PROPOSAL FOR EXPANSION OF REHABILITATION MEDICINE IN THE UK

This document has been written for specialists and trainees in Rehabilitation Medicine in the UK. It explores the difference between the UK and other countries in terms of the scope of practice and workforce numbers in the specialty. It aims to show the potential advantages of a broader remit to the specialty in order to improve rehabilitation care for patients in the modern NHS. The proposed expansion is also likely to the make the specialty more satisfying for the specialists to work in and a more attractive career choice for those entering training.

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RMEP
(Rehabilitation Medicine Expansion Proposal)

Proposal for expansion of Rehabilitation Medicine in the UK

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1. Background

1.1 Current scope of practice in Rehabilitation Medicine in the UK

Rehabilitation Medicine (RM) is concerned with improving function through the diagnosis and treatment of health conditions, reducing impairments, and preventing or treating complications [1]. The common conditions causing disability in the UK are listed in Table 1 [2].

Table 1. Top 25 causes of YDL (years lived with disability) in the UK for both sexes and all ages in 2010 (in descending order)

1	Low back pain	**14**	Road injury
2	Falls	**15**	Schizophrenia
3	Major depressive disorder	**16**	Benign prostatic hyperplasia
4	Neck pain	**17**	Other hearing loss
5	Other musculoskeletal disorders	**18**	Diabetes
6	Anxiety disorders	**19**	Ischaemic heart disease
7	COPD	**20**	Bipolar disorder
8	Drug use disorders	**21**	Dysthymia
9	Asthma	**22**	Rheumatoid arthritis
10	Migraine	**23**	Stroke
11	Osteoarthritis	**24**	Chronic kidney disease
12	Alcohol use disorders	**25**	Edentulism
13	Alzeimer's disease		

RM in the UK evolved as a medical specialty in 1980s from Rheumatology and Rehabilitation [3] and has become a well-established specialty over recent years. The British Society of Rehabilitation Medicine (BSRM)'s strategy document defines the purpose of the society as being [4];

"to promote the specialty of Rehabilitation Medicine, being defined as the application of medical skill to the diagnosis and management of disabling disease and injury of whatever cause and affecting any system of the body"

The specialty training programme duration is 4-years to become a consultant/specialist. Trainees should have completed core training in medicine/ surgery/ general practice/ psychiatry and obtained membership of Royal College prior to entering specialist training in RM.

There are currently around 190 RM consultants in the UK. The current workforce practise predominantly in three areas of RM: Brain Injury Rehabilitation, Spinal Cord Injury Rehabilitation and Amputee Rehabilitation (in descending order of number of specialists). There are very few doctors in RM practising in areas outside the above three mentioned areas. We are aware of only four RM doctors in the UK currently practising in the area of Musculoskeletal (MSK) Medicine and Rehabilitation and only one RM doctor practising in Pain Medicine. There are currently no RM doctors

practising exclusively in Cardiac Rehabilitation, Pulmonary Rehabilitation, Cancer Rehabilitation or Paediatric Rehabilitation.

1.2 Emergence of others specialists to meet the rehabilitation needs of the population

There are doctors currently practising rehabilitation within the areas of clinical need not covered by RM in the UK, but they belong to other specialties such as Rheumatology, Anaesthesia, Cardiology, Neurophysiology, Paediatrics and Palliative Medicine. Also some newer specialties have emerged to meet specific areas of unmet need such Sport and Exercise Medicine (SEM) and Stroke Medicine.

Musculoskeletal (MSK) medicine is now predominantly practised by specialists in SEM or General Practitioners with a special interest (GPwSI) in MSK Medicine. To practise Pain Medicine and Rehabilitation in the UK, one requires accreditation at fellowship level but this is currently restricted to trainees in Anaesthesia. Cardiac and Pulmonary rehabilitation services are now predominantly run by specialist nurses under supervision from cardiologists and respiratory physicians (and GPwSIs in some places). Although an obvious need exists, Cancer Rehabilitation has very little medical oversight or involvement and pathways vary widely between different areas in the UK.

