From surgical mentor to medical educator: Making knowledge effective

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"The greatest difficulty in life is to make knowledge effective, to convert it into practical wisdom." [1]

- Sir William Osler

Osler's timeless words speak directly to the core of what it means to be an educator in medicine. As surgeons, we are trained to acquire knowledge with precision, but the real challenge lies in applying that knowledge effectively. Nowhere is this more critical than in the surgical education of future urologists.

As a resident, I was once asked, "Do you want to work as a community urologist or as an academic urologist?" This question prompted serious reflection. While community urology offers profound value, I felt compelled toward academia — driven by the desire to mentor, to model clinical excellence, and to be part of shaping the next generation of surgeons.

Surgical mentorship is one of the most complex responsibilities we take on as urologists. It begins at a time when we ourselves are still finding our footing as independent practitioners. Entrusting a resident with surgical control is both necessary and unnerving. Yet, it is in this space — between risk and trust — that real teaching occurs. A strong mentor finds a way to ensure patient safety while still allowing the learner to grow.

Over the years, I have found no greater reward than witnessing residents transform. From nervous early assistants to confident, decisive operators, their evolution is a powerful reminder of the purpose of surgical education.

As my career progressed, my role evolved from a surgical mentor to a broader medical educator. Yet the foundational principles remained the same. Surgeons are, by necessity, lifelong learners. We are continually faced with new techniques, technologies, and standards, requiring us to approach our careers with a growth mindset:

- What procedure do I need to learn next?
- How will I learn it?
- How will I know it benefits my patients?

These questions served me well when I became involved in medical education at a national level. At the Royal College of Physicians and Surgeons of Canada (RCPSC), we undertook a bold transformation of specialty training through the introduction of Competence by Design (CBD).[2] Urology was broken down into functional building blocks — Entrustable Professional Activities (EPAs) and milestones — forcing educators to reconsider:

- What to teach?
- How to teach?
- How to evaluate teaching effectiveness?

In navigating this transformation, I drew heavily on an unexpected but enlightening parallel: coaching hockey. Years of experience behind the bench helped me see that medical education, like sports, is fundamentally a team effort. The coach-mentor analogy proved powerful as I led CBD implementation across all surgical disciplines in our department. We asked:

- Team construction: Who is on your educational team?
- System implementation: What is your strategy for change?
- Coach and player development: How do you prepare your team for success?
- Learning the playbook: What foundational knowledge must everyone share?
- Player performance review: How do you assess and improve individual and team performance?

This framework guided the implementation of CBD across our surgical programs in our Department of Surgery and helped engage faculty in a process that initially seemed abstract and bureaucratic.

From these efforts — and reflecting on two decades of mentorship — I've distilled my teaching philosophy into what I call Watterson's 4 Es of Education:

1. Engage – Connection is foundational. Effective mentorship starts with genuine engagement and understanding of the learner's needs.
2. Enable – Provide structure, feedback, and the tools necessary for skill acquisition and critical thinking.

3. Empower – Trust learners with responsibility. Gradually, independence must be earned and supported.
4. Enjoy – Above all, make the experience meaningful and enjoyable. Learning flourishes when it is paired with enthusiasm and mutual respect.

Education in urology is not static. It requires that we constantly evolve, just as our learners do. Whether in the operating room, the classroom, or the committee room, the challenge remains the same: to take what we know and make it matter; to convert knowledge into wisdom; to transform skills into standards; and to cultivate not only competent urologists but thoughtful, adaptable, and compassionate physicians.

Today's academic urologist must balance surgical excellence with a deep commitment to education. We are not just providers of care, we are stewards of the profession. Mentorship, when approached with intention, is how we translate knowledge into wisdom. It is how we meet Osler's challenge. As surgical educators, let us keep asking the right questions. Let us keep refining the "how" and "why" of teaching. And above all, let us continue to grow — alongside those we teach.

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