

SPECIAL REPORT

INTERDISCIPLINARY TEAM WORKING IN PHYSICAL AND REHABILITATION MEDICINE

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Effective team working plays a crucial role in Physical and Rehabilitation Medicine (PRM). As part of its role of optimizing and harmonizing clinical practice across Europe, the Professional Practice Committee of Union of European Medical Specialists (UEMS) Physical and Rehabilitation Medicine (PRM) Section reviewed patterns of team working and debated recommendations for good practice at a meeting of national UEMS delegates held in Riga, Latvia, in September 2008. This consensus statement is derived from that discussion and from a review of the literature concerning team working.

Effective team working produces better patient outcomes (including better survival rates) in a range of disorders, notably following stroke. There is limited published evidence concerning what constitute the key components of successful teams in PRM programmes. However, the theoretical basis for good team working has been well-described in other settings and includes agreed aims, agreement and understanding on how best to achieve these, a multi-professional team with an appropriate range of knowledge and skills, mutual trust and respect, willingness to share knowledge and expertise and to speak openly.

UEMS PRM Section strongly recommends this pattern of working. PRM specialists have an essential role to play in interdisciplinary teams; their training and specific expertise enable them to diagnose and assess severity of health problems, a prerequisite for safe intervention. Training spans 4–5 years in Europe, and includes knowledge and critical analysis of evidence-based rehabilitation strategies. PRM physicians are therefore well-placed to coordinate PRM programmes and to develop and evaluate new management strategies. Their broad training also means that they are able to take a holistic view of an individual patient's care.

Key words: interdisciplinary, team work, physical and rehabilitation medicine, organization, networks, care pathways.

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BACKGROUND

Every medical specialty has to define its field of competence and to improve professional skills and competencies. Physical and Rehabilitation Medicine (PRM) has been defined by the Section of Physical and Rehabilitation Medicine of the European Union of Medical Specialists (UEMS) (1). The background as well as the skills and aptitudes and the role of PRM specialists in the rehabilitation process are described in the *White Book on Physical and Rehabilitation Medicine in Europe* (2, 3). A conceptual description of the field, based on the model of the International Classification of Diseases (ICD), and of Functioning, Disability and Health (ICF) has been published by the Professional Practice Committee of the UEMS-PRM-Section (4). A consensus paper about the Field of Competence (FOC) of PRM specialists, focusing on skills and aptitudes and on clinical work will be published soon¹.

The FOC of specialists in PRM is based on the Education and Training curriculum as defined by the European Board for PRM (5) as well as by national authorities or professional colleges in the various European countries. It is based on fundamental medical principles (establishing a diagnosis, functional evaluation, treatment plan and outcome measurement), the ICF-model (6) of body function and structure, activities, participation and contextual factors, and scientific results (evidence-based health-care). However, professional practice of a single specialist is also influenced by other factors, e.g. the type of patients to be

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treated, the settings and the public health strategy of the country or region, the epidemiology of diseases and disabilities in that country as well as the general health policy¹. Last but not least, continuous evaluation and quality management as well as ongoing scientific work are factors improving the quality of professional practice in PRM.

In order to describe and further develop the field of competence of PRM specialists, a series of position papers will be discussed both within the UEMS PRM-Section (especially in its Professional Practice Committee) and with other national and international bodies. These papers will deal with PRM work in specific settings (e.g. acute hospitals) and for special indications (e.g. people with neurological disabilities). This paper is part of this activity and deals with interdisciplinary team work. It has been approved by the General Assembly of the UEMS PRM-Section at the occasion of its meeting in Riga in September 2008. Publication at this stage is intended to generate further discussion and refinement. For that reason comments to the authors or editors are very welcome.

INTRODUCTION

PRM aims at optimization of activity, social participation and quality of life of people with acute and/or chronic health conditions (i.e. agreed aims). This involves empowering the individual to achieve autonomy and typically entails: establishing a diagnosis; treating the underlying pathology where possible; reducing impairment; reducing the impact of impairment on activities; modifying context where possible to facilitate participation; and preventing and treating complications.

