical school curriculum that culminates in the MD degree and places students in one of our three family medicine residency programs.

Context

The U.S. primary care crisis has been well documented in lay, academic, and policy circles [2-5]. Expanded access to health care as part of the Affordable Care Act (ACA) will worsen this physician shortage, as millions more Americans enter a health care system that is ill equipped to handle them [6]. The Association of American Medical Colleges (AAMC) and U.S. medical schools have recognized this potential workforce crisis and have committed to increasing the number of graduating medical students by 15 to 30 percent [7].

The crisis will not be averted, moreover, unless the increasing imbalance of generalists to specialists is also addressed [8-10] apart from efforts to increase the number of medical school graduates. According to the Kaiser Family Foundation, 56 percent of U.S. patient visits are to primary care clinicians, but only 37 percent of physicians practice primary care medicine, leaving the nation's most vulnerable populations—the uninsured, low-income, those in rural or inner-city areas—without a usual source of care [11].

Rebalancing the Workforce

So how can we ameliorate the shortage? By turning out primary care doctors more quickly and by reducing the obstacles for students to pursue primary care. The Council on Graduate Medical Education (COGME) and others [12, 13] have

highlighted accelerated training as a means of promoting primary care. The 2010 COGME report, "Advancing Primary Care," noted that "workforce researchers have argued for years that one way to quickly increase the supply of physicians is to reduce the number of years of training," which has additional usefulness for students entering less-lucrative specialties, and they write approvingly of "primary care fast track programs where students are ensured of preferential admission to generalist residency programs" [14].

The financial benefits of condensed training may be linked to specialty choice. The cost of undergraduate medical education has, in recent years, risen at twice the rate of inflation [15]. U.S. medical school seniors responding to the AAMC Graduate Questionnaire revealed a debt increase of more than $18,000 between 2007 and 2011 [16]; median debt among U.S. seniors in 2011 was $162,000 [17]. The relationship between tuition debt and specialty choice is complicated [18-20], but the role of student debt and of the disparity in compensation between primary and subspecialty care cannot be discounted in explaining why only 8.4 percent of U.S. seniors in MD and DO programs matched into family medicine residences, filling only 48.2 percent of residency positions [21].

Reforming the cost of medical education, as a means of reducing the role that student debt plays, may be an important way of enabling students to feel comfortable pursuing primary care. Peter Bach and Robert Kocher, writing in the *New York Times*, proposed that predoctoral training should be free, but postdoctoral specialty training should bear a cost to the trainee, meaning that only those who are "virtually assured highly lucrative jobs" would accrue debt [22].

Accelerated training in primary care—as typified by FMAT—is another method of cost reform. Ray Dorsey, David Nincic, and Sanford Schwartz evaluated four methods to reduce the financial burden of medical education—reducing medical school tuition, decreasing medical school duration, increasing residency compensation, and decreasing residency duration [23]. Of those methods, decreasing medical school duration offered the greatest potential for reducing the financial burden. Even without financial incentives and scholarships, students in accelerated training tracks pay (and incur debt) for one fewer year of medical school, a benefit that also accrues to funders of medical education, including state and federal governments.

At TTUSOM, we calculate that FMAT decreases our students' debt load by about $86,800. This difference results partly from the institution's commitment of about $15,500 to cover tuition and fees for the second year, but mostly from eliminating the usual fourth-year tuition debt and replacing it with a resident's salary and benefits totaling about $52,800. As Dorsey et al. pointed out, this also reduces the burden on students of the "the high opportunity cost each year of training holds" [24].

The decision to cover at least one year of FMAT students' tuition and fees was integral to our commitment to reducing student debt. We chose the second year of medical school so that students would benefit from a reduced debt load early in their training. Funding sources include existing scholarship funds earmarked for FMAT as an institutional priority; we also have a Health Resources and Services Administration predoctoral primary care training grant through 2015.

Decreasing the duration of medical education—especially to encourage students to pursue primary care—is not a new idea. The accelerated residency program was piloted in the 1990s, and it proved successful in attracting U.S. graduates to primary care. Between 1989 and 2002, 15 medical schools participated in the pilot [25]. Among the findings from extensive evaluation of programs and learners: high performance on standardized exams, improved prestige and morale for those in primary care, and early recognition of leadership, as measured by graduates' career choices and subsequent positions [25-28]. Despite that success, these pilot programs were discontinued by 2002, primarily because their structure, which combined the fourth year of medical school with the first year of residency, conflicted with the guidelines of the Accrediting Council of Graduate Medical Education (ACGME), which requires that all residency trainees be graduates of accredited medical schools or already licensed to practice medicine [29].

