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*Invited Perspective*

## **What's on the Horizon: Defining Physiatry through Rehabilitation Methodology**

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One of our challenges as physiatrists is to define and describe the uniqueness of our specialty. This is evident when colleagues from other disciplines ask about physiatry, PM&R, P&RM or rehabilitation medicine, depending on how we name our specialty. Over the past decade, I have had many opportunities to contemplate, lecture, and write about this topic. And I often drift back to the essence of how physiatrists work, which is fundamentally different from most other medical and surgical specialties. One important way in which we can distinguish our specialty from other disciplines is the methodology that we use in our day-to-day work. At the same time, this "rehabilitation methodology" is far from evidence based and needs to be further explored. Therefore, the challenge is not only to define and describe this unique rehabilitation methodology, but to also design research and realize outcomes that demonstrate that this methodology has value beyond regular health care.

It is important that we start with simple, yet accurate, and commonly known definitions and descriptions of the terms rehabilitation and physiatrist (or rehabilitation medicine specialist, as we tend to say in Europe). The World Health Organization (WHO) posts the following definition and description of rehabilitation on its website [1]:

*"Rehabilitation and habilitation are processes intended to enable people with disabilities to reach and maintain optimal physical, sensory, intellectual, psychological and/or social function. Rehabilitation encompasses a wide range of activities including rehabilitative medical care, physical, psychological, speech, and occupational therapy and support services."*

The definition and role of physiatrists is described by The American Academy of Physical Medicine and Rehabilitation as follows [2]:

*“Physiatrists, or rehabilitation physicians, are nerve, muscle, and bone experts who treat injuries or illnesses that affect how you move. Rehabilitation physicians are medical doctors who have completed training in the medical specialty of physical medicine and rehabilitation (PM&R). Specifically, rehabilitation physicians: diagnose and treat pain; restore maximum function lost through injury, illness or disabling conditions; treat the whole person, not just the problem area; lead a team of medical professionals; provide non-surgical treatments; explain your medical problems and treatment/prevention plan. The job of a rehabilitation physician is to treat any disability resulting from disease or injury, from sore shoulders to spinal cord injuries. The focus is on the development of a comprehensive program for putting the pieces of a person's life back together after injury or disease – without surgery. Rehabilitation physicians take the time needed to accurately pinpoint the source of an ailment. They then design a treatment plan that can be carried out by the patients themselves or with the help of the rehabilitation physician's medical team. This medical team might include other physicians and health professionals, such as neurologists, orthopedic surgeons, and physical therapists. By providing an appropriate treatment plan, rehabilitation physicians help patients stay as active as possible at any age. Their broad medical expertise allows them to treat disabling conditions throughout a person's lifetime.”*

In Europe, the Physical and Rehabilitation Section and Board of the European Union of Medical Specialists have the following definition of the specialty [3]:

*“Physical and Rehabilitation Medicine (PRM) is an independent medical specialty concerned with the promotion of physical and cognitive functioning, activities (including behaviour), participation (including quality of life) and modifying personal and environmental factors. It is thus responsible for the prevention, diagnosis, treatment and rehabilitation management of people with disabling medical conditions and comorbidity across all ages. Specialists in PRM have a holistic approach to people with acute and chronic conditions, examples of which are musculo-skeletal and neurological disorders, amputations, pelvic organ dysfunction, cardio-respiratory insufficiency and the disability due to chronic pain and cancer. PRM specialists work in various facilities from acute*

*care units to community settings. They use specific diagnostic assessment tools and carry out treatments including pharmacological, physical, technical, educational and vocational interventions. Because of their comprehensive training, they are best placed to be responsible for the activities of multi-professional teams in order to achieve optimal outcomes.”*

Taken together, these definitions are broad (as is our specialty) and emphasize several components that form part of our specific methodology: the rehabilitation process, interdisciplinary teams, rehabilitation plans, goal setting, the disablement process, psychiatric interventions, patient-centeredness, self-management and empowerment, and outcome measurements. By evaluating them individually, it is clear that they each constitute important parts of our specialty, and how, when, and where we use them as physicians form the core of our work. And further, these components clearly demonstrate that we need to focus on how we work and deliver our services, as much as we look upon what outcomes we can achieve for our patients.

