Is the culture of surgery still a gender issue?

We read Brown and colleagues' recent article¹ on culture transition in surgery with interest. We agree with the accompanying editorial by Harvey,² that this is an important addition to the literature and that open, frank discussion is needed from the profession. We feel that some of their points merit further exploration.

The authors highlight 2 key factors influencing the culture and future of our profession: the (slow) movement toward gender balance and a generationally driven attitudinal shift. They study how "new" recruits perceive these changes by interviewing 17 surgeons (9 women, 8 men), all of whom are assistant professor level or higher; have a mean age of 38 years; and are in heterosexual relationships. The ethnic profile of the sample was not reported.

We would suggest that interviewing this sample, though of interest, might in fact miss the point; the authors have sought the views of the "new establishment." All of the participants of the study have become established academic surgeons, some against well-defined, albeit diminishing, barriers. They have opted to stay in the profession, in some cases alongside the added commitments of motherhood. In the UK, 90% of those in surgical training decide on this path during their first year postqualification with a similar gender ratio, yet far fewer women ultimately achieve their goal.3 Women initially attracted to surgery move away from this career option during their postgraduate education; this attrition was previously attributed to lifestyle considerations.4,5 We would postulate that the same may be true of some black and minority ethnic groups, and possibly also lesbian, gay, bisexual and transgendered surgical trainees. Interviewing a cohort from these groups — those who chose not

to enter the profession they were initially drawn to — may cast further light on gender and cultural issues within surgery and undercover why it has been perceived for so long as an "old boys' club" with ongoing discrimination.

Brown and colleagues1 cite a lack of mentoring as 1 potential reason for our profession's loss of talent. We would support this claim. In our experience6 and the experience of others, access to mentors is limited not only for women but also for other minorities in this professional arena. Formalized mentoring programs that seek to pair candidates with suitably matched (but not necessarily demographically similar) mentors, and the use of mentoring frameworks, may help people to achieve successful mentoring relationships.7 Raising awareness for mentoring and mentor acquisition as early as possible in surgical careers (i.e., medical school) may also benefit potential surgeons.

Positive role models have been shown to significantly impact career choices.8 From our personal experience (H.M., T.B.), role models are limited for Generation Y female potential surgeons. We agree with the study, that increasingly this is not a gender issue; men, too, want a better work-life balance9 to pursue portfolio careers while having flexibility for more time at home and the opportunity to travel. Certain aspects of surgery as a career (e.g., emergency work, management of complications, unpredictability of surgical pathology, competition for attaining training posts) inherently clash with these aspirations; however, we believe that broad-minded individuals with ambition within and outside of medicine are assets to any workforce.

Surgical trainees with the Generation Y value set should be encouraged into, not dissuaded from, surgical specialties. This will not happen passively; it requires a strategic approach involving enhanced child care options, job sharing and flexible contracts, and signposting of role models and mentoring opportunities. It requires a culture change within our profession.

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References

- 1. Brown JB, Fluit M, Lent B, et al. Surgical culture in transition: gender matters and generation counts. *Can J Surg* 2013;56:153-8.
- 2. Harvey, EJ. About time. *Can J Surg* 2013; 56:149.
- Goldacre MJ, Laxton L, Harrison EM, et al. Early career choices and successful career progression in surgery in the UK: prospective cohort studies. BMC Surg 2010;10:32.
- Bergen PC, Turnage RH, Carrico CJ. Gender-related attrition in a general surgery training program. J Surg Res 1998; 77:59-62
- Dodson TF, Webb AL. Why do residents leave surgery? The hidden problem in today's programs. Curr Surg. 2005;62:128-31.
- Kirresh A, Patel VM, Warren OJ, et al. A framework to establish a mentoring programme in surgery. *Langenbecks Arch Surg* 2011:396:811-7.
- 7. Patel VM, Warren O, Ahmed K, et al. How can we build mentorship in surgeons of the future? *ANZ J Surg* 2011;81:418-24.
- 8. Passi V, Johnson S, Peile E, et al. Doctor role modelling in medical education: BEME Guide No. 27. *Med Teach* 2013 Jul 5 [Epub ahead of print].
- JWTIntelligence report. The State of Men. 2013 June. Available: www.jwtintelligence .com/wp-content/uploads/2013/06/F_JWT_ The-State-of-Men_Trend-Report_06.04.13 .pdf (accessed 2013 Aug. 12).

THE AUTHORS RESPOND

We appreciate the thoughtful response from McGrath, Brew and Warren. We acknowledge that we interviewed those who overcame the

challenges of postgraduate training and became academic surgeons. We question whether they would perceive themselves as the "new establishment," though we will concede that to be successful these individuals have agreed to the expectations of their department and their academic institution. We recognize that many surgical trainees leave training programs and many academic surgeons leave university departments to go into community practice because they cannot, or will not, make the compromises required to deal with the demands of their roles. We agree that many capable women leave surgical training or drop out of academic surgery because of the difficulty of combining family and professional roles.