PRM is necessary to reduce the consequences of disease and trauma in patients with severe and complex problems. These may include loss of employment following an insult to the brain or spinal cord, immobility following trauma or reduced performance after myocardial infarction. Additionally, impairments such as pain, nutritional difficulties, incontinence, communication disorders, mood and behavioural disturbance have to be addressed. Another key task in PRM is prevention of complications such as pressure ulcers and contractures and

minimization of problems such as behavioural disorders in brain injury or mood disturbances associated with pain.

The aim of this position paper is to review the rationale for interdisciplinary team working in PRM and describe optimal working patterns for such teams.

INTER-DISCIPLINARY TEAM WORK

As stated in a previous UEMS resolution (Appendix I), team working is considered essential for many reasons. These include the broad range of knowledge and skills required to: diagnose and assess impairments; activity limitations and participations restrictions; select treatment options, often from a diverse range. For example, management of back pain may include education, advice to continue usual activities, medication, physical therapy and, rarely surgery; co-ordinate varied interventions to achieve agreed goals; and critically evaluate and revise plans/goals to respond to changes in the patient's health and function.

No single clinician is likely to have the necessary skills to achieve optimal results alone.

The overwhelming view amongst PRM specialists who represent their nations at UEMS is that “*interdisciplinary working*” is the preferred pattern of team working. This means that PRM teams not only comprise members from many different professional backgrounds, but also work towards agreed aims and using an agreed and shared strategy.

Since that UEMS resolution, scientific evidence has accrued to strengthen the case for team working in PRM programmes. However, published studies to date have tended to use the term “multidisciplinary team” (MDT). As the exact nature of the relationship between team members is not always specified, this term is used in the following literature review.

Studies have shown superior clinical outcomes in patients with a range of disorders treated by units with MDT working patterns compared with other settings. These data are summarized in Table I.

Evidence is particularly strong for cerebro-vascular disease (stroke), where MDT-based services also yield significantly

Table I. Summary of literature

Clinical field	First author (ref)	Studies (Participants, n)	MDT more effective?
Sub-acute low back pain – multidisciplinary biopsyo-social intervention	Karjalainen, 2009 (7)	2 RCTs (233)	Earlier return to work with MDT intervention
Coronary heart disease – multidisciplinary disease management	McAlister, 2001 (8)	12 (9803)	Fewer admitted, better control of risk factors. MI recurrence and survival unchanged
Chronic disabling lung disease – outpatient multidisciplinary rehabilitation	Griffiths, 2000 (9)	1 RCT (200)	Lower hospital and home visit rates better walking and health status
Heart failure – community MDT treatment versus usual care	Stewart, 1999 (10)	1 RCT (200)	Fewer admitted, better diet and drug compliance, survival same
Multiple sclerosis – inpatient MDT	Khan, 2008 (11)	8 RCTs (747)	Better activity and participation, impairment unchanged
Brain injury – community MDT versus information only	Powell, 2002 (12)	1 RCT (110)	Better than information alone
Severe TBI – MDT versus standard hospital care	Semylen, 1998 (13)	1 quasi-random CT (56)	Better clinical outcome and carers less distressed

MDT: multidisciplinary team; RCT: randomized controlled trial; TBI: traumatic brain injury; MI: myocardial infarction.

better survival data. The Stroke Unit Trialists' Collaboration (14) have published data concerning 3249 patients in Sweden, Finland, Australia, Canada and UK randomized to stroke units with MDT working or routine care. Amongst the latter, only 277 out of 1346 participants were exposed to multidisciplinary PRM programmes. Stroke units (with MDTs) showed better survival. Only 23.8% of those in stroke units died in the first 4 weeks compared with 27.8% of those not in stroke units. This difference was especially noticeable in those with severe stroke (Barthel Index less than 15/100 on admission); there were fewer neurological, cardiovascular or immobility related deaths in those who received multidisciplinary treatment. The authors concluded this was not due to medication; and patients were less likely to need institutional care because they were less dependent. The authors proposed that this might be attributable to more encouragement and support for carer involvement in PRM programmes by the MDT.

