The Future of Physical & Rehabilitation Medicine as a Medical Specialty in the Era of Evidence-Based Medicine

ABSTRACT

Key Words: Physical Medicine and Rehabilitation, PM&R, Medical Specialties, Evidence-Based Medicine, Physical and Rehabilitation Medicine, PRM

The professional perspective of medical specialties will increasingly depend on the evidence supporting the effectiveness of their therapeutic measures, particularly in the field of physical and rehabilitation medicine (PRM; also known as physical medicine and rehabilitation), because PRM makes use of many management and treatment approaches for which evidence of effectiveness is inherently difficult to develop.

The world’s population is aging, and chronic diseases, illnesses, sicknesses, multimorbidity, and disability are becoming fundamental challenges for all healthcare systems. According to the World Health Organization, “one of the biggest challenges in the 21st century will be how to best prevent and postpone disease and disability while maintaining the health, independence and mobility of an ageing population.” Currently, however, research (and therefore evidence) is focusing almost exclusively on the physiologic aspects of chronic diseases, illnesses, and conditions. A truly remarkable research letter reporting on a comprehensive search of the literature on randomized controlled trials on all forms of treatment of osteoarthritis revealed that more than 80% were drug trials, “many of which addressed questions of little relevance to current management issues.” Analysis of four focus group sessions showed that most of the stakeholders involved thought that the priorities of the current drug research were inappropriate and “that there should be more work on physical, surgical, and educational interventions.”

A major step forward has been initiated by the World Health Organization, which, in a worldwide effort, established the International Classification of Functioning, Disability and Health (ICF) as a twin or complementary classification to the International Classification of Disease 10 in 2001.

The specialty of PRM has always put particular emphasis on the integration of the medical and social perspectives of functioning and health. PRM medical doctors are trained to organize the rehabilitation and prevention process as a whole, including assessment and intervention of medical, psychological, occu-
pational, and social functioning. Their expertise is implicitly multidimensional and includes assessing, managing, and supervising rehabilitation and prevention programs provided by various non-MD rehabilitation and prevention specialists. They also promote functioning and health of patients with chronic conditions, diseases, or illnesses.

Practical constraints in health care may increasingly restrict the availability of the comprehensive management and/or care of a patient’s functioning and health provided by PRM specialists. Disease-management strategies developed within clinical fields may restrict a doctor’s efforts to establish the diagnosis of a pathologic condition that may underlie a disease, and to prescribe a noninvasive treatment of the pathology or perform an operation. Services may be limited when therapists primarily focus on particular and concrete physical complaints and primarily apply the techniques they know best.

In some circumstances, the comprehensive assessment, which, according to the ICF is the basis for medical rehabilitation and prevention, may be outsourced to nonmedical rehabilitation and prevention professions by referral. Notably, the role of non-MD rehabilitation and prevention specialists in diagnosing, managing, and evaluating patients with any kind of disease, illness, or sickness according to the ICF, including diagnostic services and outcome evaluation, is currently in the process of being redefined in many countries. This process is occurring with little evidence concerning potential consequences.

Condensing the relevant and useful findings published in the literature, including long-established existing medical traditions not yet subjected to adequate scientific scrutiny, is an important prerequisite to transfer scientifically generated knowledge into daily clinical practice and to ensure high standards of clinical care.²,5 No wonder that evidence-based medicine is being promoted in clinical medicine and throughout national health systems.

For centuries, a wide range of different physical medical therapies have been widely prescribed, either as individual therapies for many diseases or as important components in rehabilitation and prevention programs based on patients’ rehabilitative assessments. Even though an increasing number of systematic reviews on the effectiveness of physical modalities for many different indications have been published—most of them suggesting at least some benefit—many of these therapies have never been scrutinized in high-quality, randomized, controlled trials for their effectiveness, and they are still prescribed on the basis of empirical evidence.⁶—⁸ In comparison with the large body of evidence for pharmaceutical therapies, this factor—in the era of evidence-based medicine—is likely to eliminate many of the traditionally used physical medical modalities. This may lead PRM into a dilemma where clinical expertise will come into conflict with the interests of healthcare providers who may refuse reimbursement for (empirically) beneficial physical therapies.

The process of scientific work-up of PRM to the point where principles of evidence-based medicine may be unrestrictedly applied to physical, rehabilitation, and prevention medicine will require time, personnel, and financial resources. Unfortunately, industrial interest as a major driving force in medical research is limited in PRM. Textbooks of evidence-based medicine such as the one by Ilkka Kunnamo,⁹,¹⁰ which has been translated into different languages, should take into account the difference between acute medicine and rehabilitation medicine, and the fact that the former has been highly influenced by industrial interests,²,1¹ which may explain those different levels of evidence-based knowledge.

Strategies toward increasing the evidence-based knowledge in PRM were suggested in the Rehabilitation Medicine Summit 2005¹² and will require (1) bringing together leaders in medical rehabilitation and prevention research to characterize the current research capacity in the field and identify obstacles to expanding the capacity, (2) proposing specific actions and mechanisms to enhance research and the development of capacity, (3) formulating an action agenda for use by stakeholders in medical rehabilitation to enhance existing research and training programs and/or to create new ones, and (4) stimulating federal agencies and foundations to support the needed elements of rehabilitation research and training.

In concert with this consensus, Professor Gerold Stuck¹³,¹⁴ has published promising concepts that aim at developing a scientific workforce intended to promote human functioning and rehabilitation research; his suggestions await worldwide implementation. Such concepts are based on both the framework of the ICF¹⁵ and a mutually rewarding, multidisciplinary relationship between MD and non-MD rehabilitation scientists.¹⁶

The future of PRM will depend on developing further credible evidence of the effectiveness of its management and treatment strategies. Efforts to define a PRM research strategy have begun, but they will require substantial support and effort to be successful.

REFERENCES