INVITED EDITORIAL

Is it broken?

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Orthopaedics: A specialty with 388 current active surgeons in Aotearoa New Zealand of whom just 25 (6.4%) are women.[1] This is a pretty dismal statistic given that women represent more than 50% of our medical school graduates. We acknowledge that not everyone has a strong interest in orthopaedics and that it is possible that a greater number of female doctors may genuinely be more interested in other areas of medicine. However, the issue is about ensuring that those that do have the interest and the potential to become great surgeons are not discouraged by feeling as if they do not belong.

With the current gender inequality in orthopaedics, we are missing out on potential talent and the benefits of diversity. In addition, there are few Māori and Pasifika surgeons in Aotearoa New Zealand and only one openly gay practicing orthopaedic surgeon. Beyond even the sense of fairness and equity or the moral imperative, we know that diversity benefits organisations. Diverse groups make better decisions and experience improved creativity, performance, collaboration, and innovation.[2] In step with this, the 30% Club is an established global campaign to improve female representation at board level in the world's biggest companies.[3] Evidence based studies have shown that improving diversity, in orthopaedics specifically, leads to higher quality patient care and better outcomes.[4]

New Zealand orthopaedics is not unique in this position, with women constituting 5–10% of the orthopaedic workforce in most developed nations. A global survey of the International Orthopaedic Diversity Alliance (IODA) in 2020 showed only five countries (Estonia, Sweden, Brunei, Canada and Malaysia) reached 10% or more. Estonia is way out in front at 26%.[5]

A study in 2018 concluded that overwhelmingly orthopaedic surgery was perceived by New Zealand 4th year medical students as the specialty least accepting of females.[6] Students not only thought orthopaedic surgeons discouraged women in the field but that they also had poor work-life balance and that the specialty required a high level of physical strength. There was a strong misconception that women would be unlikely to be accepted by their male colleagues. In a further survey, junior doctors were asked to list the first three words that came to mind to describe an orthopaedic surgeon.[7] The most frequently recorded words were male, arrogant and strong. A similar New Zealand study in 2018 looked at perceived barriers to surgical careers in a slightly different way.[8] Four main themes became apparent: 1. Culture, 2. Structural barriers (e.g. inflexibility of training and long hours), 3. Physical demands, and 4. Lack of role models. Orthopaedics was perceived to have greater cultural barriers than general surgery owing to its unwelcoming "boys club" culture.

On the positive side, with some experience, junior non-training orthopaedic registrars were much less disparaging.[7] Their responses showed statistically significant changes with regards to support and encouragement of women in the field, work-life balance, the need for excessive strength, and positive influences in their desire to pursue orthopaedics. With increased exposure, the more concerning preconceptions are diminished. Contrary to popular belief, excessively large biceps are not a necessity, nor a factor in surgical prowess.

So what do we do? In New Zealand and globally, a strong vision is developing for an orthopaedic culture in which everyone can thrive. We can achieve this by breaking down real barriers, by addressing misconceptions, by advocating for change and by fostering increased engagement of female students and junior doctors. LIONZ (Ladies in Orthopaedics New Zealand) is becoming increasingly critical in this role. Their initiatives such as interactive saw-bone workshops and introducing students and doctors to female surgeons and role models helps build relationships and dispel some of the myths. It is well recognised that facilitating female role models, mentoring and availability of flexible training support greater parity and encourage more women into the orthopaedic workforce.[9,10] In the same way, a group of Māori orthopaedic surgeons, Ngā Rata Koiwi, now provide support, mentoring, advocacy and collegial advice to Māori trainees and pre-trainees. A newly formed group of Pasifika surgeons and trainees will also provide similar help.

A survey of all female orthopaedic trainees and junior consultant surgeons in 2022 confirmed over 80% reported a strong level of support from male colleagues.[11] The most negative discrimination or behaviour experienced was overwhelmingly not in fact from male surgeons but from nursing staff. Female consultants in the past 10 years have also had more success obtaining public hospital appointments than their predecessors. These new female consultants around the country have made positive changes to the environment and dynamic of the teams they join.