ORGANIZATION WITHIN THE TEAMS

The clinical literature provides limited guidance on what makes a good team. However, key features of successful team working in other situations have been utilized to provide guidance for PRM physicians in highly respected rehabilitation texts, such as that edited by DeLisa (15). These include (16):

- agreed aims;
- agreement and understanding on how best to achieve these (avoiding jargon unique to a particular profession);
- appropriate range of knowledge and skills for the agreed task
- mutual trust and respect;
- willingness to share knowledge and expertise and speak openly.

The team should work with people with disabilities and their families to negotiate and agree on appropriate, realistic and timely treatment goals within an overall coordinated rehabilitation programme (1). These goals should be person-centred, should not be imposed on the individual and should be endorsed by the team as a whole rather than by a single professional. Goals also need to be adjusted repeatedly as the PRM programme proceeds.

KEY MEMBERS OF INTERDISCIPLINARY TEAMS IN PRM, THEIR QUALIFICATIONS AND ROLES

Successful teams will need to include a wide range of knowledge, aptitudes and professional skills, and members will primarily include: PRM specialists; nurses with rehabilitation expertise; physiotherapists; occupational therapists; speech and language therapists; clinical psychologists; social workers; prosthetists and orthotists; and dieticians.

A range of additional clinicians may also be required, depending on the clinical field and specific needs and goals of each patient. On the other hand, for some patients and at certain stages in their PRM programmes, only a few of the above disciplines, and sometimes only the PRM physician, would be involved. It should be noted that in many parts of

Europe the decision to involve particular team members rests with the doctor, who also holds medico-legal responsibility for people under his/her care. Elsewhere, such decisions (and legal responsibility) are shared amongst team members. Clearly, the method of working must be in keeping with each country's pattern of medico-legal responsibility.

Team members must be appropriately qualified. Knowledge and respect for the skills and aptitudes of the other team members is required. Each team member should recognize what particular knowledge and skills he or she can offer to the PRM programme (17).

In common with other interdisciplinary team members, PRM specialists have a duty to provide adequate information, training and support to others. However, each health professional has individual responsibility to uphold his or her profession's standards.

The following are some of the competencies typically associated with specific professions, although considerable overlap occurs in practice:

- *Physicians*: diagnosing the underlying pathology and impairments, medical assessment and treatment, setting-up treatment and rehabilitation plan, prescription of pharmacological and non-pharmacological treatments and assessment of response to these.
- *Rehabilitation nurses*: addressing and monitoring day-to-day care needs. Expertise in the management of tissue viability and continence problems. Providing emotional support to patients and their families.
- *Physiotherapists*: detailed assessment of posture and movement problems, administering physical treatments including exercise to restore movement and alleviate pain, etc.
- *Occupational therapists*: assessing the impact of physical or cognitive problems on activities of daily living, return to work, education and/or leisure activities, etc. Providing expertise on strategies that can be used by the patient and his/her family and environmental adaptations to facilitate independence.
- *Speech and language therapists*: assessing and treating communication and swallowing disorders.
- *Clinical psychologists*: detailed assessment of cognitive, perceptual and emotional/behavioural problems. Development of strategies to manage these with the patient, his/her family and with other health professionals.
- *Social workers*: promoting participation, community re-integration and social support.
- *Prosthetists, orthotists and rehabilitation engineers*: expertise in the provision of technologies ranging from splints and artificial limbs to environmental controls to address functional limitations, for example, following limb loss, loss of independent mobility, loss of ability to communicate.
- *Dieticians*: assessing and promoting adequate nutrition.

