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The PRM multimodal approach and multiple morbidities management

PRM covers a broad range of disorders and includes the consequences of trauma, surgery, diseases and congenital conditions. This is in sharp distinction with/to other medical specialties that treat organs or organ-systems (*e.g.* cardiology, nephrology, dermatology), specific age groups (*e.g.* pediatrics, geriatrics) or that apply a certain skill or technical instrumentation (*e.g.* surgery, radiology, radiotherapy).

Therefore, PRM usually is considered as a "transversal specialty". Moreover, PRM is not primarily focused on prevention or treatment of the disorder itself, but focuses on the consequences in terms of activity limitations and restrictions in participation. The prevention and reduction of activity limitations and optimization of participation are the core of PRM.

As a result, PRM has adopted a patient-centered approach that also includes the personal characteristics of the patient. The consequence of this "holistic" approach is that PRM physicians do not work alone, but need to involve a large number of other healthcare professionals. The healthcare professionals operate in a collaborative way in a multi-professional team lead by the PRM physician, which also includes the patient and/or his/her caregivers.

Diagnosing, assessing, treating, training, exercising, coaching and supporting this broad range of patients with a large multi-professional team in the acute, subacute and chronic phases requires expensive and well-equipped facilities. Usually a PRM department provides facilities (and its personnel) including: electromyography, diagnostic ultrasounds, strength measurement, gait analysis, neuropsychological testing, gymnasium, occupational therapy rooms, swimming pool, physical modalities etc.

The broad range of patients, the focus on impairment, activity limitations and participation restrictions, the attention to personal factors and environmental factors, the multi-professional team and the necessity of equipment and other facilities make PRM a complex, multimodal and comprehensive specialty.

Each patient is usually treated with a broad range of therapies, provided by a broad range of health professionals. These can include, among others, exercise therapies, occupational therapies, speech therapies, neuropsychological treatments, behavioral therapies, physical therapies, manual therapies. Each patient is treated with a unique approach, according to his disease, impairments, activity limitations, participation restrictions, environmental and personal factors, in a totally multimodal and individualized approach.

The ageing of the population has a huge impact in service providing, as well as on people with disabilities: this conversely impacts on PRM specialty and treatments. Rarely patients after a certain age have only one disease; rarely the main disease for the PRM intervention is not influenced by other important morbidities. The recently developed "syndemic" conceptual framework [11] fit quite well into the approach of PRM to comorbidity. In fact, it emphasizes the synergistic role of diseases and (social) context in affecting the clinical course, and strongly relies upon a biosocial conception of health.

Therefore, treatments must be continuously adapted, making approaches even more individualized. PRM's holistic approach focuses on the entire person with the aim of improving his/her activities and increasing his/her participation and inevitably takes into account all the comorbidities, that influence treatments and outcomes.

Moreover, comorbidities are usually scarcely evaluated by the referring specialists in case of patients coming from acute wards and they frequently require a diagnostic workout by PRM physicians at the admission to the post-acute wards. Comorbidities heavily impact on the burden of care and on final outcomes: specific scales are under development to better understand, study and clinically manage their impact in the PRM process.

The multi-professional PRM team lead by the PRM physician

PRM physicians provide treatments in two different ways: as in many other specialties, they do it personally, using specific techniques (*e.g.* interventional PRM, injections, manipulations "manu medica", etc.); instead, quite specific to PRM is the delivery of treatments through team work. The latter is particularly true, when a rehabilitation process is concerned and other non-physician rehabilitation professionals are included.

The achievement of successful rehabilitation requires multiple health care professionals with a wide range of clinical skills and expertise. They must work together

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harmoniously, but also effectively as a team, in order to achieve rehabilitation goals for patients and their families. It is this style of multi-professional teamwork that differentiates PRM from many other specialties. The combined group activity of an effective team should provide synergy and result in better outcomes than the sum of each individual working alone.[12-14]

Even if being multi-professional in nature, the terms used in medical and management literature can be confusing as different team approaches or models exist and are defined according to the interaction among team members. Consequently, the means, in which the multi-professional team works, has been defined by different models: multi-, inter- and trans-disciplinary, with different meanings. A multidisciplinary team model utilizes the skills of individuals from different disciplines but each discipline still approaches the patient from his own perspective and usually the physician communicates with other professionals of the team. An interdisciplinary team model integrates the approach of different disciplines with a high level of collaboration and communication among the team professionals using an agreed and shared strategy; the leadership of the team remains in the hands of one PRM physician. In a transdisciplinary team model the boundaries of professionals' practice are blurred and any professional is capable of working in any particular team role.[15, 16]

