

Human factors in surgical performance

James Tomlinson



James Tomlinson is a Consultant Spinal Surgeon in Sheffield, UK. He has an interest in surgical education and training, and is an Associate Medical Director for Education and Deputy Director of the Faculty of Surgical Trainers, RCSEd. He teaches nationally and internationally on surgical non-technical skills and human factors.

“**Y**es but what’s the ODEP rating...?” You have probably all overheard a conversation like this in the theatre coffee room, on more than one occasion. When was the last time you heard someone discuss instrument design, or the ideal image intensifier position for optimal operative workflow?

We talk a lot about the implants we use, but we spend less time thinking about the environment we deploy them in, or the optimal operative conditions for the surgeon using them. Human factors and ergonomics offer a wealth of opportunities to think about how we work within our environment, in the most effective ways, to deliver the highest standards of care for our patients.

Healthcare is increasingly complex and collaboration between different specialties, or even subspecialties is more and more common, and part of our normal working patterns. This issue’s articles explore the roles that ergonomists, psychologists, engineers and our industry partners can play in helping improve the work environment, and ultimately help us to improve patient care. Clinical academic research and multi-centre research studies are now well established in our specialty. In time, I would hope we will see similar studies exploring

surgeon performance and workplace design. This offers the opportunity to advance patient care, and help us ensure our colleagues can enjoy long and fulfilling careers.

We have three articles exploring this topic from different perspectives. Sue Deakin has written an eye-opening and uniquely personal piece through learning from an adverse event. Her article offers insights into the multiple factors that contribute to adverse events, and the opportunities for learning and system change. It also offers insights into the benefits a trained ergonomist can bring to an NHS Trust, and the opportunities to make improvements in working conditions for all surgical staff.

The second article written by Roshana Mehdian and Professor Deborah Eastwood, explores the importance of ergonomics in the operating theatre and other clinical environments. Increasing workforce diversity is vital to ensure we represent the populations we care for, and to ensure we select the very best future colleagues. It is critical then that we have surgical instruments and safety equipment suitable for all of our workforce; their article explores some of the challenges this brings, and some of the ongoing collaborations in the field.

Our final article brings a psychology and sports perspective to surgeon performance. Professor Steven Yule explores surgical non-technical skills and the emerging field of surgical sabremetrics. It is a timely exploration of current evidence to support non-technical skills training, and the opportunities that technology offers to understand how we optimise surgeon performance, and ultimately patient outcomes.

I hope you enjoy reading the articles. Our authors have all suggested opportunities for further reading and learning. The BOA continues to host a Non-Technical Skills (NOTSS) half-day course (pre-registration essential) on the Friday of BOA Congress. It would be great to see some of you there and continue the discussions in this fascinating field of work. ■



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