Rehabilitation is often described as a process that starts when the diagnosis is made and continues as long as the person needs interventions, if not indefinitely. Adopting that description, I strongly believe that psychiatrists are well suited to manage disabilities across a life-long perspective. But is that valid? In our current politico-medical environments, both in Europe and the United States, we need to present data to support that statement. It is also evident that interdisciplinary team work is an important part of the rehabilitation process. We rely on other rehabilitation professionals, such as physiotherapists, occupational therapists, social workers, neuropsychologists and speech and language pathologists (among others), in our work. Even though we typically do not possess the direct expertise of these other professionals, psychiatrists often have the skills to lead interdisciplinary teams, resulting in a synthesized or co-ordinated coherent process. As evidence is now emerging that interdisciplinary teams (where professionals and patients work together towards commonly set goals) are more effective than multidisciplinary teams (where professionals work independently of each other without commonly set goals) this has implications for the organisation of rehabilitation services, accreditation and reimbursement, and therefore extends beyond that of solely definitions and descriptions.

Looking further into this rehabilitation process, it is helpful to describe the four steps that constitute its core (Figure 1). The initial step, the assessment, comprises components that are unique to our specialty. This is where physiatrists make the rehabilitation diagnosis, a description of the consequences of a disease or injury for the person and his or her family. Without a thorough assessment, we are not able to plan the rehabilitation process appropriately, and without a comprehensive plan we will not provide the best possible interventions. As this area is so central to our specialty, we can foresee a much stronger emphasis on the assessment and the development of comprehensive tools that facilitates this process. It is noteworthy to point out that while rehabilitation diagnoses are necessary to design long-term treatment strategies, the assessment itself is frequently made in the acute stages of an injury or illness. Therefore, the value of physiatric participation in the assessment step is as important in the acute period as in the chronic phase of a disability.

Once the assessment is made, we then design the rehabilitation plan, the second step in the process (Figure 1). In Sweden, it is mandatory that each patient has a written treatment plan; however, far from all people with disabilities ever receive such a plan (or are unaware of its existence!). With our specific knowledge and experience in leading interdisciplinary teams, and with our ability to integrate rehabilitation information and data, we are in an ideal position to provide disabled people with such a plan. As leaders in this development, I believe that our specialty can position itself in an ever-changing world of new policies and procedures. If we can establish a common ground for such a rehabilitation plan, it would be obvious that our specialty is central to this process and the long-term support for people with chronic conditions and disabilities.

One of the more challenging and critical aspects using a rehabilitation plan is goal setting, but also one that has the potential of evolving scientifically. Setting goals that are challenging for the patient, but realistic *and* measurable, using established tools, is therefore a necessary step that will support the patients in their process towards independence. However, much work remains before we are at the level where this is integrated into our daily routine as physiatrists, where we seamlessly rely on validated evidence based guidelines, and where we accommodate the patients' perspectives into generating a rehabilitation plan.

Over the past decade, we have in our department developed and refined such a plan that comprises a common language, understood by both staff and patients, utilizing the

terminology from the International Classification of Functioning, Disability and Health (ICF) [4]. The ICF is WHO's framework for measuring health and disability at both the individual and the population levels. With the ICF we have a universal framework and an international language for describing all aspects of a disability. It can be used to facilitate assessment and goal planning following a trauma or disease, as well as to improve outcomes research. In addition, the ICF also includes environmental factors which allow us to describe the impact of the environment on a person's functioning and disability. The use of the ICF has helped us in our work and also created a common framework for our rehabilitation plans and rehabilitation methodology, regardless of diagnosis or disability.

The ICF also takes into account the social aspects of disability and does not narrowly consider disability as a medical or biological dysfunction. To some extent this challenges the so called medical model and emphasizes other aspects of the rehabilitation process, which I believe are central to our rehabilitation methodology. The ICF emphasizes not only the impairment, but also activity limitations and participation restrictions, and thereby provide a holistic view of a disability. With its widespread use (regrettably not yet to its full potential in the United States) and the central role in rehabilitation, we will continue to see a growth of scientific literature exploring the ICF and its implications in our daily routines.

