

So you want to be a

“Sports and Exercise Medicine Physician?”

Michael McLarnon¹, Neil Heron²

INTRODUCTION

It is estimated that approximately 1 in 7 GP consultations are related to musculoskeletal (MSK) disorders,¹ and with appropriate training, over 90% of these consultations can be managed without referral to orthopaedic or rheumatological services.² Moreover, with an increasingly co-morbid, inactive population creating greater demand for the health service,^{3,4,5} the incidence of MSK and other conditions related to a sedentary lifestyle will inevitably increase.⁶ The Sports and Exercise Medicine (SEM) doctor is a relatively new speciality which can help efficiently manage this group of patients with musculoskeletal symptoms, physical inactivity and cardiovascular disease prevention.²

Sports and Exercise Medicine (SEM) became a recognised medical speciality with a dedicated training pathway in 2005.⁷ Still in its infancy, SEM offers broad and dynamic career opportunities, with the scope to manage different patient groups at primary, secondary and tertiary care levels, as well as on the sports pitch.² Many doctors in SEM will have roles both within and outside of the NHS, for example, as team doctors for local or national sporting authorities as well as working within MSK and rheumatology triage services.⁸ Research is actively encouraged within the field, and will help to expand and better define it;^{2,9} many SEM doctors work actively with universities to conduct large-scale research, ensuring the speciality's rapid evolution. Indeed we recently received National Institute of Health Research (NIHR) funding to undertake a PhD into adapting cardiac rehabilitation for use in the transient ischaemic attack (TIA) and minor stroke population, lead by a sport and exercise medicine consultant.¹⁰ This research in the area of secondary cardiovascular prevention is continuing to develop and showing promising results.

What does an SEM doctor do?

The broad basis of SEM covers exercise testing and prescription; diagnosis and rehabilitation of MSK injuries; research (although highly encouraged, this is not an essential component);^{11,12} population-based physical activity programmes and policies; and supporting individual athletes and their teams to maximise performance.^{2,13} There are

additionally several positions available for SEM within the military.⁹

There are several facets to the speciality. The most obvious is working with athletes to help manage their illnesses acutely (for example, at the pitch side or sporting events) and chronically (with rehabilitation, review and therapeutic interventions). One might additionally work with a high-level team (for example, Olympic sports teams) to monitor athletes health and to best optimise performance through health, including considerations surrounding illness prevention.⁸ Secondly, SEM doctors are trained in musculoskeletal medicine and often run clinics dealing with pain and locomotor dysfunction.⁹ They often perform US-guided injections of joints and soft tissues to provide symptomatic management and improve functional outcomes for patients.^{2,13} The third element of the speciality not immediately apparent is the strong emphasis on public health intervention.⁶ Interventions at local and national levels to improve population exercise and activity levels, plus engagement in sports, is of great importance as well as promoting cardiovascular disease prevention. Complexity arises when dealing with co-morbidity to improve patient exercise capacity: for example, the obese patient with osteoarthritis.¹⁴ Another new emerging area for SEM to help manage with the multidisciplinary team, is 'long COVID' as well as input into chronic fatigue, including prescribing appropriate physical activity and exercise programmes. A final area to mention is management, including appraisal, and re-arrangement of medical services. Indeed sport and exercise medicine consultants have successfully been involved in initiating a new MSK service in Northern Ireland primary care, including offering injection therapies, reducing the need for onward referral to secondary care and other MSK practitioners, including physiotherapy.¹⁵

¹ School of Medicine, Queen's University Belfast, UK

² Centre for Public Health, Queen's University Belfast and School of Medicine, Keele University, UK

Correspondence to: Neil Heron

Email: N.Heron@qub.ac.uk



SEM is best suited to individuals that enjoy working within different multidisciplinary teams across multiple environments, as well as those with a keen interest in musculoskeletal, cardiology and public health medicine.² As many SEM doctors work across several roles in portfolio careers, they typically have a varied weekly calendar.⁹ A typical week in the life of an SEM consultant is outlined in **Table 1** below, although this will vary depending on the interests of the clinician and their skill set:

Table 1: A week in the life of an SEM consultant

Day	AM	PM
Monday	MSK triage service	Research/ University work
Tuesday	GP	GP
Wednesday	Ultrasound +/- injection clinic	Research/ University work
Thursday	Sport medicine clinic	Research/ University work
Friday	MSK triage service	Appraisal/CPD work
Saturday/Sunday	Cover of sport teams	Rest/relaxation/ recuperation

Training and training pathway

Although non-specialists can pursue independent learning in sports and exercise medicine, there is a defined higher

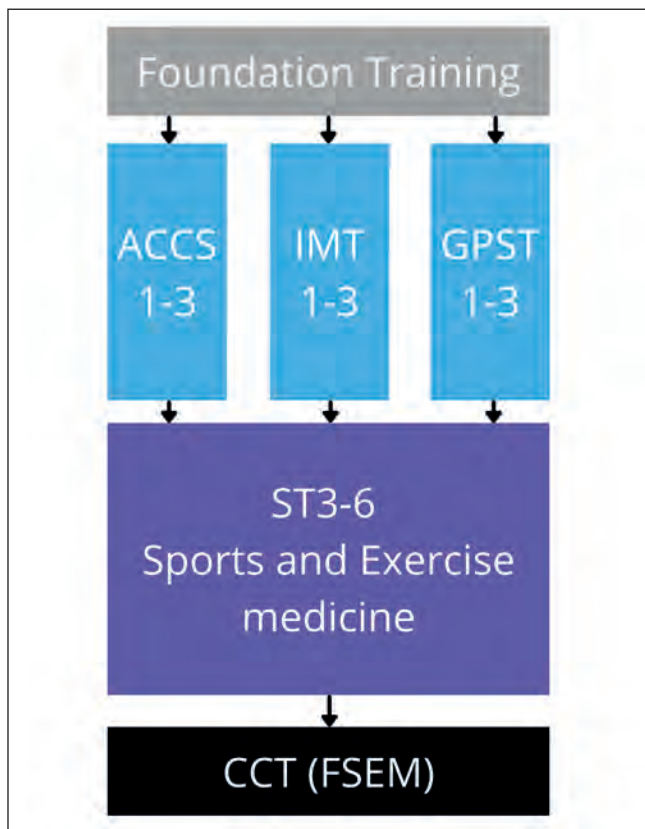


Figure 1: Training pathway after medical school

training pathway to become a consultant SEM physician.² Higher training is a four year dedicated training programme (ST3-6), during which doctors will rotate through periods in musculoskeletal medicine, general practice, public health, accident and emergency, and time working in Sport National Governing Bodies and Home Institutes.² Particular emphasis is placed on relevant clinics and skills within other specialties, such as MSK ultrasound +/- US guided injections, exercise stress testing in cardiology, sports-specific clinics and rehabilitation services.^{2,13} Trainees will take membership exams alongside their training, which they must pass by ST5.

There are several different routes to becoming eligible for applying to SEM. Following foundation training, potential candidates can either enter into Internal Medical Training (IMT (3 years)), Acute Care Common Stem (ACCS (3 years)) or GP Specialty Training (GPST (3 years)).² From their final year of training on any of these pathways, candidates are eligible to apply to higher training in SEM.¹² During these first three years, one must complete their MRCP and/or MRCGP exams.¹² Selection into SEM training occurs via national recruitment, which is a centralised application and interview process.¹² The training pathway is shown in **Figure 1**.

GPwSI in SEM

GPs interested in sports and exercise medicine can pursue this further independently without progressing to formal higher training. Doing so typically takes several years to acquire the requisite knowledge and become established in the field.¹⁶

Multiple qualifications are either necessary or favourable when working towards becoming a GPwSI in SEM. Further qualifications can contribute to a portfolio of evidence for any individual aiming to work in an advanced role. Many GPs work pitch-side for local sporting teams, requiring a Sports Pre-Hospital Immediate Care Course.¹⁷ The Faculty of Sports and Exercise Medicine (FSEM) offer a Diploma in Sports and Exercise Medicine as a benchmark of MSK knowledge amongst healthcare professionals as well as a new Diploma in Musculoskeletal medicine;¹⁸ there are also various postgraduate Master's degrees in SEM offered across the UK.¹⁷ Interested GPs may also wish to revise for and take the FSEM membership exam.¹⁶ These formal qualifications aside, GPs may show further interest in the specialty through attending courses and conferences related to SEM and subscribing to SEM journals, such as the British Journal of Sports Medicine.^{16,17}

