Improving patient safety through education

A window of opportunity exists to include training in human factors in undergraduate and postgraduate training

The recent abolition of the National Patient Safety Agency is hardly reassuring news following a series of reports that have revealed levels of inadequacy in the provision of healthcare that shame us all, even if only by proxy. Around one in 10 patients admitted to hospital experiences an adverse event not directly related to their condition, and with an estimated 2.34 million operations carried out worldwide each year, the scale of the problem, not just from a surgical perspective, is huge.

There is little hope on the horizon of any further investment, and morale in many areas of the UK healthcare system remains low. Clinical and financial targets now dominate the horizon, with education and training forced into the back seat. The previous long hours and fatigue felt by many trainees have been reduced by the European Working Time Directive. Instead they have been replaced by more intense shiftwork patterns, which in themselves have been unpopular and not conducive to continuity of care and training, especially in many of the surgical specialties.

The past five years have seen unprecedented investment in the NHS, so that compared with many other countries hospital buildings, staffing, equipment, and facilities are of a standard that should facilitate high quality outcomes. Productivity has increased and waiting times have fallen, but multiple institutional and departmental failures remain. The associated public outrage is entirely understandable and the rising costs of preventable errors unsustainable. Such errors include wrong side surgery; failure to ensure the provision of antibiotic and thromboembolic prophylaxis; persistently high meticillin resistant Staphylococcus aureus, Clostridium difficile, and central line infection rates; and drug errors. These primarily relate to a failure of human factors, and until this area of medicine is properly tackled, patient safety will continue to be compromised and unacceptable errors will occur.1

The National Patient Safety Agency (www.npsa.nhs.uk) and the Scottish Patient Safety Alliance (www.patientsafetyalliance.scot.nhs.uk) have both adopted methods from the Institute for Health Improvement (www.ihi.org/ihi) programmes for introducing ‘bundles of care’ to reduce complications in specific areas, such as central line sepsis, prophylaxis for deep vein thrombosis, wound infections, and intraoperative errors. These collaborative efforts based on shared learning, transparency, and openness have led to remarkable improvements in patient care.5

Although effective and successful in their own specific areas, these programmes are not the whole answer. Poor practice and medical errors occur mainly because of failings in organisational culture and the non-technical skills that underpin good clinical practice, rather than a lack of knowledge or technical ability. These non-technical skills have now been identified for surgery, anaesthesia, and nursing.3 Lessons learnt from other domains have also influenced safety and quality in medicine. Improvements include more robust reporting systems; understanding the importance of human factors; and team training to develop and sustain honesty, resilience, and cultural change.3

Improvements in patient safety across the board require a radical change to the culture and teaching of medicine. As highlighted in a previous BMJ editorial and by the Clinical Human Factors Group (www.chfg.org), the importance of human factors in the safe practice of medicine in its broadest term must be imbedded in both undergraduate and postgraduate curriculums. Dedicated and enthusiastic teachers are needed within all parts of the hospital system, as is a huge cultural shift in every area of clinical practice towards open reporting and a willingness to work together in a supportive environment to reduce variations in clinical practice.

Two major changes currently occurring within postgraduate medicine offer a real opportunity to achieve many of these goals. The Postgraduate Medical Education and Training Board (PMETB), albeit now incorporated within the General Medical Council (GMC), has a unique position in being able to approve the content of all curriculums in postgraduate medicine, and this process is nearing completion of its current cycle. Similarly, the process of revalidation by the GMC is currently under construction. A window of opportunity therefore exists to incorporate those human factor elements of performance that are key to ensuring better standards of care into the core of medical education and assessment. Unfortunately, no evidence exists to suggest that these opportunities are being realised, so there is a very real danger that one of the greatest chances to radically change medical culture and practice in the United Kingdom might be lost for the next generation. Those currently tasked with the education, training, and assessment of doctors in the UK must rise to this challenge now or patients will continue to experience unnecessary and often life threatening complications from their medical treatment.


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