

Some Things We Cannot Rush - Like Training Physicians



By Chuck Dinerstein, MD, MBA — August 20, 2018



Courtesy of the Wellcome Trust [1]

In the last few weeks, there have been a number of articles [1] on reducing the length of medical training to help ease the physician shortage. And our medical curriculum is due for a major overhaul, its foundational document, the Flexner report, was released over 100 years ago, and our medical needs and knowledge have changed. Shortening medical education may provide a “bonus” in easing the anticipated shortage of physicians but may have more significant unanticipated consequences.

The Bonus

While estimates vary, we are expected to need an additional 100,000 physicians beyond our current capacity to graduate physicians by 2030. Currently 90,000 complete medical schools annually from US schools so by reducing medical school one year we would have a one-time “bonus” of an additional 90,000 graduates and resolve our problem without having to expand the number of training positions open, our capacity. Medical school does not feature summer vacations, it is a year-round activity so to reduce time spent you have to either make the little ones learn faster or learn less. And you can’t skip education physicians need and use daily, the tools of the trade, like the knowledge of our body’s systems, physiology, or how to diagnose various diseases or even the practical arts, like how to do a physical examination.

What you could reduce is basic science education that underlies the knowledge we use, for example, biochemistry or histology. Biochemistry teaches the many chemicals and compounds within our body, and the forces governing their interaction. That information, in turn, is the building block for physiology, the science that explains how all the parts works together in sickness and

health. So knowing biochemistry makes understanding physiology easier, I do not use biochemistry in the day to day care of patients, not like I use my knowledge of physiology.[2] Similarly, histology is the description of cells in health and disease and is far more critical to a pathologist who uses the information to provide a diagnosis, then to me; after all, I take the pathology report as true, I do not check their work.

In many of the musing I have been reading, the extra time created by reducing basic science education can either be used to minimize training time or by adding purely vocational training, e.g., how to understand risk, talk to patients or lead a healthcare team. But of course, if we add in these new skills, we are not going to be saving that year. And more importantly, we have no postgraduate training slots for those additional 90,000 graduates – reducing medical school creates more physicians, but we have not built more capacity to complete their training. To avoid the mismatch of graduates and capacity we could instead shorten post-graduate training, a term we use for the on-the-job training of physicians as interns, residents, and fellows.

A "fly in the ointment."

No one graduates from medical school capable of being a physician; they have little practical autonomous experience. The three to five or more years after medical school graduation is when we really learn the trade and it often has "wasted time." Some of the time is spent in "laboratory years" where residents get experience doing research, but clinicians rarely do research outside of academic walls. And even if we do squeeze another few months out, we must be careful, because, in order to have safe, unimpaired physicians-in-training their work hours are regulated and limited. Those work-hour limitations have been in place for some time now and reducing post-graduate training times while keeping work rules in place only creates physicians with less experience. And let me hasten to say, that the advocates of these time efficiencies point out that when school or post-graduate training is reduced, the scores on examinations remain the same – just as good in less time.

Less time, yes; but just as good?

While the scores on examinations say just as good, the graduating physicians tell us a different story by their actions. First, there is the increasing concern and rates of 'burnout' that suggests that medical students, residents, and fully trained physicians are emotionally exhausted and need among other things more time. Second, there are a number of reports suggesting that physicians completing their residencies feel unprepared to assume autonomous care of patients. In some instances, there is an additional fellowship year, on top of the 3-5 years of residency training they have already spent, helping them to "transition" into day-to-day practice.

Some things just take time; maturing judgment is one of them. Medicine is not science, it is an applied science at best and for my money, it is an art. So I am OK with the idea that we need not know the details of how oil paint is made to use it; but without life experience, we have less to draw upon and express. You can squeeze out 'wasted' time from medical training, but your product will be poorer for the experience.

You would think with all the concerns about how we alternately rush our children to grow up and then shelter them from being mature that we wouldn't apply the same thinking to our young adults.

Are we really in such a rush that we cannot allow time to grow up?

[1] [Medical students are skipping class in droves — and making lectures increasingly obsolete](#) [2],
[Our doctors are too educated](#) [3]

[2] To be fair, I rarely use physiology as it is taught in day-to-day practice. Physicians use a more applied form, how it affects you, rather than a more rigorous form involving isolated systems in the laboratory.

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[1]

https://upload.wikimedia.org/wikipedia/commons/9/98/A_group_of_fashionable_physicians_gathered_around_a_sick_p

[2] https://www.statnews.com/2018/08/14/medical-students-skipping-class/?utm_source=STAT+Newsletters&utm_campaign=4183ecc7d6-Weekend_Reads&utm_medium=email&utm_term=0_8cab1d7961-4183ecc7d6-149880241

[3] https://www.washingtonpost.com/opinions/the-simplest-way-to-solve-our-doctor-shortage/2018/08/13/ddb344f4-91c3-11e8-9b0d-749fb254bc3d_story.html?utm_term=.47f6ba1ac5d3