

## Core Curriculum Guidelines: Minimum Standards, Practical Goals, or Lofty Ideals?

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In their article in this issue of *Family Medicine*,<sup>1</sup> Jerant and Lloyd report being unable to locate even a single paper assessing the informatics and computing skills of family practice residency faculty, even though, as the authors correctly state, "Such information would be critical to help determine whether current faculty are able to help residents meet core educational guidelines established by the American Academy of Family Physicians (AAFP)."<sup>2</sup>

As I interpret it, Jerant and Lloyd's study showed what many already suspected—family medicine faculty and residency programs are not ready to help residents meet the core informatics guidelines and develop the computing skills necessary for future practice.

### Where Did These Guidelines Come From?

The results of Jerant's and Lloyd's study make me question how and why teachers of family medicine came to develop and accept such core educational guidelines in informatics. If no one had previously considered the clinical computing skills of our teachers, then how did the teachers come to be asked to ensure that residents

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(See related article on page 267.)

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develop computer skills? It seems to me that in family medicine education, there is often a capability-expectation mismatch, in which formal expectations expressed in curricular guidelines exceed the real-world capabilities of faculty and programs. Why?

If we only consider computing and informatics, some of the mismatch can be explained by the ongoing, relentless advancement in computers and software. Even those of us with a special interest in computing have difficulty keeping up with all the innovations in medical computing. At some point, however, the basics of the new technology become standard, and all of us should be familiar with them.

Today's core guidelines in informatics include elementary skills like keyboarding, using e-mail and the Internet, and using an operating system—all skills that young physicians should acquire prior to matriculation in residency. The guidelines indicate that the faculty who develop and implement these guidelines still think that these generic computer skills are not universal, that they need to be embedded into the medical education curriculum, and that family practice residency programs should teach them. This proves to me that even though we'd like to believe that computers are ubiquitous in medicine, they aren't, and a large number of students and faculty remain functionally illiterate in computing.

Medicine will likely limp along in this condition for a while, but

when medical computing actually reaches the common status of cars and phones, then the burden should be lifted from medical faculty. But, until then, should the burden for remedial computer education fall on residency faculty who may be scrambling to learn these skills themselves? And, is the disparity between the expectations of faculty and the actual skills of the faculty unique to medical informatics education, or is it a more-pervasive problem with family medicine education guidelines and the related expectations for a mere 3-year residency?

It may be that family practice residencies have allowed themselves to become a dumping ground for unfinished business in the medical education system. We appear to have forgotten that residency training is a form of higher, not basic, education.

### Basic Standards or Unrealistic Goals?

We family physicians seem congenitally prone to accept burdens that don't belong to us. Worse yet, we seem to set impossibly high standards, fail to meet them, and then conveniently forget about them. Our core guidelines are more often ideal goals than practical objectives for trainees. We create core curriculum guidelines in a variety of areas of family medicine, ranging from the computer keyboard to the labor and delivery suite. If we are honest with ourselves, we would acknowledge that many (or perhaps

most) of our faculty do not have all the skills that the guidelines recommend we teach to our residents. If we are really honest, we would realize that most of our residents do not acquire many of the skills specified in the many curricular guidelines.

I remember a specialist in medical school who would deride any student caught with a *Merck Manual*, calling it a "nurse's book." Since then, I've watched to see which faculty members actually knew everything in that apparently simple book, but I've never found even one. Sometimes we deride standards as laughably simple, despite the fact that not even one person can meet them! No wonder our faculty have a capability-expectation mismatch.

The core educational guidelines for family practice residents,<sup>3</sup> published by the AAFP, remind me of that *Merck Manual*. Although the core guidelines are supposed to detail basic skills for a resident, even as a faculty member I can't measure up to many of them. I will never measure up to them all, and neither will the residents and other faculty at my well-regarded residency program.

The guidelines may be ideal goals, but they are poor standards. Some of the core guidelines are misguided and unrealistic, and some are outright politicized. Taken as a whole, they are poorly matched to what can be achieved in 3 years by any resident when one considers the skills of a graduating medical student, the overall burden of residency, the actual capabilities of

the faculty, and the short window of 3 years. As a whole, the core guidelines are worthy, wonderful goals to shoot for, but with few exceptions, they are never met. No resident, faculty, or program can ever be properly criticized for failing to achieve them.

### Where Do We Go From Here?

So what are we faculty to do? I am not sure that we physicians are even capable of getting together and setting true minimum standards for our specialty. The machinations of committees and differing viewpoints would add more and more items to the package of basic standards until we were right back where we are now. Besides, we don't want to be too rigid and squeeze all the local art out of residency education. Postgraduate medical education programs must retain the flexibility to adapt to the individual resources, capabilities, and needs of both their learners and teachers.

Thus, I think that the use of the term *core* by a prestigious group like the AAFP makes the core guidelines sound like minimum standards rather than ideal goals. Using a different name might help, but even a name change would not likely be enough. Rather, we need to be sensible and realistic about what we ask ourselves to do and what we permit others to ask us to do. Faculty and residency programs should remember that we don't have to overreact to every societal transition like computers in medicine that will ultimately be "old hat"

to everyone. We should remember that we are involved in higher education and, as such, should be teaching residents how to learn instead of trying to ensure that they learn everything. We should set standards for matriculating residents, and expect them to meet those standards, but refuse to accept burdens that should be borne by medical school education and other forms of "lower" education. We should not be expecting our residents to master skills that most of our faculty have not mastered. Finally, in recognition of the breadth, diversity, and artistic qualities of family medicine, we should stay flexible and differentiate between our ideal goals and our minimum standards and refuse to accept undeserved criticism that stems from burdens we never accepted in the first place.

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### REFERENCES

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Curriculum Guidelines for Undergraduate Programs in Data Science. —. Curriculum guidelines in related disciplines. 2015 CUPM Curriculum Guide to Majors in the Mathematical Sciences (MAA 2015): [http://www.maa.org/sites/default/files/pdf/CUPM/pdf/CUPMguide\\_print.pdf](http://www.maa.org/sites/default/files/pdf/CUPM/pdf/CUPMguide_print.pdf) Computer Science Curricula 2013: Curriculum Guidelines for Undergraduate Degree Programs in Computer Science (ACM/IEEE 2013): <https://www.acm.org/education/CS2013-nal-report.pdf> Curriculum Guidelines for Undergraduate Programs in Statistical Science. The practical real-world meanings come from interpreting the data in the context of the domain in which the data arose. Writing curriculum-Aims, goals, objectives - What are the differences? Each level has a specific function within a larger whole. Numerous examples offered. The Aims, Goals, and Objectives “What are the differences for writing curriculum?” © Leslie Owen Wilson (1990, 1997, 2003, 2014, PDF File Below “all rights reserved). Writing curriculum can be confusing. So what are the basic differences between these components referred to as aims, goals and objectives? A.G.O. is not only an easy acronym, it is an easy way to remember the correct progression from larger ideas to smaller instructional components. In everyday English we tend to use these terms interchangeably. The national core curriculum creates cohesion and consistent goals, values and direction. The 2004 framework describes learning experiences, rather than being content specific. The national core curriculum has two roles: it is an "administrative steering document [and] a tool for teachers to develop their own pedagogical praxis" (Vitikka, Krokfors & Hurmerinta, 2012, p. 1). Each municipal district develops its own curricula. All 16 states agreed to comply with the standards which formed the framework for revision of state curricula (Leyendecker & Letschert, 2008). To address the significant paradigm shift to competencies, the Berlin Ministry of Education developed new curriculum