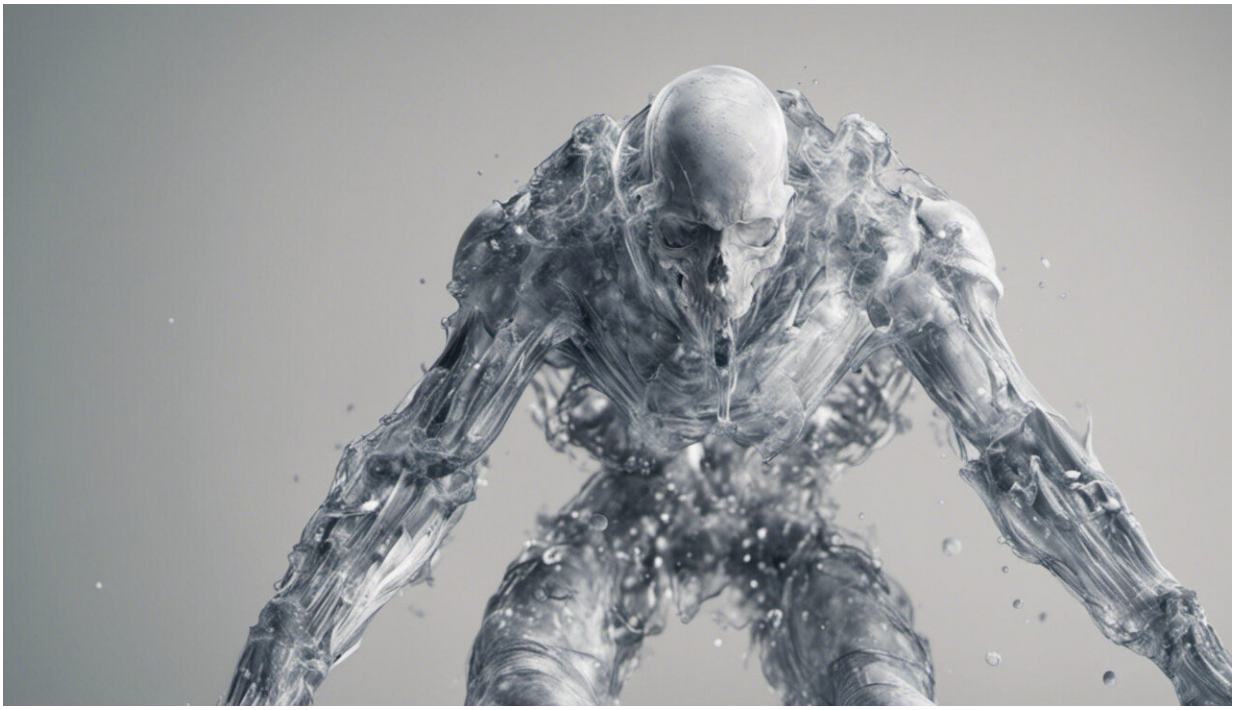
How to improve the skills of tomorrow's doctors

October 5 2017, by J Damon Dagnone



Credit: AI-generated image (disclaimer)

Imagine you're inside an ambulance racing to the emergency room with the lights and sirens blaring. You and your nine-year-old daughter were in a car accident; she is unconscious and bleeding. The paramedic has initiated an IV, placed cardiac monitors and an oxygen mask on her.

Minutes later, you arrive at the hospital. You need the best doctors available to take care of your child. You are at the mercy of their skills and expertise.

This scenario happens multiple times every day in my role as an emergency room physician. Patients and their family members place their trust in our team to care for them in a way that is competent, compassionate and patient-centred. As a clinical faculty supervisor, I also guide physician trainees to take on this leadership role. As a leader in medical education at Queen's University's medical school, I help create, refine and optimize physician training for the doctors of tomorrow.

This is why we have recently launched something called competency-based medical education (CBME) at Queen's. With this new model, trainees progress to the next stage of their education only once they have achieved required competency in clinical tasks —and not before. In the old system, they progressed when they had completed a set number of hours in a rotation, with no flexibility to slow down, or speed up, their path to independent practice.