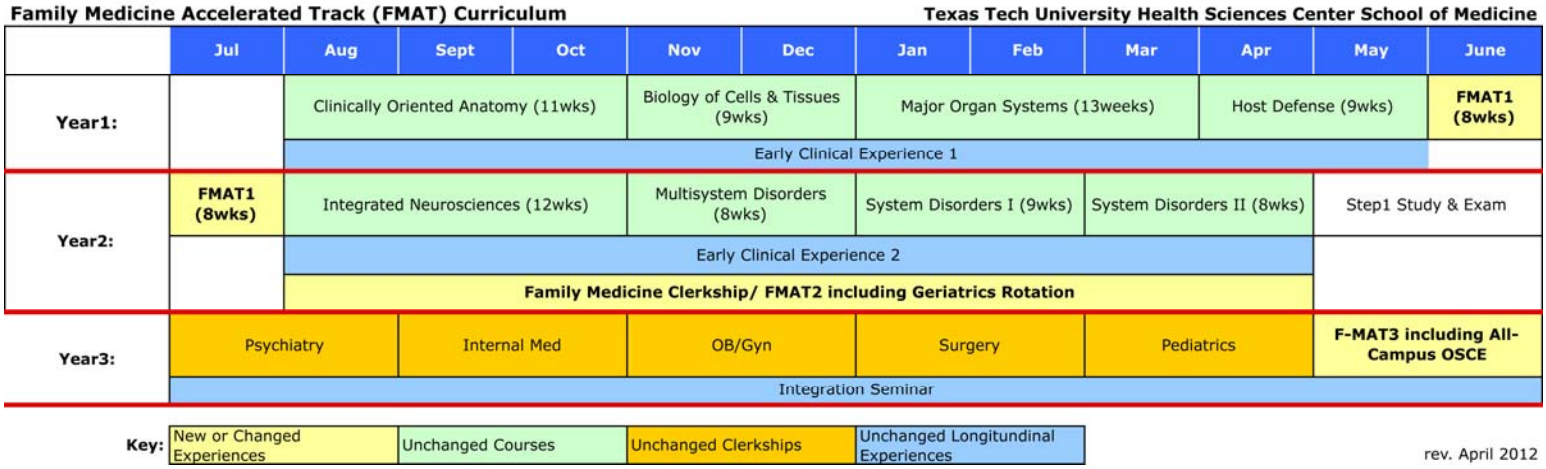
How FMAT Works

The FMAT program differs from the earlier pilot program models in that students receive the MD degree at the end of 3 years before entering a 3-year residency program. Currently, students may apply to the FMAT program at two points in time: when applying to TTUSOM and midway through their first year, following fall orientation sessions. Applicants in the former group who are invited for a campus visit meet with an FMAT faculty member in addition to their other interviews. Enrolled TTUSOM students who apply to the program also interview with the FMAT selection committee, whose members are faculty in the program. Of a class of 8-12 students, about half are selected from each of the two application methods. The entire class is in place by mid-spring, prior to the beginning of FMAT coursework in June.

All students at the Texas Tech School of Medicine complete the first 2 years of medical school in Lubbock, before they are distributed for clinical training among the regional campuses in Amarillo, Odessa, or Lubbock in the summer between their second and third years. FMAT students complete the standard first- and second-year basic sciences blocks and third-year clerkship rotations with very few alterations from the 4-year program. All clerkship rotations in TTUSOM's 4-year curriculum are 8 weeks long, including family medicine. Whereas the 4-year curriculum spans 160 weeks, FMAT covers 149 weeks; both curricula exceed the Liaison Committee on Medical Education's requirement that a "medical education program must include at least 130 weeks of instruction" [30]. The FMAT curriculum includes 3 courses distinct from the 4-year track's: an 8-week systems-based course taken in the summer between the first and second years, a longitudinal family medicine clerkship

in the second year (the equivalent of a 12-week experience), and a third-year capstone course that covers senior selective and critical care experiences (see figure 1). The capstone course is conducted on the distributed campuses where students will also complete their family medicine residency training [31, 32].