We also acknowledge the limitations of our study group. We were interested in the case study represented by a department of surgery that intentionally set out to change the gender mix and to change policies to be more "family friendly." We would contend that departments of surgery can make choices about how to support women and men during their training and as faculty members, and these choices will make trainees more likely to be successful. This is an evolutionary rather than a revolutionary approach.

Our paper indicates the critical importance of mentorship. If mentors are not assigned or identified in one's own department, individuals need to look elsewhere—to national surgery organizations or other national organizations such as the Canadian Medical Association, which has a mentorship program to faculty members outside of surgery.

Again, we thank the authors for their comments and observations, all directed at inclusiveness in surgical training and academic pursuits.

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COMMENT ON "COMPARISON OF THE MAJOR INTRAOPERATIVE AND POSTOPERATIVE COMPLICATIONS BETWEEN UNILATERAL AND SEQUENTIAL BILATERAL TOTAL KNEE ARTHROPLASTY IN A HIGH-VOLUME COMMUNITY HOSPITAL"

It was with great interest that we read the recent article by Spicer, Thomas and Rumble, which provides an insight into the safety of unilateral total knee arthroplasty (UTKA) versus sequential or simultaneous bilateral total knee arthroplasty (BTKA) in a high-volume community hospital. The authors excluded from their study patients who underwent staged TKA, defined as "2 distinct surgeries on both knees within a 1-year period." Instead, candidates with bilateral knee symptoms who were deemed eligible for surgery were given the option of BTKA or 2 UTKAs.1

In our experience with patients who present with bilateral fixed flexion knee deformities, even if a UKTA is initially successful, it may develop stiffness and adopt the fixed flexion of the contralateral knee if the latter is not likewise replaced within a few months. Residual flexion contractures after knee replacement have been associated with poor outcomes.²

The limitation of movement and impact on quality of life caused by a residual flexion contracture³ should be considered a complication in itself. This complication might be avoided by performing a BTKA or careful pre- and postoperative management to safely complete staged TKA procedures in considerably less than 1 year. Although it seems reasonable that

"individuals who decline the second operation may have been better served by a 1-step BTKA," the alternative is perhaps more relevant to orthopedic departments where there is less experience and expertise in performing BTKAs.

The merits of BTKA versus staged TKA have been extensively discussed in the literature. Reduced costs, single anesthetic and decreased total recovery time have been highlighted as advantages of BTKA,⁴ but an increased risk of serious post-operative complications have also been reported.⁵ We hope that future studies will continue to objectively evaluate the risks and benefits of each, and identify which patients might be more suited to a particular method.

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References

- Spicer E, Thomas GR, Rumble EJ. Comparison of the major intraoperative and postoperative complications between unilateral and sequential bilateral total knee arthroplasty in a high-volume community hospital. *Can J Surg* 2013;56:311-7.
- Ritter MA, Lutgring JD, Davis KE, et al.
 The role of flexion contracture on outcomes in primary total knee arthroplasty. J Arthroplasty 2007;22:1092-6.
- Scuderi GR, Kochhar T. Management of flexion contracture in total knee arthroplasty. J Arthroplasty 2007;22(Suppl 1):20-4.
- Hutchinson JR, Parish EN, Cross MJ. A comparison of bilateral uncemented total knee arthroplasty: Simultaneous or staged? *J Bone Joint Surg Br* 2006;88:40-3.
- Hu J, Liu Y, Lv Z, et al. Mortality and morbidity associated with simultaneous bilateral or staged bilateral total knee arthroplasty: a meta-analysis. Arch Orthop Trauma Surg 2011;131:1291-8.

THE AUTHORS RESPOND

We thank Razii and Morgan-Jones for their comments regarding our study that compared the incidence of serious perioperative complications between unilateral and bilateral total knee replacements.

They make the additional observation that replacing 1 knee when the patient has a deformity in both knees presents difficulties with rehabilitation and may compromise the outcome for the knee. We agree that this may very well be the case, though it was not the focus of our study.

They also comment on the omission of staged procedures, in which the 2 knees are replaced on separate occasions within the first year. In our hospital there were only 69 such patients during the time frame of our study, which did not reach statistical significance; hence, we omitted them.

They encourage further study to "identify which patients might be more suited to a particular method." This may be useful to surgeons in different settings. In our case, we found that replacing both knees under 1 anesthetic was safe in the

setting of a high-volume community hospital.

Once again, we appreciate the feedback.

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