The Royal College of Physicians and Surgeons of Canada recommended adopting competency-based medical education (CBME) several years ago. Many medical schools and teaching hospitals across Canada are slowly shifting their curriculum, specialty by specialty. In launching CBME all at once, Queen's University's medical school is the first in North America to fully adopt this innovative new approach to medical education across all of its residency education programs.

Training that uses time as a resource

The traditional model of apprenticeship-style, time-based medical training, introduced in the last century, has served us well for many

years. Yet we are now at a tipping point for physician training in Canada. Health care is far more complicated today and a number of opposing forces are challenging the status quo.

How do we reconcile the need to decrease trainee hours —to optimize physician wellness and improve patient safety —with developments in new technology, diagnostic tests, therapeutic drugs and procedures, end-of-life care options and overall medical progress?

One might wonder —is CBME really necessary? Such a large-scale transformation of medical training has huge implications for universities, hospitals, accreditation bodies and government funding structures. It's normal, perhaps necessary, to be skeptical.

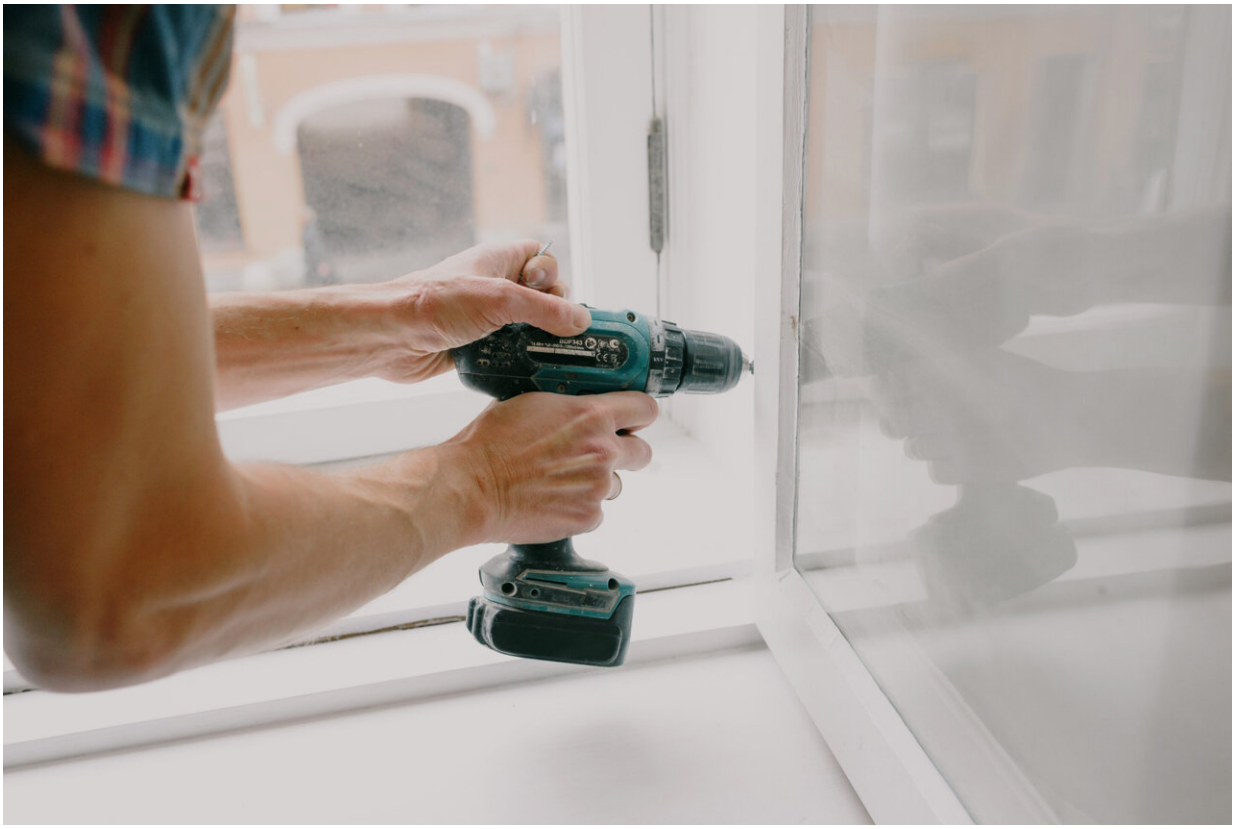
But the term "resident" doctor comes from decades ago when 100- to 120-hour work weeks were common. You lived in the hospital for prolonged periods of time while you cared for patients and developed your skills as a physician. You had little direct supervision, practised many skills for the first time on real patients and learned from your mistakes at the patient's expense.