Our specific rehabilitation methodology empowers people with the coping skills and self-management tools they need to attain independence and self-determination. This is, however, a paradox. Ostensibly, our work as psychiatrists is to minimize the need for ourselves over time and to support our patients to eventually manage by themselves, at the same time as we demonstrate the uniqueness of our specialty in a life-long perspective, the results we can obtain by working in interdisciplinary teams with a holistic view and the outcome from a patient-centeredness perspective. Therefore, I strongly believe that we should emphasize the consumer experience, that of the patient and his or her central role in the process, and liaise with patient advocacy groups and patient organizations. They clearly understand the psychiatric role and often appreciate our methodology, and can serve as our ambassadors. The specific rehabilitation methodology can thereby be communicated to our consumers and they can then carry the message further afield.

In my opinion, it is not clear to everyone what type of interventions we can provide (Figure 1). This part of the rehabilitation process, and our specific methodology, requires

as much attention. To many professionals from other disciplines, as well as patients, rehabilitation is synonymous with “training”; however, the definitions and descriptions of our specialty comprise more than just improvement of function, which is the tenor of the term training to most people. It is therefore important to describe our interventions in a broader way. Certainly, our overarching goal is to improve functioning, but this can include interventions such as providing aids and equipment, strategies and compensatory techniques, education and self-management principles, symptom management and the reduction of the impact of certain impairments, and so on. In practice, our interventions can be described as *elimination*, *compensation* or *training* (Figure 2). We eliminate a symptom or an environmental barrier, or we reduce the consequences it has for overall functioning (for example, reducing spasticity may improve the use of a hand during meal preparations). Similarly, compensation provides disabled people with a technique, a strategy, an equipment or an aid to perform an activity in a better way. For example, an orthotic device can improve walking and a memory aid can improve the ability to go shopping. Training, finally, includes actions aimed at reducing impairments, as well as activity limitations and participation restrictions. Providing such a structure to our interventions assists us in describing our rehabilitation methodology and thereby more clearly our specialty. More importantly, though, it may enable us to develop more effective interventions that can improve body functions and transfer into improved activity and participation.

Finally, an area in which we have much to offer is outcome measurements, the fourth and final step in the rehabilitation process (Figure 1). We are used to (sometimes even forced to!) measure and evaluate our results, and our specialty is at the cutting-edge of outcome measurements, their development and implementation in our daily routines. And it is vital to our specialty, to our services, and to our patients that we continue to stay at the forefront of this field. This is an area with great potential, scientifically as well as clinically.

Within this part of the development of our rehabilitation methodology lie many dimensions related to the process of measurement, the type of instruments used, the nomenclature of the ICF and above all, the perspective of the person doing or being measured. As our overarching goal is to improve functioning, it is natural that we have access to outcome measures that can capture recovery and restoration, and the results of the interventions we use following an injury or a disease. These measures should be valid, reliable and sensitive, yet simple to use. Commonly, these measures focus on impairments (as defined in the ICF) and can

be both objective (i.e. performed by staff) and self-report (i.e., based on the patient's subjective perception). As we keenly focus upon the patient perspective during the rehabilitation process, it is imperative that we emphasize the patient perspective also in our measurements. The use of patient reported outcome measures (PROMs) in rehabilitation – as a complement to other forms of measures – is an area where we will see important developments over the next decade. In the development and implementation of such measures, we can apply the Rasch model to refine psychometrically sound PROMS. Scales that fit the Rasch model expectations can be transformed into equal interval measurements, enabling a summation of the score and parametric statistical analyses to be used. Methods, such as 'item banking' and Item Response Theory (IRT), commonly used in education and sociology, are also making their way into the field of rehabilitation and outcome research, and will supplement the development of appropriate outcome measures.

