

EDITORIAL

Reflections on change

I have recently enjoyed reading the recollections of a London based neurosurgeon (*Do No Harm*, Norman Marsh, Phoenix, 2014) and was intrigued by the similarity of our viewpoints. The author is slightly younger than me, works in a different medical system in a different country and has different stresses (they kill, we cripple), but our psychology as surgeons is the same. Marsh writes of surgery as 'single combat' and I have long known that a challenging operation is like going to war. But the most interesting thing was how we both view the changes that have occurred in our disciplines during our professional lives. Some of them are worth reflection.

Professional attitude

Young doctors now have rights; their working hours are controlled to reduce mistakes from exhaustion, their pay is relatively far better than my generations' was, and they are prepared to strike to protect themselves. I approve of this; my generation knew no better and was exploited (my wife worked a 72-hour shift as an intern at Red Cross). The question is, however, whether this translates into better patient care, and a higher professional standard. With less concentrated clinical exposure it takes longer to train specialists. Junior doctors in the developed world now work shifts; the result should be fewer mistakes from tiredness, but there also seems to be less of a sense of personal responsibility for patients, less continuity of care and the need for stringent handover procedures. It can be argued that this works for nurses and air traffic controllers, but Marsh and I regret the dilution of the doctor-patient bond.

Bureaucracy

A few years ago the Australians were complaining there were more desks than beds in their hospitals, and the New Zealand Minister of Health reduced his budget by culling administrative staff. In the South African public health system we have seen a progressive increase in unproductive administrative staff, and a serious decline in the numbers of the medical personnel who actually do the work. To a lesser degree this is also happening in the private sector, especially with the medical funders. This goes with a reversal of their respective status; in the rational world clinicians would tell the administrators what they need, and the administrators' job would be to supply it. Now unresponsive bureaucrats control the clinicians and dictate how and when we work. If we do not resist this we shall lose our professional independence and become little more than salaried technicians.

Technology

We now perform operations and achieve results that were unimaginable when I was a trainee. This is largely due to the explosion of technology in recent decades, but these advances are costly, and it is now our responsibility to critically evaluate their clinical benefit. An example is Computer Assisted Surgery (CAS), especially in knee arthroplasty. A literature search does show more consistent limb alignment using CAS, but there appears to be little evidence of better clinical outcomes. Similarly there is no evident clinical superiority for patient-specific implants, and minimally invasive spinal surgery or arthroplasty, not to mention other techniques including the imminent use of robotics. Statistical significance should now be replaced by clinical significance when deciding whether a procedure is effective, and the profile of patients most likely to benefit must be defined to aid patient selection. There is no excuse for this continuing uncertainty in the face of increasing financial pressure on medical systems world-wide; new techniques need to be validated independently before, not after, they are released on the market. And as commercially naïve, enthusiastic and adventurous surgeons we must learn not to confuse novelty with progress.

None would deny the advances in medical imaging, but Marsh indulges himself in a tirade for much of a chapter on the frustrations and possible dangers of working with modern digital radiology systems. Most of us would agree with him. The time wasted trying to access important images on a user-unfriendly CD from an unfamiliar radiology practice is infuriating and surely unnecessary; simplification and a degree of standardisation are long overdue. And why should we tolerate disclaimers warning that images are not adequate for clinical work when we are dependent on them in the consulting room and theatre?

Education

Medicine can be lucrative. This results in products being promoted using poor science; a friend in the pharmaceutical research world says the statisticians simply ask what is the desired result, and they will find suitable statistics. If cynical experienced surgeons battle to reconcile the conflicting evidence, how much more difficult must it be for a trainee? The situation is exacerbated by the proliferation of indiscriminating 'research' journals and the easy access to them by IT. Now more than ever, we need to recognise and promote journals with impeccable standards, which can be trusted to publish only work of real, lasting value, not academic garbage.

The role of the teacher has also changed. In the words of Stephen Toope, formerly president and vice chancellor of the University of British Columbia, 'with so much information, and so many opinions coming at us, you need a guide, and I think that's what teachers are now; navigators. Not so much people who tell you what you need to know, as people who help you figure out how to process what you do find out'.

Geologists are proposing that the Holocene era, dating from the last Ice Age, has ended, and we now live in the Anthropocene era. This is the period when mankind has profoundly altered this planet, leaving a trail of radiation, 'techno-materials' such as plastics, aluminium and concrete, ecological and climate changes. Our era is considered to have started in the 1950s; this unprecedented event has happened in my lifetime. Change is part of our culture and we must adapt to it. But although humans may think they are taking increasing control of their lives, the side effects are often unpredictable and sometimes catastrophic. Stephen Hawking has suggested that mankind needs extra-terrestrial settlements to ensure the species survives. He may be right.

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