

The field of competence of Physical and Rehabilitation Medicine – description and developments

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Abstract

The main focus of the Professional Practice Committee of the UEMS-PRM-Section is the description and development of the field of competence (FOC) of the PRM specialist in Europe. The field of competence is an umbrella term for expertise, skills and aptitudes of PRM specialists as well as the way of cooperation and interaction with other specialties and health professionals. Besides short definitions of the field, a conceptional description and a white book on the role of PRM specialists in rehabilitation and their skills and aptitudes have been published recently.

PRM-specialists have a wide range of skills and aptitudes including diagnostic methods, team working skills and have to know about a wide range of interventions, including medication, physical therapy and social measures. Additionally PRM-specialists have skills to set-up a medical diagnosis, to perform functional assessments, to set-up a rehabilitation plan, and to coordinate team work. Professional practice of Physical and Rehabilitation medicine include different settings from the acute hospital to community based rehabilitation.

The Professional Practice Committee defined an action plan to develop the given definitions and descriptions and to specify the field of competence of the PRM in different clinical settings and rehabilitation programs for special groups of patients. Examples for this are the role of PRM in acute rehab units (ARU) and peripatetic acute rehab teams (ART), the role of PRM in rehabilitation teamwork, the cooperation with other medical specialties, the role of PRM in community based rehabilitation and others.

Key words: Field of competence of PRM, conceptual description, skills and aptitudes, action plan

1. Introduction

The main focus of the Professional Practice Committee of the UEMS-PRM-Section is the description and development of the field of competence (FOC) of the PRM specialist in Europe. The field of competence is an umbrella term for expertise, skills and aptitudes of PRM specialists as well as the way of cooperation and interaction with other specialties and health professionals. Of course, the role of PRM in different settings (from acute hospitals to the community) and the parameters for the access to specialized rehabilitation programs are included too.

In Europe as well as in other parts of the world survival rates from serious disease and trauma increase, leading to an increasing number of persons with complex problems and functional deficits. The number of patients with chronic conditions is increasing too. Epidemiologic surveys demonstrate that about 10% of Western Europe's population experience a disability. At the same time there is a growing expectation of good health in today's society. Both tendencies place high demands on health care, especially aiming at an improvement in functioning. Many

studies show that rehabilitation is effective in reducing the burden of disability and in enhancing opportunities for people with disabilities.

The term function is defined in the International Classification of Functioning, Disability and Health (ICF)(1). Within this model functioning is related to the components body functions and structures, activities and participation and influenced by the health condition as well as by personal and environmental factors. It describes the interaction between an individual with a health condition and his or her environment. Physical and Rehabilitation Medicine is concerned with the multi-professional promotion of a person's functioning ([figure 1](#)).

A functional approach is relevant for people with disabilities as well as for patients with chronic conditions. The aim of rehabilitation is to enable people with disabilities to lead the life that they would wish. This is achieved by a combination of measures to overcome or to work around their impairments, to remove or reduce the barriers to participation in the person's chosen environments and to support their reintegration into society. Physical and Rehabilitation Medicine provides methods to improve functioning including all components of the ICF-model and facilitation empowerment and participation of people with disabilities and chronic disabling conditions.

Such activities are relevant in all sectors of the health system, which range from specialised rehabilitation centres and departments in acute hospitals to outpatient and community settings. Acute rehabilitation is important in order to utilise plasticity as effectively and as early as possible and to reduce the potential for complications. Patients also require rehabilitation in dedicated rehabilitation facilities directed by PRM specialists and those with longstanding, often progressive disabilities and disorders, will need it in the community to ensure that their fitness, health and abilities are maintained and their independence is promoted.

The recent concepts of Physical and Rehabilitation Medicine (PRM) integrate a patient-centred approach and are based on interdisciplinary cooperation and a multi-professional teamwork (see [table 1](#)). As any other medical activity Physical and Rehabilitation Medicine is based on diagnostic and staging of underlying pathology. Additionally PRM performs a detailed functional assessment and systematically sets up a rehabilitation plan in order to coordinate the multi-dimensional interventions. In the course of the rehabilitation process regular re-evaluation is performed by the PRM-specialists. These activities are necessary in a wide range of pathologies and disabilities (for more details see 2).

To perform the tasks in rehabilitation PRM-specialists need a wide range of skills and aptitudes including diagnostic methods, team working skills and have to know about a wide range of interventions, including medication, physical therapy and social measures.