Another part of outcome measurements where the patient perspective is highly relevant is the assessment of participation, commonly referred to as an individual's subjective experiences of involvement in life situations [4]. Until now, there are few instruments that focus specifically on participation, as it is defined by the ICF. However, with its central role in the management and rehabilitation of life-long disabilities, where the person rather than the medical condition is the main focus, we will see some major advancement. Finally, given the emphasis on the process and patient-centeredness in our work, there are two topics related to outcome measurements where we will also see major advancement: goal attainment and consumer satisfaction. Rehabilitation is about improving functioning but it is also about achieving goals. It is therefore important that we also measure how we and our patients achieve the goals that we together set in our rehabilitation plans. Instruments that allow us to do this are scarce and their use in our work much underrecognized. Similarly, measurements of consumer satisfaction will add to the overall understanding of the outcomes achieved. However, consumer satisfaction has generally been seen as quite un-scientific. I strongly believe we can make progress here, and a challenge for the future is to develop a measure that amalgamate different aspects related to improved functioning, goal attainment and consumer satisfaction.

In summary, our speciality has unique features; agreeing on the description of our specific methodology will clearly help us prepare for evolution of our specialty. In this day and age, when resources are limited and health care is under financial pressure, other parts of the



medical system would benefit from adopting some of this rehabilitation methodology. This means that we have a mission to educate our colleagues and medical society about our specific methodology. A common language, a research agenda focusing on providing the evidence for our interventions, and a mission to enhance the knowledge of our methodology may set the stage for the next decade. This said, it is clear that we have a huge responsibility in providing the scientific evidence that these methods are beneficial to the patient, to our system, and to our society.

