Harnessing the Potential Futures of CBME
Here and Now
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Abstract

The COVID-19 pandemic of 2020 exposed the reactive nature of the medical education community in response to a disruption that, at one time, may have seemed preposterous. In this article, the author reflected on the impact of an unpredictable plight on a system of medical education that (1) is continuous but doesn’t function as a continuum and (2) requires adaptation but is steeped in a fixed mindset and structure that resists change. As a result, innovations which were previously considered impossible, such as time variable education and training, were forced into being. Inspired by the changes brought about by the pandemic, the ensuing decade is explored through a lens of possible futures to envision a path forward based on resilience rather than reactivity.

A learning organization … is continually expanding its capacity to create its future.
—Peter Senge, The Fifth Discipline

The Year is 2021...

The preposterous has happened. The COVID-19 pandemic has ravaged the world. The response of the medical education community was reactive, facilitating flexibility for some, but falling short of providing needed adaptability for many. For those of us who can’t or won’t think beyond our own vision of probable, the “Futures Cone” (see Figure 1) should prompt us to reexamine our thoughts and our conscience about the future of medical education. The original diagram first appeared in a report from an international consultation convening by the World Health Organization entitled “Health futures in support of health for all.” It has since been modified to its current form by Voros, who uses it in “foresight teaching and practice.” What will the future hold along the spectrum from the “preference” to “preposterous” if we don’t design a future for medical education that is resilient rather than reactive?

The pandemic should humble us and force us to move from a fixed mindset of satisfaction with the status quo to a growth mindset of what could be. It is worth noting, some regulatory bodies permitted an alteration in training experiences and/or early graduation to meet the needs of an ever-growing population of critically ill patients, breaking down the greatest barrier to full implementation of competency-based medical education (CBME). However, in these cases, there did not appear to be a consistent and overarching approach, and the urgency of the situation preempted the development of a shared national mental model upon which to base decisions about readiness to practice without supervision.

The Ensuing Decade...

The years following the beginning of the COVID-19 pandemic presented an “Overton window,” a bounded time period where the ravages of the pandemic remained alive, allowing us to progressively build upon changes in medical education in response to the pandemic that were not considered possible before it. The quintessential example is graduating trainees based on competence rather than time. This fundamental principle of CBME has 2 critical components: logistics and summative assessment decisions. While the logistics of time variability seemed preposterous at the beginning of this decade, especially at the graduate medical education (GME) level, it became more plausible once undergraduate medical education (UME) and fellowship training programs initiated the move to a time-variable model. At every stage, junior learners were available to rotate in when more senior learners transitioned to the next stage. Medical education became learner centric, in light of time-variable transitions across the continuum of UME, GME, and practice. In parallel, the adoption of a growth mindset enabled educators to reevaluate and advance long-standing practices by seeing learner assessment through the lens of quality improvement (QI) science. Educators began to apply QI principles to the wicked problem of learner assessment, especially summative assessment. A natural progression of this work was changing our focus from assessment of learning to assessment for learning.

As an outgrowth of the collaboration needed to establish a true medical education continuum, leaders of regulatory bodies, sponsoring institutions, medical schools, specialty societies, and organizations began breaking down their traditional silos and shifting to a systems approach to medical education. “Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static ‘snapshots’.” As a result, the “House of Medicine” was no longer a misnomer for a myriad of societies and organizations with parochial missions and visions, but rather represented a unified voice that spoke to matters affecting medical education quality and health care outcomes, realizing the 2 are inextricably linked. This new reality forced an additional allocation of funds for education within medical schools, accountability and...
transparency of funds flow in GME, as well as federal dollars for research in medical education.

The Year is 2030…

The COVID pandemic of the last decade forced us to take the road “less traveled by/and that has made all the difference” (Frost, lines 19–20). Predictably, we learned that being proactive leads to better patient and learner outcomes than a reactive approach. In the aftermath of the pandemic, countries, health professions, and specialties forged ahead with research on trainee assessment, shared their experiences, and learned from each other. Entrustable professional activities (EPAs) have been universally adopted as a unifying framework for assessment of medical students, residents, fellows, and practicing physicians. Based on their broad and holistic concepts, medical educators were able to map and embed more specific competencies and milestones within the EPAs. More importantly, in addition to the educational benefits, EPAs focus on safe and effective outcomes for patients instead of just learner outcomes or competence. This little explored attribute of EPAs set the stage for a critical line of research on the link between learner and patient outcomes.

EPAs also bring the competencies and milestones to life by contributing the needed context, and thus specificity, to make assessments meaningful. EPA implementation research published at the beginning of the decade demonstrated that program directors have differing ideas about the minimum skills needed for graduation, sometimes believing that indirect and even direct supervision is needed for new graduates, especially in areas where current gaps in training exist, such as QI and behavioral and mental health. While somewhat surprising, this thinking dispels a long-standing myth that structured learning during GME fully prepares trainees for completely unsupervised practice. Admitting that lifelong learning after GME training is a necessity rather than a choice afforded us the opportunity to begin to develop structured learning during practice. Robust EPA data from intentional programs of assessment are now used to support decisions about readiness for graduation and serve as a needs assessment for the critical learning needed during the early years of practice.

This change was operationalized by having more experienced practice partners and mentors observe and assess new practitioners, helping them to advance from requiring indirect supervision to practicing quality medicine without it. Both practitioners and their mentors earn maintenance of certification (MOC) credits when the former advances along a trajectory from competence toward expertise. MOC learning activities, which align with career-specific EPAs, offer opportunities to: (1) fill identified gaps in knowledge and skills and (2) engage in structured learning that targets desired shifts in practice. The aggregate information gained from MOC programs can also provide feedback to medical educators and sponsoring institutions as to the types of learner difficulties and levels of performance that readily allow gaps to be closed in practice and which require more time spent in GME.

We learned from the hard lessons taught to humanity by COVID-19 and improved care of patients by implementing CBME across the continuum as a way of honoring all those who lost their lives and those who risked their lives to care for others during a challenging time in our history. Anything is possible, whether or not we have the capability to envision it at the start. The time has come for us to focus on the “potential” of medical education and what is truly “preferable.” The conceptual link between patient and learner outcomes, afforded by EPAs, was the Holy Grail we were searching for and rose to the top of our research agenda as we implemented time-variable CBME across the continuum. While the pandemic disrupted the education and training of learners, it also advanced us from what we would have considered to be the “preposterous
or possible” (depending on the scope of your imagination), to a new reality of graduating trainees when they have been meaningfully assessed as ready to practice.

Re-reading this last sentence as I write feels like I am offering common sense rather than wisdom. So be it. While it is impossible to fully predict the future, it is possible to prepare for it, and more importantly step in to shape it. Our only mistake would be to do nothing.

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References