2. ICF-based conceptual description of Physical and Rehabilitation Medicine

As the comprehensive model of functioning (WHO) is the basis of rehabilitation Stucki & Melvin (3) in cooperation with the Professional Practice Committee made a proposal for a conceptual definition of the specialty.

“PRM is the medical specialty that aims to enable people experiencing or likely to experience disability to achieve and maintain optimal functioning in interaction with the environment. It is based on WHO's integrative model of human functioning, the rehabilitative health strategy, and includes the diagnosis and treatment of health conditions. PRM specialists assess functioning, perform or apply biomedical and engineering interventions to optimize capacity and lead and co-ordinate intervention programs in a multidisciplinary iterative problem-solving process to optimize performance. They provide advice to people of all age groups and relevant persons in their immediate environment, service providers and payers along the continuum of care and across sectors in all situations from the acute hospital to the community and along the course of the condition. PRM specialists manage rehabilitation, health and multi-sectorial services. They inform the public and decision-makers about suitable policies and programs in the health sector and across sectors that provide a facilitating larger physical and social environment, ensure access to rehabilitation services as a human right, and empower PRM specialists to provide timely and effective care.” (Stucki & Melvin 2007),

3. Skills and aptitudes of the PRM specialist

The skills and aptitudes of the specialist of PRM are described in the White Book on Physical and Rehabilitation Medicine in Europe that has been adopted by the main European bodies of the field (2). In this document the diagnostic skills, the set-up of the rehabilitation plan, the team work and the interventions used are described as follows. Additionally a description of the settings in which rehabilitation is performed is given.

3.1. Diagnostics, assessment and evaluation

PRM doctors recognise the need for a definitive diagnosis prior to treatment and problem-orientated rehabilitation. In addition, they are concerned with aspects of functioning and participation that contribute to the full evaluation of the patient in determining the treatment goals. These are reached in conjunction with the person with disability, his or her family and members of the rehabilitation team.

Diagnostics and assessment in PRM comprise all dimensions of body functions and structures, activities and participation issues relevant for the rehabilitation process. Additionally relevant contextual factors are assessed. History taking in PRM should include analysing problems in all the ICF dimensions.

In order to obtain a diagnosis of structural deficits relevant to the disease and the rehabilitation process standard investigations and techniques are used in addition to clinical examination. These include laboratory analysis of blood samples, imaging, etc.

Clinical evaluation and measurement of functional restrictions and functional potential with respect to the rehabilitation process constitute a major part of diagnostics in PRM. These include the clinical evaluation of muscle power, range of motion circulatory and respiratory functions. Technical measurements may include muscle testing (strength, electrical activity and others), testing of circulatory functions (blood pressure, heart frequency, EMG while resting and under strain), lung function and others. PRM specialists may use standardised measurements of performance such as gait analysis, iso-kinetic muscle testing and other movement functions. In rehabilitation of patients with certain conditions specialised diagnostic measures will be required, e.g. dysphagia evaluation in patients with stroke, urodynamic measurements in patients with spinal cord injury, or executive function analysis in patients with brain injury.

Patients' activities can be assessed in many ways. Examples of two important methods are:

- Standardised activities of single functions performed by the patient (e.g. walking test, grip tests or handling of instruments, performance in standardised occupational settings). These tests can be evaluated qualitatively (assessed by PRM-doctors or specialised therapists) or quantitatively (performance time, capacity to lift loads, and others).
- Assessments of more complex activities, such as the activities of daily living (washing oneself, dressing, toileting and others) and performance in day-to-day living (walking, sitting, etc.). These assessments may be performed by rehabilitation professionals or may be as self rated using standardised questionnaires.

Participation is mainly analysed in interviews with the patient through standardised questionnaires. Socio-economic parameters (e.g. days of sick leave) are used in order to evaluate social or occupational participation problems.

Many assessment instruments in PRM combine parameters of body functions, activities and participation. These may be used to decide on the indication for rehabilitation measures (assignment) or to assess the result of the intervention (evaluation). The appropriate instruments have to be chosen in accordance with the individual functional problem and the phase of the rehabilitation process.

The relevant contextual factors with respect to the social and physical environment are evaluated by interviews or standardised ICF-based checklists. For the diagnosis of personal factors, e.g. coping strategies of the patients' standardised questionnaires are available.