For years, everyone has recognised this "traditional" way of training is more than outdated —it is unacceptable —and only a transformative approach will take us to where we need to go moving forward.

If we continue in a time-based system, where time spent on numerous clinical rotations is the standard to become competent as a doctor, it will take even longer than the current average of 13 to 15 years at university to graduate as a specialist physician. This cannot be. There must be a better approach to training that uses time as a resource.

Promotion based on competence

Competency based education (CBE) is not a new concept. It has been part of adult learning methods for many decades. Only recently has it become integrated into medicine.



Credit: Ksenia Chernaya from Pexels

At its root, competency based medical education (CBME) is very simple. It reduces the emphasis of learning in clinical rotations based on "units of time" and instead shifts the basis of trainee promotion to the demonstration of competence.

A trainee is directly supervised and is promoted only once skills

(competencies) can be performed independently. In a CBME system, there is not a fixed time frame. The time to promotion may be longer for slower development, or may be quicker if a trainee demonstrates early mastery.

In the drive to transform how doctors are trained, CBME is an idea worth sharing with everyone. Depending on who you are as a stakeholder, CBME means different things. For a resident trainee, CBME offers a more flexible curriculum, greater individualized learning plans, more frequent assessment and better overall preparedness for practice —through the attainment of "entrustable professional activities (EPAs)."

For the patient, it is more focused on patient-centred care, allows direct feedback on residency assessment and provides greater physician accountability. Faculty in a CBME system provide enhanced learner driven instruction, focus assessments on real-time observable competencies and use well-defined learning outcomes. For society, CBME tightens the gap between medical education, health care delivery and societal health needs.

Canada can lead medical education globally

Canada has a world-class reputation in medical education and is well-positioned to be at the cutting edge of the transition to CBME. Our country has been a leader for decades, since launching the seven essential "CanMeds" roles of a physician (communicator, collaborator, health advocate, leader, medical expert, professional, scholar). Many countries have implemented pioneering work from Canada.

More recently in 2010, the College of Family Physicians of Canada (CFPC) launched a transformational competency framework —The Triple C —to optimize how family physicians are trained across the

country.

And the Royal College of Physicians and Surgeons of Canada announced in 2015 the creation of a new Competency by Design (CBD) framework that will transform residency education across more than 60 specialties at all 17 universities with medical schools in Canada.

Strong institutional leadership needed

So what are the next steps to make training better for our future doctors? To be successful, the following changes to our medical training models must occur:

1. All sides of the patient care interaction need to become engaged with CBME. This includes universities, hospital and government leadership, as well as students, residents, faculty, allied health care providers and patients and their families.
2. Strong institutional leadership is needed —to implement change in a strategic, collaborative and meaningful manner.
3. Barriers within government funding models must be broken down to become more fluid in all stages of medical training —medical school, residency training and continuing career development.

Ultimately, every patient, parent and family member must have confidence that all doctors involved in their care are competent, compassionate and have the prerequisite expertise required.

Arriving in the emergency room, the operating room, the intensive-care unit, a hospital ward environment or clinic can be a frightening situation. As a parent myself, I know I need the next generation of physicians to be competent to care for my family too.