The case for adaptability in urological training and practice

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See related article on page 109.

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There is increasing evidence that Canadian residency training in urology may not be meeting the needs of graduates. This report points to significant deficiencies in graduates' comfort level in category "A" procedures in urology as mandated by the Royal College of Physicians and Surgeons.[1,2] Others have shown an increase in the number of graduates seeking additional training through fellowships.[3,4] Such reports may alarmingly raise the concern that residency training is not meeting the needs or aspirations of trainees. Even more concerning, the specter is raised of practicing urologists ill-equipped for competent practice potentially compromising patient safety.

However, before drawing such dire conclusions, one needs to understand the reasons behind such findings and, in the process, to reposition the role of residency training in a long arc of acquiring expertise. This arc began with acquiring cognitive skills long before residency, and will continue with increasing knowledge and experience long after.

The types of "A" procedures that residents seem to be most uncomfortable with fall into 2 broad categories: (1) simple procedures that are likely to be low volume in residency, such as cavernosal shunting for priapism or (2) complex procedures that are likely to require far more than the exposure provided in residency to master, such as anterior exenteration. These findings seem to confirm that novice urologists seem to be most comfortable with the familiar procedures that they have had a chance to practice repeatedly.

It has been established that there are 2 types of expertise: routine and adaptive.[5] Routine experts have acquired a set of advanced skills that they apply routinely to a set of problems. When faced with a novel problem, the routine expert will adapt the problem to the solutions they are comfortable with. Conversely, an adaptive expert will use the new problem as a point of departure for exploration and innovation. They don't attempt to do the same things more efficiently, they attempt to do them better.[6] It is this type of adaptive expertise that we should strive to foster within residency education.

With the increasing complexity of urological practice, it is unlikely that training programs will offer enough volume in each category "A" procedure to develop routine expertise. Moreover, this approach to problem-solving may be detrimental to evolution and adaptability during practice in an ever-changing specialty. This is not to deny the importance of experience and knowledge. However, this experience should be viewed as a foundation towards improvement, and not an end in itself. Learners should therefore be encouraged to not solely rely on past experience in solving new cases, rather they should use the new cases to improve their understanding of their past experiences.[6] The notion of change is in fact embedded in the Royal College definition of competence, "it is dynamic and continually changes over time."[2]

As Charles Darwin said, "It is not the strongest or the most intelligent who will survive, but those who can best manage change."[7]

Competing interests: Dr. Touma has attended an Advisory Board meeting for Janssen.

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