Many tools can be used to evaluate both global and specific functional capacity as well as the rehabilitation process. Some cross the individual ICF components. For instance, the Functional Independence Measure (FIM) and the Barthel-Index incorporate aspects of body functions and activities as well as relevant co-morbidities and the extent of external support needed. The choice of measures will depend on the phase and aims of the rehabilitation process and the functional capacity of the individual.

3.2. Rehabilitation plan

PRM devise and employ a rehabilitation plan for each individual to direct his or her future problem-orientated rehabilitation. Patients actively participate in its development along with the other members of the patient-centred rehabilitation team. The emphasis of the plan varies depending on the particular problems encountered, but the essential elements have a similar basic format. The plan must be regularly reviewed and updated by the rehabilitation team and forms the basis of team members' regular communication on patients' progress during rehabilitation.

PRM specialists are responsible for the development of a rehabilitation plan and for identifying the time frame in which it should be delivered. The plan should include information on diagnosis, presenting problems and preserved functions (according to the ICF framework), the individuals' goals, carer and family goals and the professionals' goals.

3.3. Interventions in Physical and Rehabilitation Medicine

PRM uses diverse interventions. PRM-specialists develop an intervention plan based on the diagnosis and functional limitation of the patient. Thereafter, the specialist either performs the intervention aiming at solving the given problems or another team member may do so. In other settings the PRM-specialist will prescribe the therapy. Interventions include:

- Medical interventions (e.g. medication aiming at restoration or improvement of body structures and/or function, e.g. pain therapy, inflammation therapy, regulation of muscle tone, improvement of cognition, improvement of physical performance, treatment of depression). Practical procedures include injections and other techniques of drug administration)
- Physical Treatments (e.g. manual therapy techniques for reversible stiff joints and related soft tissue dysfunctions, kinesiotherapy and exercise therapy, electrotherapy and others including ultrasound, heat and cold applications, phototherapy, hydrotherapy and balneotherapy, diathermy, massage therapy and lymph therapy)
- Occupational therapy to analyse activities, such as those of daily living and occupation, support impaired body structures (e.g. splints), to teach the patient skills to overcome barriers to activity of daily living (e.g.

adjusting private facilities), and to train in the presence of impaired function and cognition and d) enhance motivation,

- Speech & language therapy within the framework of complex specialized rehabilitation programmes,
- Dysphagia management,
- Neuropsychological interventions,
- Psychological assessment and interventions, including counselling,
- Nutritional therapy,
- Disability equipment, assistive technology, prosthetics, orthotics, technical supports and aids,
- Patient education,
- Rehabilitation nursing.

3.4. Physical and Rehabilitation Medicine Practice – Clinical Activities and Settings

PRM specialists are involved in all stages of the rehabilitation and recovery processes, as well as in the care of patients with chronic conditions. They practise in a variety of clinical settings ranging from acute care facilities, stand alone rehabilitation centres, hospital based rehabilitation departments to community settings and independent specialist practice. Their activities vary according to the clinical settings, but they adopt the same general principles of PRM in all.

Specialised rehabilitation facilities are essential in acute hospitals. There should be dedicated beds under the responsibility of a PRM specialist together with a peripatetic rehabilitation team providing advice and treatments to patients in intensive care units and other acute wards. PRM provides the diagnostics and assessments as well as the interventions both for patients in their dedicated facilities as well as for patients in other wards. The consultative role of the PRM specialist helps to ensure that rehabilitation, functional restoration and prevention of secondary loss of function e.g. from immobilisation (such as contracture, pneumonia or thrombosis) start as soon as possible. Early specialised rehabilitation prevents and or reduces long-term restrictions of functioning.

In the immediate period following injury, it is known that the simple act of transferring a brain-injured patient from a busy surgical or neurosurgical ward to the calmer, quieter atmosphere of a rehabilitation ward has a therapeutic effect in itself and improvement in attention, irritability and cognition is observed. Acute general wards are not conducive to the practice of multi-professional rehabilitation for patients with complex needs.

In rehabilitation centres (including day-hospital care) and rehabilitation departments of acute hospitals all patients are seen by a PRM-specialist. He or she investigates the patient, performs functional assessments and explores the influence of contextual factors on functioning. The necessary interventions are selected, e.g. physical therapies, psychotherapy, occupational therapy, speech therapy, neuropsychological training, drugs or social interventions.