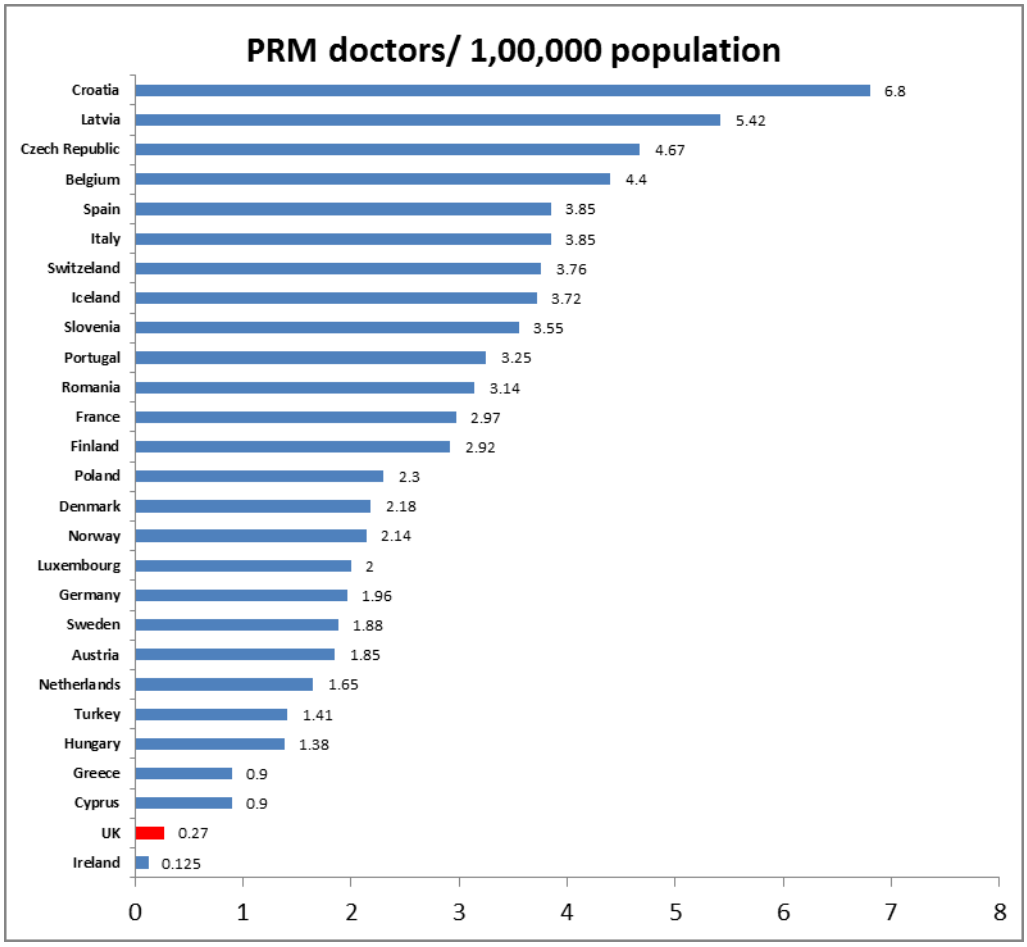
SEM was a specialty created in 2005 with the 2012 Olympics in mind and there was a lack of a clear training path for specialising in MSK and Sports Medicine along with Rehabilitation Medicine. There are currently around 70 specialists in SEM in the country. Stroke Medicine has also developed as a separate specialty with intake of trainees from Neurology, Elderly Medicine and Rehabilitation Medicine. Clinical Neurophysiology (Neuromuscular Medicine) is a small specialty with around 100 specialists in the country.

The workforce in RM (in the UK) over the years has not seen the expansion seen in other core medical subspecialties. It can be argued that growth and expansion of the specialty of RM has been hampered by the emergence of multiple smaller specialties and provision of rehabilitation services being led by non-RM physicians in certain areas. We argue that these services might be better led by RM physicians whose practice is based on the ICF biopsychosocial framework [5].

