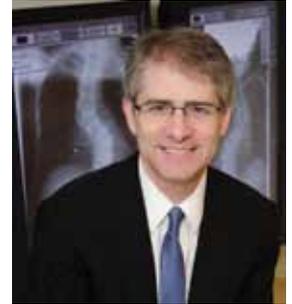


# Letter from the Chairman

---

## THE FUTURE OF DUKE ORTHOPAEDICS: DEVELOPING A CULTURE FOR SUCCESS



Academic orthopaedic departments have a special challenge to develop and maintain three core missions: To provide an exceptional level of patient-centered musculoskeletal care, to generate and use new knowledge to improve the care of people with musculoskeletal conditions, and to educate and train the next generation of musculoskeletal providers and the leaders of orthopaedic surgery tomorrow. Exceptional performance in any one core mission is a reason to celebrate. Our department reached an important milestone this year in demonstrating exceptional performance in its tripartite clinical, research and education mission. The department ranked 9th in the US News and World Report for clinical care, 6th in NIH funding for an orthopaedic department, and 5th in the inaugural Doximity/US News and World Report Residency rankings. This makes Duke orthopaedics the only department ranked 9th or better in all three of these indices. This is an important accomplishment, something that recognizes the incredible quality, dedication, and depth of the Duke faculty, trainees and staff.

While we celebrate this accomplishment, it is not time for Duke orthopaedics to rest on our laurels looking to the past; rather it is time to look to the future to build on our successes. By working together to build the right environment and recruiting the right people, the sky is the limit for what we can achieved together. In order to continue on our upward trajectory, we need to also consider the culture of orthopaedics, and how the right culture will foster success.

Many in medicine have heard the joke about an orthopaedic surgeon being strong as an ox and twice as smart. Hugh Owen Thomas, an early pioneer in orthopaedics practicing in the United Kingdom, helped to promote this characterization. He had a reputation for using brute force in treatments, having developed fracture and deformity therapies with names, such as the Thomas ‘wrench.’ Over time, orthopaedics, however, has evolved. Some orthopaedic subspecialty areas require delicate surgical technique, a departure from brute force, for a good outcome. Physicians going into orthopaedics not uncommonly rank at the very top of their medical school classes academically. Indeed, a recent publication in the British Medical Journal compared grip strength and IQ between orthopaedic surgeons and anesthesiologists. When matched for age and gender, orthopaedists had both higher grip strength and a higher IQ. The authors concluded that one needs to be cautious when making fun of orthopaedists as they will come back with a snappy retort that will be followed by a crushing handshake.<sup>1</sup>

This change from strong and gruff to educated and technically skilled is not necessarily associated with a change in how others view orthopaedists, nor in the way we as orthopaedists view ourselves. It is important that this view changes for several reasons, culture and attitudes in orthopaedics surgeons have been identified as an important contributing factor preventing medical students from considering our specialty.<sup>5</sup> Helping students understand more about the evolving culture our specialty will help to promote diversity and the recruitment of the brightest into our specialty. Interestingly, recent data suggest that the right attitude from a surgeon will improve patient outcomes. Thus, promoting the right culture and attitudes will help our field in many ways.

## Attitude and Patient Outcomes

Attitudes play important roles in safety outcomes. The Federal Aviation Authority (FAA) has long recognized this, and the FAA’s Handbook of Aeronautical Knowledge<sup>2</sup> provides information on how attitudes and, in particular, five hazardous attitudes affect the way one makes decisions, and can lead you to potentially hazardous situations. These hazardous attitudes are: (1) Anti-Authority—‘Don’t tell me;’ (2) Impulsivity—‘Do it quickly;’ (3) Invulnerability—‘It won’t happen to me;’ (3) Macho—‘I can do it;’ and (5) Resignation—‘What’s the use?’ Recently, a group from Boston, examined these attitudes in orthopaedic surgeons, and found that more than a quarter of orthopaedists exhibit hazardous attitudes. Furthermore, those that exhibit these characteristics have a high rate of reoperations and readmissions among their patients.<sup>3</sup> Thus, similar to the lessons learned in aviation, having the wrong attitude can result in poor surgical outcomes for our patients. You can take an online test to evaluate yourself for these attributes at [http://www.avhf.com/html/Evaluation/HazardAttitude/Hazard\\_Attitude\\_Intro.htm](http://www.avhf.com/html/Evaluation/HazardAttitude/Hazard_Attitude_Intro.htm), just substitute ‘orthopaedic surgeon’ for the word ‘pilot.’

