Rethinking the basis of medical knowledge
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Introduction: Twentieth-century medical education constructed medicine as biomedical science. Although bioscientific knowledge has brought large benefits to clinical practice, many have questioned the appropriateness of its domination of the medical curriculum. As the content of that curriculum is itself a historically mediated social construct, it can be changed to fit current descriptions of the competent doctors medical schools are expected to produce. Such doctors are expected not only to have biomedical expertise, but also to carry out multiple other roles as described in competency frameworks such as that of CanMEDS1 and ACGME. Many of these other roles are socio-culturally based and thus not supported by bioscientific knowledge, for example, medical expert, communicator, collaborator, manager, health advocate, scholar and professional.

Methods: The authors designed a thought experiment to delineate the need to identify and integrate the range of foundational knowledge required to support the development of doctors capable of performing all the roles described in the competency frameworks. They asked the following questions: What foundational knowledge needs to be in the curriculum to support the development of competent doctors? Is biomedical knowledge sufficient, or is knowledge from other disciplines also required to equip the doctors of the future? To illustrate their ideas, the authors selected examples from the medical curriculum that linked to non-Medical Expert roles and outlined the disciplines that supported them, focusing on undergraduate medical education.

Results: Students educated in the foundational knowledge necessary for competence in all doctor roles should be exposed to ideas and ways of thinking from a wide array of disciplines outside the traditional biomedical sciences, such as social sciences and humanities. These roles should be introduced in context and in ways that would support future medical practice. They would also broaden students’ understanding of the nature of legitimate medical knowledge. This presents a significant challenge to medical educators, requiring a transformation of the curriculum in order to address the current inconsistency between its contents and the objectives of the competency frameworks.

Conclusions: Medical educators must progress beyond tinkering with the contents of the curriculum and re-imagine it entirely, based on the kinds of knowledge that doctors need to truly enact all of their roles in specific social, political and cultural contexts in which they work. This does not imply that full courses in social sciences and humanities disciplines should be added to medical training any more than it would mandate full courses in physics or organic

1 (CanMEDS roles are a group of characteristics that the Royal College of Physicians of Canada and the College of Family Physicians of Canada has adopted for residents.)

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chemistry. Medical education is training for competent medical practice, and the only justification for any kind of foundational knowledge is that it will support that practice. As our contemporary definition of the competent medical school graduate does not include researcher-level expertise in any discipline, the presentation of this knowledge from the social sciences and humanities in context should therefore be no different from the way in which bioscientific knowledge should be introduced, taught and assessed. Addressing these will require engaging in different types of knowledge, in context and in ways that positively affect practice, from disciplines not currently present within the medical school. In order to accomplish this, the authors promote active engagement with colleagues throughout the university.

Implications for TUSM: As we discussed during our ESP process, we must think about medical knowledge broadly if we want to prepare competent and knowledgeable physicians for the future. To accomplish such an endeavor, we should keep working collaboratively crossing disciplines boundaries as we have been approaching our ESP efforts.