1.3 International perspective

The specialty of RM in the UK has been described in a recent journal editorial as one with discrete components when compared to other countries [6]. In other words, it exists as a fragmented specialty. Specialists in Physical and Rehabilitation Medicine (PRM) in other countries have a far broader scope to their work, with multiple subspecialties under one broad umbrella specialty of PRM (as detailed in section 2). This perhaps explains the disparity between number of RM specialists in the UK and other countries where they are able to respond to a wider spectrum of health needs (Figure 1) [7].

Figure 1. Number of PRM specialists in Europe



2. Specialty scope of practice in some countries outside UK

2.1 Specialty in North America

The structure of the specialty in the USA and Canada is broad-based with numerous subspecialties. The USA has more than 8,000 physicians practising in various fields under the equivalent umbrella specialty of Physical Medicine and Rehabilitation (PM&R).

The USA specialty residency training programme is for 4-5 years after graduating from medical school. The first year involves working in General Internal Medicine (GIM) followed by 2 years of rotations in various mandatory areas listed above. Trainees then spend 1-2 years subspecialising in their area of interest. The specialty has ranked in the top 10-15 specialties (out of 60 odd specialties) in residency matches for last few decades (its popularity being greater than specialties like Neurology, Internal Medicine and Family Medicine). The satisfaction rate in the specialty is also higher than many other core specialties [8].

2.2 Specialty in Europe

There are over 13,000 specialists in 30 countries (Reference), with an average of 3 PRM specialists/100,000 inhabitants (compared to less than 0.27 RM specialists/100,000 inhabitants in UK) (Figure 1). The training structure is similar (4 years) with board certification required (similar to the USA) to become a specialist. The entry requirement does not involve completion of core medical or surgical training as in the UK.

The areas of practice are also similar to those of the USA, with specialist areas of Neurological Rehabilitation, Musculoskeletal Medicine, Spine, Pain and Sports Injuries. It is our understanding that some European PRM specialists' also practice in areas of Cardiac, Pulmonary or Cancer Rehabilitation.

The scope of practice in various countries is summarized in Table 2

Table 2. Curriculum comparison between countries

Curriculum	Predominant nature of work	North America PM&R	Europe PRM (scope varies in countries)	Asia PM&R/RM (scope varies in countries)	UK RM
Brain Injury Medicine	Inpatient	√	√	√	√
Spinal Cord Injury Medicine	Inpatient	√	√	√	√
Amputee Medicine	Outpatient	√	√	√	√
Neuromuscular Medicine	Outpatient	√	√	-	Optional
Pain Medicine	Outpatient	√	√	√	Optional
Stroke Medicine	Inpatient	√	√	√	Optional
Paediatric Rehabilitation	Inpatient	√	√	-	-
Musculoskeletal Medicine	Outpatient	√	√	√	√
Sports Medicine	Outpatient	√	√	√	-
Cardiac Rehabilitation	Outpatient	√	√	√	-
Hospice and Palliative Medicine	Inpatient	Optional	Optional	Optional	Optional
Integrative Medicine	Outpatient	Optional	-	-	-

2.3 Specialty in Asia and Australasia

Physical Medicine and Rehabilitation is a developing specialty in countries like India, China and Japan. In these countries, PM&R is based on the model from the USA, with fellowships in specialist areas, but the workforce is thought to be small by comparison to North America/ Europe and the model is quite variable in different regions of these countries.

Rehabilitation Medicine in Australia, New Zealand and Singapore is based on the UK model, with practice predominantly focused on inpatient rehabilitation. However, RM has a broad remit, including the care of neurological conditions, orthopaedic post-surgical cases, and systemtic deconditioning. In contrast to the UK, many RM specialists practise in the area of chronic pain.

