WARM UP

How should we teach sports medicine?

P McCrory

Sports and exercise medicine (SEM) is a relatively new specialty in which a broad knowledge of general medicine, musculoskeletal and orthopaedic medicine, and exercise prescription is required. Curricula for the training of sports medicine practitioners has been developed in a number of countries but surprisingly little has been published about the methods by which these have been developed.[1 2] Many of these curricula are only broadly defined and more importantly the methods by which these curricula are delivered and the results assessed remain poorly studied.

Medical education in the broadest sense should be seen as a career-long continuum, with postgraduate medical education supplementing undergraduate education and being continued after appointment to a career post as continuing medical education. There has also been increasing realisation of the importance of self directed learning and development of life long learning skills to allow the modern doctor to keep pace with continually changing medical knowledge.

It is pleasing to see that an increasing number of medical schools either include SEM as a part of the core curriculum or as an elective teaching module.[3] The gradual change in medical courses from the traditional model to problem-based learning hopefully should equip new SEM trainees in these important learning skills.

Postgraduate training programmes are overseen and regularly monitored by various Colleges, inter-collegiate committees and governmental agencies. Whilst these bodies may lay down the criteria for training in the individual specialties and approve training programmes, they seldom direct the manner in which postgraduates are actually taught. Part of this is because these bodies are more driven by issues of competency and safety rather than education per se.

Four studies are available in the literature in which the process of determining aspects of the SEM curriculum is described.[1 4–6] Whilst various analytic techniques were utilised to assess SEM curricula, it could be argued that the generic approach to the design of the curriculum in the institutions studied was notable for the absence of any over-arching guiding principle or educational framework.

A key curriculum design principle that has recently achieved prominence is constructive alignment whereby learning activities, learning objectives and assessment act to reinforce one another.[7] In constructive alignment, teaching is considered to be the support of learning; the focus shifts to what students do rather than what teachers do. Importantly for many teachers in SEM Colleges, the concept of a curriculum appears to be little more than the syllabus of topics that need to be covered.

The pivotal nature of assessment in the curriculum is critical in this learning process. In aligned teaching, the assessment reinforces learning and is the senior partner in learning and teaching. Get it wrong and the rest collapses. The nature of the knowledge and skills to be assessed therefore needs to be delineated by the assessors in consultation with the curriculum developers and teachers. Our standard SEM curriculum therefore needs to be defined by the competencies to be assessed and then developed rather than setting a curriculum and then assessing a student's mastery of the written material.

Teaching the teachers of vital importance, and consultants who take on this role should be motivated; they should be taught how to teach and their efforts should be valued and rewarded. Teachers need to learn to be facilitators of learning rather than providers of information. To achieve this teachers must provide students with appropriate direction and guidance within a constructive and supportive educational environment. Given that postgraduate SEM training in some countries is conducted within the private sector, this adds a significant burden to the SEM Colleges to provide this infrastructure.

We have the opportunity as a new specialty to develop a curriculum that can be designed from the ground up using best practice approaches of curriculum design and assessment. Let us not just repeat the mistakes of the other Colleges but rather embrace the brave new world of education.

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During 2021 and 2022 there was an investigation by *British Journal of Sports Medicine* and BMJ which found that some of McCrory's work was the product of publication misconduct. *British Journal of Sports Medicine* published a summary of the investigation.[1]

References

1. Macdonald H, Ragavooloo S, Abbasi K, *et al*. Update on the investigation into the publication record of former BJSM editor-in-chief Paul McCrory *Br J Sports Med* doi: 10.1136/bjsports-2022-106408

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