An interdisciplinary approach in the multi-professional team is the preferred pattern of team working. However, even if it is not the most appropriate to answer to the needs of the patient and provide a good rehabilitation program, other models can also be found in various rehabilitation settings, such as a multidisciplinary approach in an acute-care unit or a transdisciplinary approach in long-term community care for a patient with educational needs. In most settings, an interdisciplinary model is most effective because it allows a collaborative, holistic and patient-centered approach to rehabilitation.[17] For all these reasons in this book we prefer the term "collaborative" referred to team work, since various models can be applied effectively in different settings. The PRM team, under the responsibility of the PRM physician, should agree and set realistic goals along with patients and their families and then work together to achieve these goals using a shared strategy. This is often best done in joint sessions which may serve to avoid over-stimulation, fatigue or repetition.

Evidence shows that improved functional outcomes and even better survival can be achieved with multi-professional collaborative teamwork in several conditions particularly stroke, traumatic brain injury, hip fracture, pulmonary rehabilitation and back pain.[17-19]

The interpretation and the means to obtain a good collaborative approach for the multi-professional team are different according to the settings. In a PRM ward (in acute and post-acute hospitals) all professionals work together in the same facility under the responsibility of the PRM physician. The turn-over of patients is relatively low, the rehabilitation time long enough, and the answer of patients to treatments quite rapid. All these factors play a major role in determining the approach to team management that is considered "classical" in PRM, since it is the most studied.

In the acute hospital with a central PRM department the multi-professional team of the PRM department is responsible for all rehabilitation issues in the acute hospital. The multi-professional PRM team acts on a consultant basis for all wards. The multi-professional team consists of PRM physicians and rehabilitation professionals under the responsibility of the PRM physician. The multi-professional team works collaboratively with other disciplines at the different wards wherever they are needed.

Also, outpatients' settings must provide multi-professional teams working in a collaborative way with other disciplines, under the responsibility of the PRM physician. Nevertheless, teams may be incomplete or sometimes do not seem to exist, particularly when the PRM physician and the rehabilitation professionals providing treatment are not even working in the same place teamwork. Teams may operate without the physical presence of one or several rehabilitation professionals, but always under the PRM physician's responsibility (liability). Other specific characteristics of this setting include huge number of patients, rapid turn-over, short time for evaluation and treatments (a few sessions) and rapid answers to treatments. Obviously, the difficulties of a team approach increase in these cases, and management is based on protocols and/or simple prescriptions: in case of exceptions to protocols, disagreement and/or particular clinical cases, direct written and/or speaking contacts between the professionals are needed. Possibly, team meetings should also be planned, even if with

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reduced frequency. Very close to this setting, is the situation of the so-called "post-rehabilitation" and/or maintenance activities in chronic patients. Sometimes, it is argued that these settings are not clinical and outside the rehabilitation team, but the management of these complex patients is usually difficult and they intermittently require classical rehabilitation interventions: consequently, also in these cases a team management of maintenance is more appropriate, even if light strategies should be adopted.

Another different situation for team work management is in long term PRM facilities, where turn-over and clinical changes are very slow, and rehabilitation treatment reduced. In these cases, team meetings are still possible, but on a very low pace.

Successful rehabilitation team work requires some specificities, even if not all are possible in the different settings proposed:

— management and leadership: PRM physicians are clinical managers and should be good leaders of the rehabilitation team: in addition, they should be able to manage groups, solve problems, facilitate discussion, make decisions and listen;

— hierarchy: even if there is no direct hierarchical relationship (not possible when in different facilities), there must be in all health systems someone, who is ultimately responsible for the patients, and for making clinical decisions: this is the physician, usually the PRM physicians, in a functional hierarchical relationship;

— time: appropriate time must be devoted to team building, which may vary according to the setting. Since rehabilitation is not possible without the team, this is proper working time and not only improves the standards of clinical work, but really allows it to function;

— respect of roles and professions: all the team members have different competences that must be recognized by all the others; the roles are different, and a hierarchy exists with the leadership of the PRM physician and needs to be respected;

— personal factors: teams function, if people make it function. There are clearly personal factors, such as the availability to change, the ability to collaborate, team work education, a balance of personal strength to accept to have one's own work discussed and sometimes challenged, and the ability to listen and permission to speak. These factors can only partially be learned, but are necessary to practise rehabilitation for all professionals

— environmental factors: general attitudes in the working place (in and out the rehabilitation ward, including the administrative management) plays a major role in facilitating or inhibiting team work; PRM physicians have a major role in facilitating the environmental attitude. Moreover, specific instruments and communication tools should be developed according to the setting.

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- European College of Physical and Rehabilitation Medicine (ECPRM) – served by the UEMS-PRM Board
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