RELEVANCE OF MEDICAL DIAGNOSIS FOR THERAPY AND REHABILITATION

Every clinical intervention has to address the health condition, impairments, activity limitations and participation restrictions.

However, virtually every rehabilitation intervention has risks, which may be magnified if the underlying medical diagnosis, its severity and potential complications have not been properly evaluated. This is the case for both drug and physical treatments. Examples are: manipulation of the spine in someone with, for example, undiagnosed spinal malignancy or aplasia of dens axis; rotation of the hip-joint after total hip replacement; massage under the condition of anticoagulation; and attempted mobilization with artificial limbs in patients with inadequate cardiopulmonary reserve as a consequence of, say, ischaemic heart disease.

For this reason, a thorough medical diagnosis and assessment is essential prior to every rehabilitation intervention. This principle is enshrined within the Medical Act (18), whose agreed definition is given below:

“The medical act encompasses all professional action, e.g. scientific teaching training and educational, clinical and medico-technical steps to promote health and functioning, prevent diseases, provide diagnostic, therapeutic and rehabilitative care to patients, individual groups or communities and is the responsibility of and must always be performed by a registered medical doctor/physician or under his or her direct supervision and/or prescription.”

SAFE CARE PATHWAYS

Patients will almost invariably need more than one rehabilitation intervention during their PRM programme. Such interventions are likely to be delivered in different places by different PRM teams and at different times in what is called the patient journey or the “care pathway”. This process has to be managed seamlessly. Networks, links with other specialists and clinical services, also need to be well-delineated, but fluid enough to respond to the patient’s changing needs.

For PRM programmes to function optimally, interdisciplinary members must understand their specific contribution to each patient’s care pathway. Other health professionals are trained to a high level of expertise to assess specific impairments within their fields. However, PRM specialists have a unique responsibility for providing an integrated description of an individual’s pattern of pathologies and impairments.

People in whom complex problems are exerting a significant impact on functioning according to the ICF model, are best served by carefully organized PRM programmes under the direction of a specialist in PRM. This applies to both in-patient and ambulatory settings as well as to private practice.

CONCLUSION

In summary, evidence from published scientific literature from larger trials indicates that PRM programmes with multidisciplinary teams achieve better results in, for example, those with sub-acute and chronic low back pain, cardio-respiratory and neurological disorders than services that lack such PRM teams. Indeed, good team working may have a significant influence on survival.

Whilst there is limited evidence concerning what constitute the key components of successful teams in PRM programmes, the theoretical basis for good team working has been well-described in other settings. This includes: agreed aims; agreement and understanding on how best to achieve these (avoiding jargon unique to a particular profession); appropriate range of knowledge and skills for the agreed task; mutual trust and respect; and willingness to share knowledge and expertise and speak openly.

UEMS PRM Section therefore believes there is a very strong case for recommending this pattern of working.

PRM specialists have an essential role to play in interdisciplinary teams; their training and specific expertise enables them to diagnose and assess severity of health problems, a prerequisite for safe intervention. Their broad training also means they are able to take holistic view of an individual patient’s care, and are therefore well-placed to coordinate PRM programmes and develop and evaluate new management strategies.

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APPENDIX I. UEMS/D8908/89: European Resolution

“In all integrated Rehabilitation Teams the responsibility for diagnosis and treatment can only belong to a medical practitioner competent in Rehabilitation. He or she alone can take responsibility for modifying the prescribed or alter its administration, taking account of the advice and suggestions proposed by the other members of the team, through their professional relationship with the patient, at the regular team meetings.

In all cases, the final decision and responsibility rest entirely with the competent medical practitioner in medical charge.”

Approved unanimously by the executive committee of the UEMS, in Brussels, 28 April 1989.

Approved by the General Assembly of the “Standing Committee of European Doctors”, 1990.

B. Reychler, B. Maillet,

UEMS, Brussels, 27 January 2004.