3. Benefits of a wider-scope to the specialty

There are numerous benefits of the proposed expansion and these are detailed below:

3.1 Meeting rehabilitation needs in the modern NHS

Currently, the UK NHS is under significant strain with increasing demands being placed on finite resources. Complex multimorbidity is increasingly seen as the norm in UK populations, and it has been highlighted that medical education, research, and clinical services need to adapt to meet this growing challenge [9]. The increase in patients attending appointments and being admitted to hospital consist largely of those with chronic disabling health conditions and complex rehabilitation needs. Many rehabilitation services (for example musculoskeletal services) are staffed exclusively by non-medically trained therapists and lack dedicated involvement of RM doctors. An expanded RM workforce with a broader skill base and scope would be ideally placed to manage such demand and improve the lives of such patients. In this regard, the Royal College of Physicians (RCP) places emphasis on improving the generalist ability of trainee physicians to meet the needs of the population and RM is theoretically well placed in this regard, with the specialty accepting applicants from a broad range of backgrounds in Medicine, Surgery, Psychiatry, and General Practice.

3.2 A workforce with broader skills

A RM physician has a wide remit of skills to be a well-rounded physician, and provides holistic, person-centred rehabilitation. A training programme which includes adequate exposure and training opportunities in all subspecialist areas is likely to produce highly skilled RM physicians, more attractive in terms of employment potential, and able to work in a greater range of acute and community settings alike. Such a sought-after workforce is likely to be able to develop services and respond to variety of needs defined by CCGs.

3.3 Improving quality of rehabilitation by using a multifaceted approach

Patients' rehabilitation needs are generally complex and not confined to one subspecialty. For example, there is now increasing evidence of benefits noted in patients undergoing neurological rehabilitation from optimising their physical status [10]. Improved fitness can translate into better cognitive and psychological improvement in these groups of patients. Hence skills in musculoskeletal and exercise medicine will be useful in improving the quality of many rehabilitation programmes and hence outcome for these patients.

3.4 More satisfied workforce

Literature supports greater satisfaction in the specialties of PM&R and PRM in some countries around the world [8]. Satisfaction rates in the UK are not currently as high as other core medical specialties [11,12]. As the specialty already takes physicians from various backgrounds and skill sets, one could argue that there should be better utilisation of these respective skills sets in a wider-scoped specialty, hence contributing to greater work satisfaction.

3.5 Growth in workforce

The RM workforce in the UK is likely to grow if smaller specialties are integrated back into RM training and service delivery in the future. With a bigger workforce, there will be more awareness of the specialty among medical students, colleagues in other specialties, commissioners and service managers. In order to match the European average of 3 PRM specialists/ 100,000 population, there would need to be around 2,000 specialists in the UK (around 10 times the current number). Although there are many physicians already practising rehabilitation, they are either not RM trained, or are not working under the RM banner. Addressing this discrepancy has obvious advantages in terms of clinical governance, education, quality control, and the establishment of national standards. An integrated specialty with a wide variety of practice is likely to be more popular and attract a greater number of junior doctors to consider the specialty as a career.

3.6 International equivalence

Most medical specialties in the UK have the required international equivalence that enables physicians trained here to relate to their peers outside UK, contribute to key developments in the specialty on an international stage, and be employable abroad. As we have a relatively small workforce and a narrower scope of practice, we currently do not have the benefits of such equivalence. If we work towards an international model, this position is likely to improve and lead to a greater involvement of UK RM physicians internationally that would be stimulating and helpful to all.

3.6 Increased research opportunities

In the UK, there is a pressing need to re-vitalise academic RM again. Currently, there is considerable academic output from USA. In Europre, there are moves afoot to develop a Cochrane Collaboration focus group on PMR, and it is important that the UK is represented in this development. There are many areas of potential relevance to the specialty, such as correlating self-report and biomarkers in the management of chronic pain and/or functional neurological disorders. Most interventions in RM are complex, involving multiple potential therapeutic contacts/inputs/providers, and using methods that account for this complexity are available [13]. Our specialty is unique in this respect, in that such an approach to research is possible in its entirety within one specialty (if neurorehabilitation, neurophysiology and pain specialists are all colleagues working within the same specialty).