At a national level, diversity and inclusion in orthopaedics is a hot topic with the NZOA (New Zealand Orthopaedic Association). Ngā Rata Kōiwi, LIONZ and our Māori cultural advisor are increasingly welcomed and respected as advocates on the council, the training board and subcommittees across our organisation. Improving diversity in leadership positions is a work in progress. The NZOA is in the process of developing a strategic diversity plan with representatives from Ngā Rata Kōiwi and LIONZ to lead the way. This action supports the growing body of social science research showing that organisations that put someone in charge of diversity have stronger records of attracting qualified individuals from under-represented groups.[12]

Last year 24% of orthopaedic trainees in New Zealand were female. Over 20% of trainees were Māori or Pasifika. From 2016 to 2021, it has been statistically more likely that female applicants are successful. Disappointingly no females were selected in 2022. This has dropped the percentage of female trainees to 21% in 2023. This anomaly led to intense scrutiny of all aspects of selection and understandably a level of angst and distress from some prospective female applicants. The training board has spent a great deal of time focused on trying to minimise bias in assessment and interview as well as improving our ability

to select for diversity when required. However, the predominant factor behind the low level of females in orthopaedics remains the low numbers who apply. We need to encourage and support a diverse range of junior doctors to consider a career orthopaedics. It is clear there is work to be done. It is particularly heartening to be able to disclose that 20 of 49 registrants for application this year are female.

The evolution of any change is slow and inevitably erratic initially. Momentum and consistency will grow over time. While it takes time to change individual attitudes and behaviours, we absolutely see collective departments around the country becoming more inclusive in their actions and culture. Orthopaedics is getting there.

The evolution of change is not uniform.
Breaks heal at varying rates
But the direction remains clear
We will achieve strong union.

References

1. New Zealand Orthopaedic Association [Internet]. NZOA; 2012-2023. Find a surgeon. [Cited 2023 Mar 11]. Available from: https://www.nzoa.org.nz/find-a-surgeon

2. Woetzel J, Madgavkar A, Ellingrud K, Labaye E, Devillard S, Kutcher E, et al. The power of parity: how advancing women's equality can add $12 trillion to global growth. McKinsey & Company; 2015 Sep.

3. Welcome to the 30% Club [Internet]. The 30% Club; 2021 [cited 2023 Mar 11]. Available from: https://30percentclub.org/.

4. White AA. Justification and needs for diversity in orthopaedics. Clin Orthop Relat Res. 1999;362(1):22–33.

5. Green JA, Chye VPC, Hiemstra LA, et al. Gender diversity in orthopaedic surgery: A perspective from the International Orthopaedic Diversity Alliance. Journal of Trauma and Orthopaedics. 2020;8(1):44-51.

6. Mowbray J, Coleman B. Barriers to Women Choosing Orthopaedic Surgery as a Career. Presentation NZOA Registrar Paper Day 2018.

7. Coleman B, Mowbray J, Kim V Orthopaedic Bullying and Harrassment: Does it Occur and does it affect career choice? Presentation at NZOA Annual Scientific Meeting 2018.

8. Tan R, Muir D, Lacey EK, Vasey C. Where are the women in Orthopaedics : Perceived barriers to entering a career in orthopaedic surgery. Presentation at NZOA ASM 2018.

9. Jones M, Archer J, Garrod T. Breaking barriers; developing drivers for female surgeons [Internet]. Royal Australasian College of Surgeons; 2020 [cited 2023 Mar 11].

10. Giantini Larsen AM, Pories S, Parangi S, Robertson FC. Barriers to Pursuing a Career in Surgery: An Institutional Survey of Harvard Medical School Students. Ann Surg. 2019 Oct 9;273(6):1120-1126. doi: 10.1097/SLA.0000000000003618. PMID: 31599803.

11. Smith K. Almost 40 years of Ladies in Orthopaedics in New Zealand. Presentation LIONZ Meeting 2022.

12. Plaut VC, Thomas KM, Tran NM, Bazemore CM. Diversity ideologies in organizations: An introduction. New York (NY): Routledge/Taylor & Francis Group; 2014. doi: 10.4324/9781315852188

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