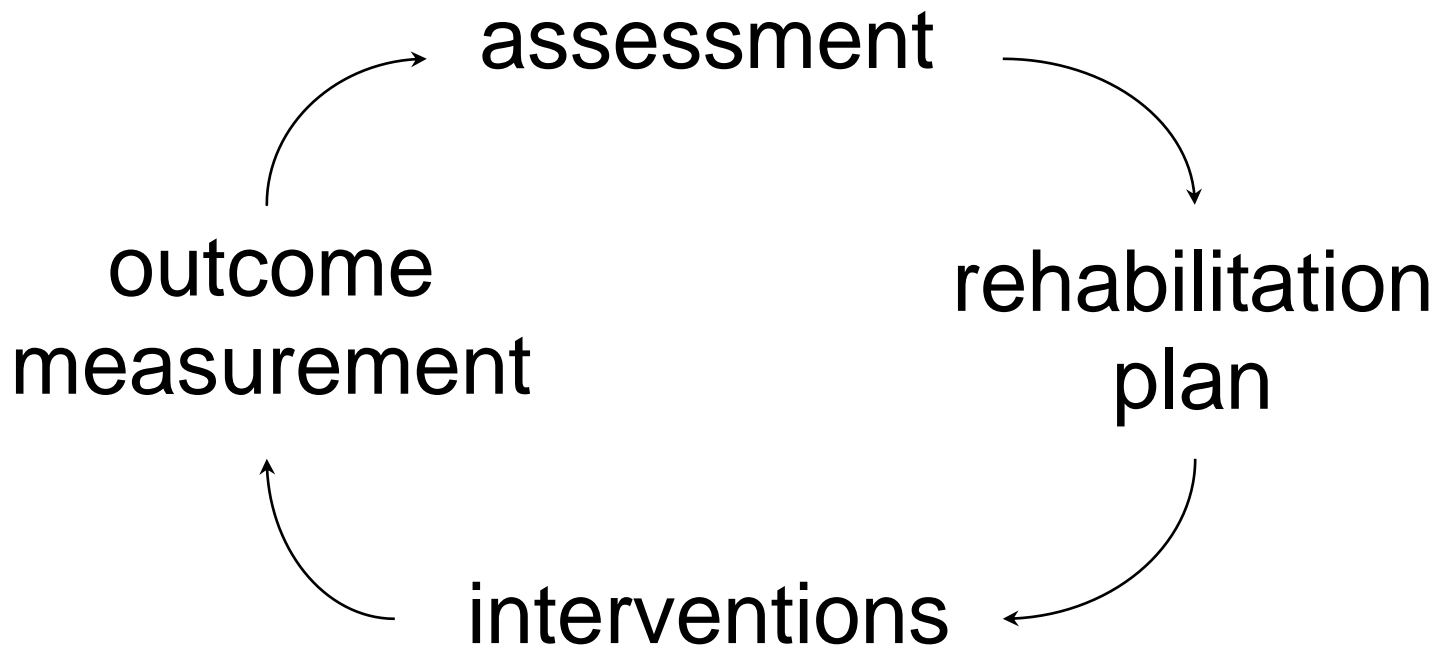
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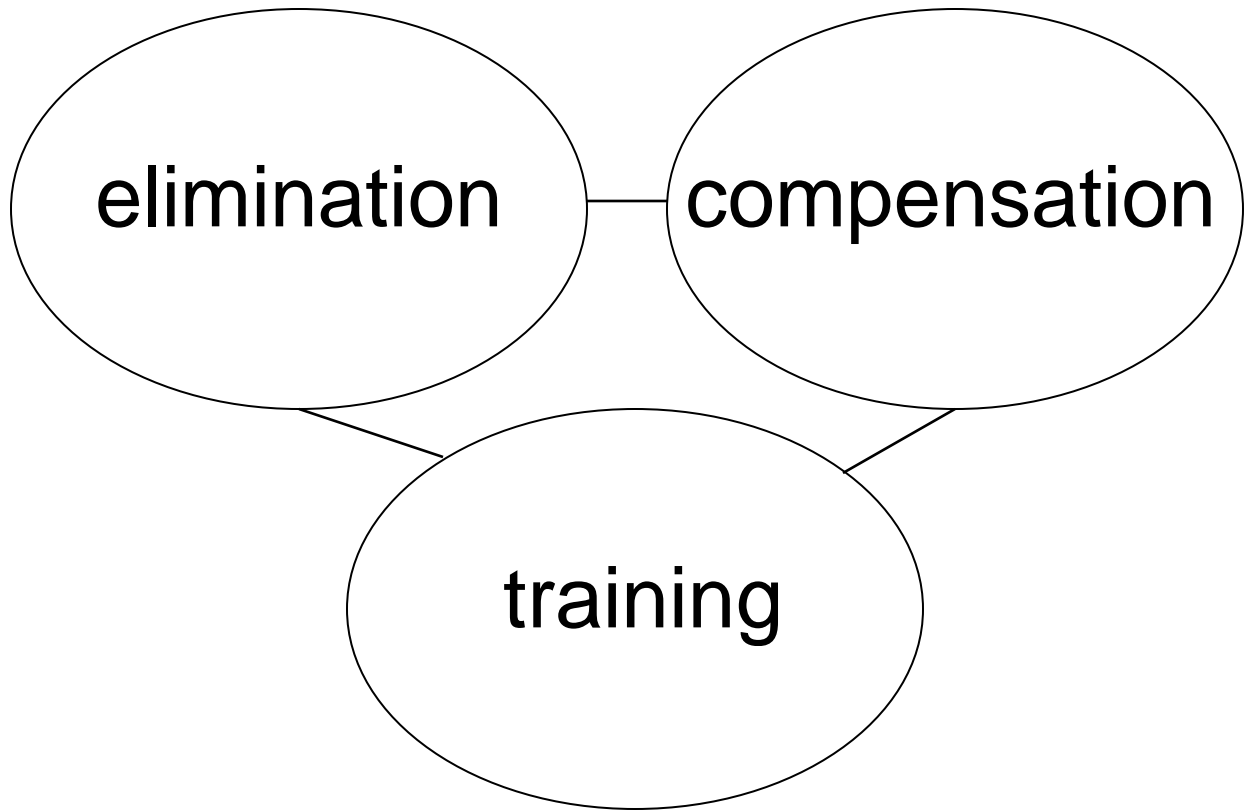
## LEGENDS

Figure 1      The four principal steps of the rehabilitation process.

Figure 2      The three main components of rehabilitation interventions.



*Figure 1*



***Figure 2***