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LETTER TO THE EDITOR

FROM BRUGES TO VENICE 2: TOWARDS A COMPREHENSIVE ABSTRACT TOPIC LIST FOR INTERNATIONAL PHYSICAL AND REHABILITATION MEDICINE CONGRESSES

Sir,

Scientific conferences are instrumental in the development of scientific fields. Conferences bring scientists together and foster the exchange of ideas as well as the formation of a common identity. For a scientific field, continuous research in specific topics is essential, for example, on the basic mechanisms of pathologies and interventions, on clinical evidence, or on the influence of environmental factors. Researchers in specific fields working on specific topics should meet regularly at scientific conferences to present recent results and exchange ideas for future developments. For that reason, a continuity of topics discussed at scientific conferences in a specific field is important in order to develop both science and clinical practice. A list of topics, to which participants can refer when submitting abstracts and presentations, on the one hand defines the field, and on the other encourages researchers interested in these topics to attend a conference.

For scientific societies that are organizing congresses, it is therefore worthwhile to define the topic list for the free submission of abstracts (either for poster sessions or presentations) with care. The successful identification of a topic list requires a systematic approach based on conceptual considerations relevant to a research area such as Physical and Rehabilitation Medicine (PRM). There are a number of criteria to be considered when developing a topic list. Firstly, the list should include topics relevant and attractive to practitioners and re-

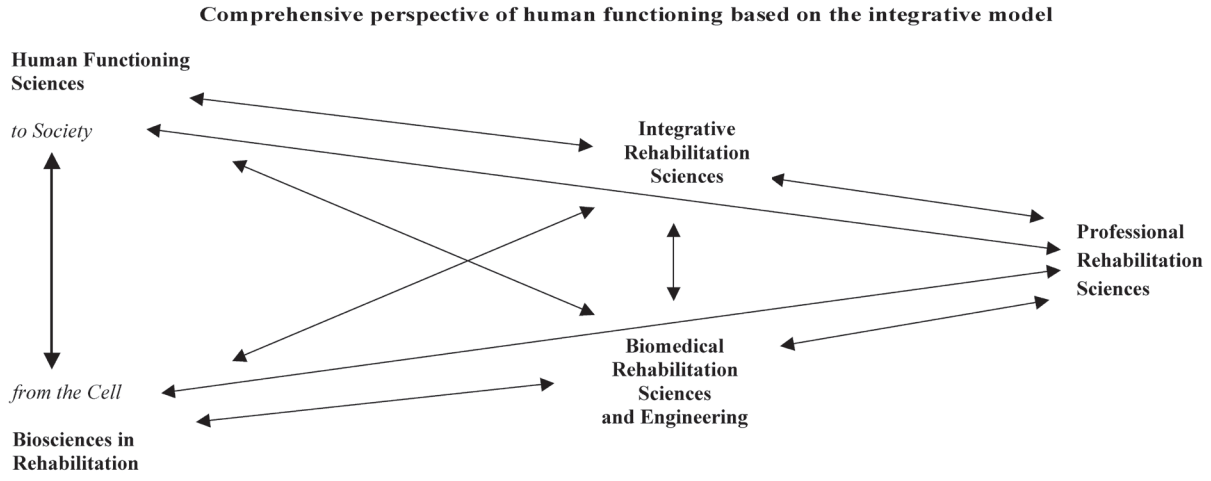

Fig. 1. Distinct scientific fields in Human Functioning and Rehabilitation Research. The figure illustrates relationships in the process of communication of scientific knowledge between distinct scientific fields. The double arrows indicate that knowledge may be communicated in both directions. The horizontal dimension symbolizes the confluence of knowledge generated by the basic and applied sciences to serve the professional sciences, and vice versa. The vertical dimension distinguishes the comprehensive perspective based on the integrative model of functioning from the focused perspective of the biomedical aspects of functioning. Diagonal arrows thus display flows of knowledge with respect to both dimensions (reproduced from reference 6).