Therapists also evaluate the patient prior to applying their intervention techniques. The results of the PRM-specialist investigations and therapists' functional assessments form the basis for the rehab plan and further decisions made by the rehabilitation team.

Decisions on discharging patients are the responsibility of the PRM-specialist on the basis of team conference, in which the person with disability and the family members actively participate. PRM-specialists provide a comprehensive discharge report on the basis of the investigations and the information provided by the team members. This report covers information on the presenting conditions, the patient's functional state, activity capacity and participation at discharge as well as on the prognosis and recommendations for further care, treatment and rehabilitation.

In out patient departments and private practice, there is a different emphasis on PRM practice. The emphasis here is on diagnostic assessment and initiation of treatment. After an investigation and functional assessment, patients are prescribed either a single series of therapy (PT, OT, or others) or, if multi-professional rehabilitation is required, a team approach is adopted. Following treatment, the PRM-specialist reassesses the patient and decides on further interventions or discharge back to the primary physician, as appropriate.

PMR-specialists cooperate closely with the patient and family and aim to communicate well with the patients' general practitioner and with other specialists, particularly, when diagnostics or therapies are needed in other medical fields e.g. neurology, cardiology, orthopaedic surgery etc.

PMR specialists may in addition work with specialised community rehabilitation teams (such as those for acquired brain injury, for chronic neurological disease, for transitional problems or for musculoskeletal disorders) and also provide advice to general community teams.

4. Future activities

The above given definitions and descriptions are a starting point for further discussions and a consensus finding process at a European level. This process will be performed within the European bodies of PRM as the PRM-section of the UEMS, the European Society for Physical and Rehabilitation Medicine and the European Academy for rehabilitation Medicine. Based on this the tasks and field of competence of the PRM specialist in the different clinical settings and in rehabilitation programs for special groups of patients will be described more in detail. Examples for this are

- the role of PRM in acute rehab units (ARU) and peripatetic acute rehab teams (ART)
- the role of PRM in rehab teams (and access to therapists)
- the cooperation with other medical specialties

- the role of PRM in community based rehabilitation and
- the contribution of PRM in rehabilitation of children and of elderly people and
- the role of PRM in rehabilitation of defined medical conditions.

For the gathering of information and discussion a series of special sessions will be implemented in National and European congresses within the field. The process of consensus will be open to all European specialists interested and coordinated by the UEMS-PRM-section. Continuous information will be provided on the website of the Section: www.euro-prm.org.

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Figures and tables

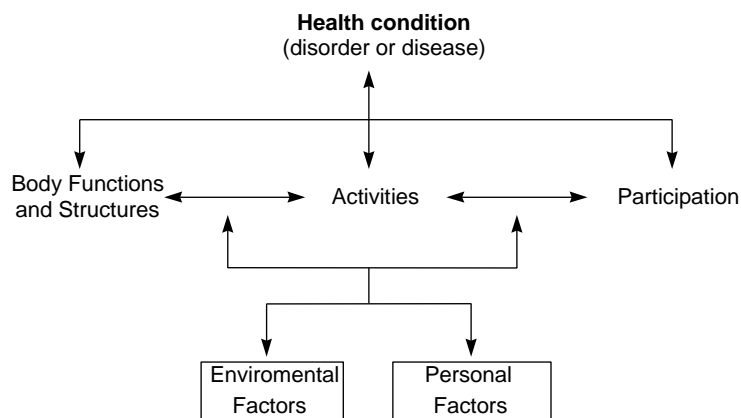


Figure 1: The current framework of functioning and disability – the WHO International Classification of Functioning, Disability and Health (ICF)

Table 1: Field of Competence of the specialty of Physical and Rehabilitation Medicine (PRM)

The field of competence of the specialist of Physical and Rehabilitation Medicine (PRM)		
PRM-specialist activities	Rehabilitation teamwork	
<u>Diagnostics</u> <ul style="list-style-type: none"> • underlying pathology • functional capacities and activities • participation in society • contextual factors 	<u>Rehabilitation team</u> <ul style="list-style-type: none"> • Physiotherapists • Occupational therapists • Psychotherapists • Social workers • Nurses • and others 	<u>Interdisciplinary cooperation</u> <ul style="list-style-type: none"> • Other medical specialisations
<u>Interventions</u> <ul style="list-style-type: none"> • Medical treatments • Physical treatments • education and psycho-social interventions 		