4. Proposed action plan for widening the scope of specialty

4.1 Membership survey

By using a BSRM membership survey, we can decide together as a specialty how best to expand our traditional scope of practice, such as whether to align more closely with a more internationally accepted model for the specialty. The survey can explore member views on other issues such as re-integration of various small specialties, as well as to consider the most appropriate name for the new look specialty.

4.2 Working with other specialties to form a larger unified specialty

We are currently in a disadvantaged position where many small specialties have already emerged that could have been subspecialties of RM. It is thus important to devise a framework for a wider-scope specialty, which includes multiple subspecialties, such as those listed below.

Musculoskeletal Medicine and Rehabilitation is the most popular subspecialty of PM&R/PRM in other countries. As already highlighted in a UK RM trainee survey in 2011, there is a need to increase training and career opportunities in MSK medicine for RM specialists [14]. Using SEM as an example, when a lack of specialists in this area was highlighted with the London Olympics on the horizon, creating the specialty of SEM became easier. However, we feel SEM as a standalone specialty is yet to prove its returns to the NHS, with many specialists currently working with elite athletes in the private sector. SEM specialists working in the NHS are providing MSK rehabilitation in some community services. By building links with SEM, we could put forward a case for a merger of the specialties to their mutual benefit, providing a framework for shared training and skills development, and producing high quality specialists working in one integrated, quality controlled and clinically relevant specialty.

Clinical Exercise Medicine and Neuromuscular Medicine. Both branches of physiology are core elements that underpin our routine practice in RM and we would benefit from having expertise in these areas within the specialty. Again, a separate specialty of Clinical Neurophysiology is quite unique in the UK; it is a subspecialty of PM&R/PRM elsewhere. Our integration with Neurosciences is likely to become even stronger if we develop core skills in Neurophysiology that are essential to any Neurological Rehabilitation service (including District General Hospital set-up). Physicians practising neurorehabilitation in the USA have these skills and are an integral part of hospital neurology services in the country. Again a merger of Neurophysiology with RM can be explored hopefully to mutually benefit both specialties.

Cardiac and Pulmonary Rehabilitation are ideally delivered by multidisciplinary teams lead by a RM physician and we need to put forward the case for this with relevant bodies in Cardiology and Respiratory Medicine, and attract the physicians working in these areas to become members of BSRM, to develop jobs that encompass rehabilitation, and to facilitate training our future trainee workforce in these areas.

The role of RM physicians in **Cancer Rehabilitation** needs to be formally recognised and accredited. We already provide high-quality rehabilitation to cancer patients in certain areas like neurological malignancies. It is concerning that the national document on cancer rehabilitation does not mention/ acknowledge the role of RM physicians anywhere [15]. We need to formally offer our skills to develop this as a subspecialty of RM and aim to encourage non-RM physicians already working in the area to develop formal links with the specialty and facilitate our expansion.

Practice of **Pain Medicine and Rehabilitation** in the UK is currently almost restricted to physicians trained in Anaesthesia, whereas more than one-third of Pain physicians overseas are PRM/PM&R specialists. Recent research has proven the value of the bio-psychosocial model for chronic pain management. RM physicians are champions of this approach and are well placed to manage these patients. Managing chronic pain requires a good grounding in Neurology and MSK Medicine that is uniquely available to us. We need to negotiate with the British Pain Society to facilitate the intake of RM trainees for Pain fellowships and for consultant positions to the benefit of people with chronic pain, Pain Medicine and our own specialty.

Paediatric Rehabilitation is a popular subspecialty overseas, where our peers manage children who have long-term neurological conditions. In the UK, these children are currently managed by Paediatricians, eventually being passed on to adult services, which may or may not be led by RM physicians. Transition to adult services can face multiple difficulties for patients and carers alike and an integrated approach is necessary. Other countries already have Paediatric Rehabilitation specialists' who belong to the same specialty as those involved in adult rehabilitation. In UK, we need to encourage Paediatricians working in the area of Neurodisability to work collaboratively with our specialty to develop a dedicated and seamless Paediatric Rehabilitation service. This will help managing the needs of the

paediatric population through transition into adult services and beyond. This is likely to benefit both patients and our specialty in the long run.