## Attitudes and Diversity

Attitudes and cultures can be a block to recruiting the best and the brightest from different backgrounds into a field. There is also a wealth of evidence that organizations benefit in productivity and innovation from a work force consisting of individuals from diverse backgrounds.<sup>4</sup> As a field, orthopaedics lags behind most clinical specialties in diversity. For instance, fewer than 5% of American Academy of Orthopaedic Surgeons members, and fewer than 14% of AAOS candidate members (trainees) are women.<sup>5</sup> Since, roughly half of medical students are women, this means that the field is missing out on excellent candidates from almost half of medical school graduates. Simply missing out on selecting from a large proportion of medical school graduates, limits our potential as a specialty. Of course, diversity is not only a gender issue, and orthopaedics also does not do well in terms of recruiting visible minorities into our specialty. While the cause of this lack of diversity in orthopaedics is multifactorial, the culture and attitudes of orthopaedic surgeons have been identified as an important contributing factor.<sup>5</sup> The importance of cultures and attitudes in making an environment that embraces a diverse workforce is recognized in the business world, where diversity only contributes to improved productivity in an organization whose culture and attitudes accept diversity.<sup>4</sup>

For orthopaedics as a specialty to reach its potential, we need to develop and support a culture that fosters diversity, and work to discourage hazardous attitudes. This will improve patient care, increase the diversity of our profession's workforce, ultimately raising our level of innovation and productivity in our profession. Duke orthopaedics is well positioned to lead the way in embracing the right culture and attitudes, and to use this to promote its continued ascending trajectory. Avoiding hazardous attitudes is part of the Duke culture, and essential in our ability to provide the best care for our patients. We already have a history of diversity in our residency program, for instance, we have more women in our program than the national average, but we can still do better. Last year, the department established a diversity and inclusion committee, and part of this committee's charge is to identify ways to maintain the right attitudes in our faculty, staff, and trainees to provide a welcoming and inclusive environment for all in our department. Over the coming years, I hope to be able to report on how Duke has embraced a leadership role in improving culture and attitudes in orthopaedics, resulting in even greater achievements, as our department continues on its upward course.

I want to thank the members of the Duke Orthopaedic Department Advisory Committee for their help and advice on this article.

## REFERENCES

1. Subramanian P, Kantharuban S, Subramanian V, Willis-Owen SAG, Willis-Owen CA. Orthopaedic surgeons: as strong as an ox and almost twice as clever? Multicentre prospective comparative study. *BMJ* 2011;343:d7506.
2. Available at: [http://www.faa.gov/regulations\\_policies/handbooks\\_manuals/aviation/pilot\\_handbook/](http://www.faa.gov/regulations_policies/handbooks_manuals/aviation/pilot_handbook/).
3. Kadzielski J, McCormick F, Herndon JH, Rubash H, Ring D. Surgeons' attitudes are associated with reoperation and readmission rates. *Clin Orthop Relat Res* 2014 May 30.
4. Reagans R, Zuckerman EW. Networks, Diversity, and Productivity: The Social Capital of Corporate R&D Teams. *Organization Science*. Permalink: Available at: <http://dx.doi.org/10.1287/orsc.12.4.502.10637>, Published Online: 2001 August 1.
5. Lewis VO, Scherl SA, O'Connor, MI. Women in Orthopaedics—Way Behind the Number Curve. *J Bone Joint Surg Am* 2012 Mar 07;94(5):e30. Available at: <http://dx.doi.org/10.2106/JBJS.J.01408>.

**Benjamin Alman MD FRCS**