To practically gain exposure to the field, prospective GPwSI's will typically take on roles as the team doctor for local sporting teams or as the doctor-on-call at sporting events.¹⁶ Within their practice, they might run several clinics a week specialising in MSK or sports medicine and even offer therapeutic joint injections or other minor interventions.¹⁴ One article by the British Association of Sports and Exercise



Medicine (BASEM) recommends a minimum of four sessions per week and estimates a five to eight-year journey to achieve high levels of competence.¹⁶

Getting experience in SEM and building a competitive application

Since SEM is not formally covered within most undergraduate curricula or offered as a specialty during early medical training,⁶ gaining exposure is a largely self-directed process requiring initiative. Training posts are competitive to attain, with ST3 competition ratios of 5.83, 2.91 and 3 for the last three years, respectively.^{19,20,21} Regularly reviewing the person specification for entry in to SEM training provides insight into many of the essential and desirable criteria for applicants, and may help frame relevant CV building.¹²

At any career stage, those interested in SEM can undertake research related to the area, best done under the supervision of a qualified SEM doctor or within a higher degree. Aforementioned, higher degrees can be taken post-qualification or as part of an intercalated degree; both are looked upon favourably.¹² Students and junior doctors can also apply and become a member of BASEM, and join their local branch of the Undergraduate Sports and Exercise Medicine Society (USEMS).^{6,13}

There are additional proactive steps that one can be taken at medical school or as a junior doctor.

In medical school

In medical school, interested students can first gain exposure to SEM through student selected components/modules (SSCs/SSMs). These are offered throughout the undergraduate course and where modules specific to SEM aren't available, there is usually scope for students to organise their own SSC, for example, through reaching out to an SEM consultant. A SSM in sport and exercise medicine has been developed by Dr Heron at Queen's University Belfast for medical students to develop initial experience in sport and exercise medicine during their medical degree. Following this, they may wish to undertake a related intercalated year.

In their penultimate or final year of university, students avail of an overseas medical elective.²¹ This is an excellent opportunity to gain further exposure to SEM with the potential to work with different global sporting teams and organisations. BASEM offers several annual bursaries to students to help facilitate their SEM electives.²¹

As a junior doctor

The taster week is a two to five day period offered within the foundation programme to enable foundation year doctors to embed themselves into a specialty of interest. This is organised by the doctor and can be undertaken in SEM. One article outlines how an FY2 doctor worked alongside an SEM consultant at the 2019 European Indoor Athletics Championships in Glasgow.²³

When selecting foundation or core training rotations, doctors can think laterally and expose themselves to related areas of medicine, such as accident and emergency, rehabilitation or musculoskeletal medicine.¹³ Aside from this, interested doctors can shadow and work under SEM doctors within the hospital or team environment in their own time.

Where a career in SEM can lead

A SEM career can lead anywhere you want it to. . . . Dr Heron has been lucky enough to work in international football with both the Northern Irish and English Football Associations as well as in international cycling with the British Cycling team. Dr Heron has also worked with some of the top sport teams in the world including Team Sky cycling team and through these teams and opportunities, all over the world, including Canada, Australia, China and Japan, to name but a few. More importantly, this work allows you to work with fantastic colleagues, who motivate you to work harder, constantly wanting to learn and who have become life-long friends.

Whilst being exposed to some of the best athletes in the world, Dr Heron has continued to undertake regular weekly GP and A&E sessions as well as working in musculoskeletal triage services and undertaking research into cardiovascular disease prevention and new injection therapies for knee osteoarthritis. His research has changed the way sports are played and governed, including the assessment of concussion in cycling.^{24,25,26} Such a varied job role ensures that no two days are the same and that sport and exercise medicine, in our opinion, is the best job, not only within medicine.

CONCLUSION

Sports and Exercise Medicine is a varied, exciting and rewarding career. As a newer specialty, it offers flexibility for practitioners to define an individualised career path, which may involve assuming several different roles with multiple job titles. Budding SEM doctors can help shape the future of the specialty, with much ongoing research in the area and increasing demand for exercise interventions at a public health, population level.

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