4.3 Name of the specialty

There are various names for the specialty around the world:

- Physical Medicine and Rehabilitation in USA, Canada, India and China.
- Physical and Rehabilitation Medicine in most countries of Europe.
- Rehabilitation Medicine in some countries of Europe, UK, Singapore and Australia.

We need to ask the BSRM membership whether a change of name is needed as we embark on the proposed expansion mission. The existing literature contains ideological debates by renowned authors on the name of the specialty [16,17]. BSRM members should have access to these articles and other forums where this topic can be openly debated and decided diplomatically by a members' vote. We have summarised our views on the different names for the specialty in Table 3.

Table 3. Views on specialty name

	Pros	**Cons**
RM	• Generic term that emphasises the broad scope of the specialty • Allows us to expand in to any area of medicine including Cancer, Cardiac and Integrative Medicine	• Difficult to differentiate our area from Psychiatric Rehabilitation and Drug and Alcohol Rehabilitation • Name does not reflect the current scope of practice in the UK
PRM/ PM&R	• Better represents our patients with physical impairments (disability) • Better captures the scope of specialty that includes MSK, Pain and Exercise • International recognition with peers and sense of belonging to a global specialty	• Does not represent patients without physical impairments we manage • Too much emphasis on term "physical" that can be counterproductive for the biopsychosocial approach that underpins our practice

4.4 Setting up a working group with representation of specialist areas

A dedicated working group can explore benefits of expanding the remit of the specialty. The group should have representation from the Special Interest Groups (SIGs) of the specialist areas we wish to incorporate in RM. These SIGs would produce more specific scoping documents in relevant areas and a plan forward. The working group and SIGs will facilitate collaborative work with smaller specialties we decide to work closely with.

5. Barriers to proposed expansion

5.1 Resistance from other specialties

It is possible that existing, well-established specialties might view this proposal as a threat to their own expansion. However, it is our view that the smaller specialties mentioned in this document may be better placed and will prosper in a unified specialty. Reconfiguration and expansion of the scope of RM may also positively impact on the acute specialties, allowing them to concentrate on providing the highest quality acute care. For example, if RM physicians can manage chronic pain work, acute pain physicians (in Anaesthesia) might be released to deal with their heavy workload.

5.2 Lack of engagement by BSRM membership

This proposal might be viewed by some as moving away from our traditional work managing patients with complex long-term neurological conditions. However, we recognize such work as vital and as core strength of the specialty of RM to build on. Our view is that RM specialists' also have a responsibility to cater for the rehabilitation needs of other, non-neurological conditions. The proposed expansion does not mean that every RM physician will have to practise in all subspecialist areas, but would give them greater choice and a wider skill base. The proposal aims to promote the creation of a larger and unified specialty with different groups of specialists within it driving the clinical and academic work in a wide variety of subspecialist areas. It is anticipated that such a move will also enable RM physicians in the UK to enjoy international equivalence, enhance their ability to interact and collaborate with their professional peers elsewhere in the world.

6. Summary

- Complex multimorbidity and long term conditions are increasingly the norm in UK populations. The NHS needs to adapt to meet the complex needs of such patients and RM is in some ways uniquely placed to do this.
- However, the current scope of practice in RM in the UK is limited when compared with that in many other countries around the world and the specialty is not yet able to respond to these needs adequately. These limitations exist in a context where other specialists have stepped forward to meet rehabilitation needs in areas of practice outside the current remit of RM in the UK.
- Targeted expansion of RM, working collaboratively with other relevant specialties will help build a stronger specialty that can meet the variety of rehabilitation needs in the NHS. This is likely to lead to increased engagement with our colleagues in acute adult specialties, a more seamless integration between paediatric and adult services, enhanced links with primary care, and a more satisfying career pathway for the doctors working in the specialty.

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