

The reformation of sports medicine

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On October 31, 1517, Martin Luther protested the role of the church in society by posting his 95 theses on the door of the Castle Church in Wittenberg. These theses were widely disseminated and led to a reformation in religious practice that echoes to this day.

Currently, we are at a crossroad of sport and exercise medicine (SEM) as a specialty. There are many threats to its viability and an inexplicable reluctance to debate the future of SEM and just how SEM will be practiced, given the changing demands of the medical workplace. We need a reformation for our specialty in the same way that Luther changed the religious landscape in his time.

THREATS IN THE SEM WORKPLACE

It is a frightening thought that the length of time to institute change in medicine means that, in many cases, current SEM specialists will be ending their professional careers as the current crop of students begin their journey. Trainees entering SEM advanced training programmes this year will not graduate before 2011, and the SEM specialists of 2021 entered undergraduate training this year.

We are faced with the global problem that in many countries, particularly the US, a lot of young doctors are recruited to fill gaps elsewhere in the medical workforce. This, it would appear, is unlikely to change in the foreseeable future. The demands from Western countries, as well as emerging countries in the developing world, will fuel intense competition for new graduates and change the demographic of those available and willing to undertake specialist training programmes.

This change is occurring simultaneously with a global sociological change in specialist training. Graduates are choosing not to embark upon long training programmes with extensive after-hours work commitments and only modest remuneration at the end of the process. This is common to all specialties and is international in impact. SEM, one of the sexy new specialties, has been protected to some degree, but this will

inevitably go the way of other mainstream specialties.

We are also seeing a feminisation of the medical workforce across all specialties. While this is a positive development, it also inevitably alters the medical workplace with increasing requirements for adaptable work practices, differential uptake of specialty training and greater flexibility requirements, particularly in the early postgraduate training years.

In addition, the changing demographics of the population create extra service demands. The push for healthy ageing and exercise participation throughout life leads to the need for SEM specialists capable of delivering services and having sufficient expertise in geriatric medicine to provide quality care.

Over and above these issues, the current cadre of SEM specialists is being subtly re-orientated as de facto public health physicians to deal with the international epidemic of obesity, inactivity and the inevitable medical consequences of our Western lifestyle. This is being driven by health bureaucrats who see a short-term solution to national health goals, perhaps at the expense of SEM as a viable specialty in the long term.

What then is the legacy of training and professional direction that we leave for our professional descendants?

THE SEM SPECIALIST OF THE FUTURE SHOULD BE RE-DEPLOYABLE

Given that the demand for SEM specialists is likely to increase, and few can predict with any certainty what the medical workforce or indeed the health environment will look like in 2021, the conclusion must be that SEM specialists must be able to be re-trained and be re-deployable to deal with changing demands. This is in direct conflict with the push within the undergraduate university sector for streaming undergraduates into subspecialty training in the latter stages of their undergraduate degrees or soon after graduation. Where universities attempt to provide postgraduate training (in lieu of colleges) then this risk is paramount. Although vertical

integration of training through undergraduate and postgraduate foundation years is laudable, there is significant risk if left untrammelled.

The SEM colleges then need to consider, as part of the curriculum development process, how general medical skills and SEM competencies can be developed and, moreover, what competencies are required to make a specialist re-trainable in their future professional career.

THE SEM SPECIALIST OF THE FUTURE SHOULD BE A CLINICIAN SCIENTIST

There is little doubt that one of the great advances in medical practice in the past 2 decades has been the emergence of evidence-based medicine, driving improvements in quality of medical care. Although change is usually incremental in medicine, the ability of SEM specialists to interface with search engines and knowledge databases will become ever more critical as the scope of medical knowledge continues to expand. The major issue that confronts all medicine is not the breadth of knowledge but rather how to search for it efficiently.

We, as SEM specialists, also need to understand the scientific process and be capable of performing research in an effective manner. Such skills require scientific mentoring as well as a commitment from training providers, such as colleges, to recognise the importance of the acquisition of research skills as a fundamental competency of all SEM physicians.

THE SEM SPECIALIST OF THE FUTURE SHOULD BE SCEPTICAL

Coupled with the skills of research assessment and evidence-based medicine, the SEM specialist needs to remain fundamentally scientific in approach. In part this is under threat from complementary and alternative medicine modalities, and emerging technologies as well as pharmaceutical companies. SEM physicians with skills in critical analysis and clinical decision making will be better placed to deal with these potential threats.

SEM specialists will also have to make judgements about the very real difficulties of limiting the application of expensive health technologies in order to curtail ever-escalating health budgets. An example of this is the drive in Australia for SEM specialists to be able to access reputable MR scans in the same way that other specialists can (and general practitioners cannot). Although there is no doubt that MR scanning is important in some clinical decisions, it is likely to be overused in many situations and

contribute to healthcare costs with little gains in health outcomes.