Figure 1. TTUSOM FMAT curriculum



Students may opt out of FMAT and return to the 4-year curriculum at any time. The accelerated nature of the program cannot accommodate time for remediation, so a student who encounters academic difficulty would be counseled to move to the traditional curriculum.

Significantly, the FMAT program at Texas Tech is limited to family medicine, as opposed to primary care more broadly. National and local data indicate that only 10 to 20 percent of internal medicine residency graduates choose primary care careers, down from 54 percent a decade ago [33], and only about 40 percent of pediatrics graduates remain in primary care [34]. In contrast, more than 90 percent of family medicine graduates make careers in primary care, and almost 40 percent do so in communities of fewer than 25,000 people or areas of the inner city that could be considered low-income [35]. The FMAT program is designed so that students transition to one of our family medicine residency programs in West Texas, all of which have a strong track record of placing graduates in rural and underserved communities where the lack of primary care physician workforce is most acute.

Evaluating the Program

Evaluation of the FMAT program will, by necessity, be a long-term process, especially if the ultimate goal is a net gain in the primary care physician workforce. Interim metrics include student interest and program completion, as well as performance in courses, clerkships and standardized exams. We anticipate following our graduates to assess satisfaction and competencies into residency and well beyond, especially as we seek to improve curriculum elements and student experiences.

As of the fall of 2012, the FMAT program includes 9 students in the class of 2013 who will go through the match and graduate in 2013, 7 students in the class of 2014 who are in the midst of the longitudinal family medicine clerkship, and 4 first-year students who will be joined by another 5-8 students to complete the class of 2015. All nine students in the FMAT class of 2013 passed Step 1 with scores at about the national average. These students performed better than their peers in the traditional program on an end-of-second-year objective structured clinical examination (89.12 vs. 88.35) but less well than their peers on an OSCE at the end of their third-year clerkship (92.38 vs. 95.03). One class of students, however, yields numbers too low to determine statistical significance.

Program improvements from our first to second years include adding procedures workshops and ultrasound training, allowing students more control over their schedules and improving patient and health care team continuity. Continuous feedback from students, faculty, and residents, as well as formal evaluations and focus groups, drove these changes, as well as other course corrections.

The 2-part application process outlined above was adopted to expand the FMAT applicant pool, beginning with the class of 2015. All students in the classes of 2013 and 2014 were chosen from among first-year TTUSOM students, which effectively limited the number of potential students to about 150.

It may well be asked whether the FMAT program's efficiencies resonate with its students. For a poster that they initiated and prepared for the 2011 AAMC Annual Conference Innovations in Medical Education session, one member of the FMAT class of 2013 reflected on personal experiences in allocating the limited personal resources required to succeed in an intensive accelerated program, saying: "Right now is the most stressful time I've experienced in medical school…. I have noticed a definite decrease in my test grades, but this might be due simply to the fact that neuro is a harder course. All of this being said, however, I would not trade the clinic time. Clinic is interesting [and] exciting and will be 100 percent relevant to my future as a family physician. The same cannot necessarily be said for neuro."

Future Directions for Accelerated Training

Without question, accelerated training is not for every medical student. The ideal FMAT candidate is perhaps that student who is strong enough academically to withstand a rigorous schedule and sure enough of his or her career goals to select family medicine in the first year of medical school. Indeed, it is that early decision—both specialty choice and residency location—that obviates the need for much of the elective and try-out rotations that often comprise the fourth year of medical school [13].

By the same token, accelerated training programs that promote primary care are not for every medical school. Such programs require faculty time, clinic space, and administrative advocates at the highest level. A September 9, 2012, article in the *New York Times*, "Luring Students Into Primary Care," noted that TTUSOM's

"mind-set around primary care" is perhaps more positive than all schools enjoy [36]. Even so, a number of other schools—Mercer University, Louisiana State University, and the Medical College of Wisconsin, to name three—are developing their own accelerated models, and we anticipate that a growing cohort of schools will lead to shared curricula, evaluation strategies, and recommendations for best practices. At TTUSOM, we posit that accelerated training is a dramatic strategy to expand the primary care physician workforce, and we are privileged to engage that "mind-set" toward our shared goals of better care, better health and lower cost.

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