Scepticism is a key skill that needs to be taught in SEM training programmes and reinforced by competency assessment. At the present time, specialist examinations that simple recall content facts (eg, multi-choice questions style) rather than test clinical decision making are doing a disservice to our specialty.

THE SEM SPECIALIST OF THE FUTURE SHOULD BE RESILIENT

We all need to realise that medical workforces are changing. We have seen the emergence of nurse practitioners and other allied health professionals whose role has increasingly encompassed what were traditionally regarded as medical duties. Whether this process saves either money or time in healthcare systems has been hotly debated, but the reality is that we, as SEM specialists, need to realise that medical practice in the broadest sense is evolving. In team sport, much of what happens on the field is first aid and can be dealt with adequately by an appropriate sports trainer. SEM “team physicians” have in turn tried to create a distinct subspecialty out of the practice of SEM in a team environment. As we move (or are pushed!) towards a public health role, so SEM practice may need to change. Given the limited SEM workforce, is team medicine a viable role that is sustainable in the current healthcare system? We must utilise the changes in the workplace as an opportunity to develop our SEM skill set in new and innovate ways in order to deal with the challenges that are created.

That our role is changing is undoubted. How we deal with this and train our future specialists to deal with this will be crucial. The traditional reactionary medical approach to change will need to evolve into something more meaningful

so that we can recognise our emergent skills. More importantly, the ability to tolerate a degree of clinical uncertainty in our roles will need to develop to a much greater extent than exhibited by current SEM specialists.

THE SEM SPECIALIST OF THE FUTURE SHOULD UNDERSTAND PUBLIC HEALTH, PSYCHOLOGY, ANTHROPOLOGY AND SOCIOLOGY

If, as I have alluded to, the future SEM specialist is to be re-orientated to a public health role, then we need to embed the skill set to deal with these issues so that they become a part of training and continuing education.

We need to debate amongst ourselves just what is the appropriate public health role for SEM specialists. Are we trying to be “generalist” physicians dealing with a public health problem or, with the correct skill set, can we engage more fully with this area and effect change at a population level? The limited SEM workforce in many countries simply means that if we see ourselves as clinicians in this area then we will only see a vanishingly small per cent of all such patients. What then aren't we practicing in a smarter way and looking at broader health outcome changes at a population level? Isn't that where our expertise could be better utilised? What do the SEM training providers expect to achieve with a 6-month block of public health training embedded in a 4-year training programme? A skill set to enable SEM physicians to alter “at-risk behaviour” or “at-risk perceptions” more broadly as well as the skills to interface with health promotion and media/marketing technology will be a prerequisite for the future, not simply time serving in a training programme that ill-equips future specialists.

THE SEM SPECIALIST OF THE FUTURE SHOULD BE HORIZONTALLY INTEGRATED

Traditionally, SEM colleges have delivered a training programme as an independent “silo” without reference to other training providers. The outcome of this process is that increasingly we have different core curricula in different countries and often between providers in the same countries. This limits the ability of SEM physicians to have a “transportable” qualification and move easily in a global marketplace. The ability to harmonise training would be relatively simple, it just requires the wherewithal from the colleges worldwide to embrace such a development.

As well as integration of core training and competency assessment between SEM providers, we also need to consider how we relate to other medical colleges. Although SEM historically was a multi-disciplinary grouping of medical and paramedical specialties, the reality of the future is that we need to evolve into a mainstream medical college alongside our medical brethren. This also creates opportunities, as the shared experience of postgraduate training can be tapped and similarities of competency assessment explored.

WHERE DO WE GO?

The SEM specialists of 2021 are already in training. The health system that they inherit and the technologies they will use can only be imagined and we cannot affect these. We can, however, redefine the nature and competency of the SEM specialist to deal with these issues in a suitable manner. The sooner we debate these issues as a profession, the sooner we leave a legacy that we can be proud of.

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Expression of concern about content of which Dr Paul McCrory is a single author

This paper is authored by Dr Paul McCrory. During 2021 and 2022 there was an investigation by BJSM and BMJ which found that some of his work was the product of publication misconduct. Such misconduct includes plagiarism, duplicate publication, misquotation and misrepresentation in publications in respect of which he was listed as the sole author.¹ We are placing a notice to readers on all content in relation to which he is identified as the sole author to alert them to the conclusions of our investigation.

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REFERENCE

- 1 Macdonald H, Ragavooloo S, Abbasi K. Update into the investigation of former BJSM editor-in-chief Paul McCrory. *Br J Sports Med* 2022.