searchers across the whole research area. In the case of PRM, it is, for example, obvious that a wide range of topics in the area of the Clinical or Professional Rehabilitation Sciences should be included. However, it is also important to include topics on relevant applied and basic sciences, both from the biomedical perspective and from the integrative perspective. In this context, it is important to realize that, particularly for topics at the frontier of the research area, such as the emerging science of human functioning (1, 2), there may be only a few submissions. It is nevertheless important to include such topics because otherwise researchers interested in them will not identify respective congresses as relevant to the presentation of their research. In the case of conferences in PRM, it is essential to include topics that will attract postgraduate researchers working in such diverse fields as biology and sociology and focusing on the understanding of human functioning from the point of view of the cell to that of society. While a biologist will attend highly focused conferences in molecular biology, it is also essential to attract these researchers to congresses in PRM in order to present, for instance, their results on plasticity. On the other hand, sociologists working in the area of social integration will present their research at conferences organized by social scientists, but should also be provided with the opportunity to present their research to the PRM community.

When developing a topic list for PRM one may rely on a number of concepts of potential relevance to the systematic development of the list. From the perspective of the European Union of Medical Specialists (UEMS), the topic list of the Board examinations (3) is an obvious starting point. Another starting point is the review of topics of recent successful congresses in the area. An example is the recent European Society of Physical and Rehabilitation Medicine (ESPRM) meeting in 2008 in Bruges with its comprehensive topic list in PRM, which was compiled by a first-time truly European scientific committee. Finally, one may refer to conceptualizations of the research area relevant to PRM, such as the recently published articles on how to develop human functioning and rehabilitation research (1, 2, 4–6).

Based on these considerations, we have developed a proposal for a topic list suitable for PRM congresses at the national, regional and international level. The primary structure of the topic list is orientated towards the 5 distinct scientific fields identified by Stucki et al. (1, 2) (Fig. 1):

- Clinical or Professional Rehabilitation Sciences;
- Biosciences in Rehabilitation;
- Biomedical Rehabilitation Sciences and Engineering from the biomedical perspective;
- Integrative Rehabilitation Sciences;
- Human Functioning Sciences from the comprehensive or integrative perspective.

For the selection of specific topics, we used the International Classification of Functioning, Disability and Health (ICF)-based conceptual description of the medical specialty of PRM, as shown in the paper by Stucki & Melvin (5), and domains of research in 4 distinct scientific fields of human functioning and rehabilitation research, as shown in Table IV of the paper by Stucki et al. (2). Additionally, the list of PRM diagnostics and interventions from the *White Book on Physical Medicine and Rehabilitation in Europe* was used (7, 8). The list has been aligned with the curriculum for the European Board Certification for PRM (3). The specific section on Biomedical Rehabilitation Sciences and Engineering with respect to organ systems has been structured according to the ICF (e.g. sexuality functions). The interventions have been structured according to the conceptual description of PRM (5).

A major challenge for the organization is the fact that in PRM there are at least 2 conceivable orthogonal dimensions: one is the systematic of research topics, and the other is the standard approach in medicine that focuses on health conditions according to the ICD. From the perspective of the clinical reality the starting point is often the health condition, while from the perspective of research the starting point is the scientific topic, which need not necessarily or primarily be defined by the health condition. A typical example is pain or spinal cord injury. From the perspective of a clinician working in the area of pain or spinal cord injury, all aspects, from insights into the cellular mechanisms to the integration of persons with the condition in society, are important. Conversely, for a health professional working in the area of vocational rehabilitation, the condition is of secondary relevance. To provide another example, a clinical researcher in the area of gait analysis is generally interested in the study of gait and how to optimize gait across a wide range of conditions and age groups. In order

Table I. *Brief list of abstract topics (for announcements)*

Clinical PRM Sciences
Pain
Musculoskeletal conditions
Neurological and mental conditions
Internal medicine conditions
Social integration programmes
Paediatrics
Geriatrics
Sports in rehabilitation and sports rehabilitation
Miscellaneous
Biosciences in PRM
Tissue injury
Cell and tissue adaptation
Biological mechanism of interventions
Miscellaneous
Biomedical Rehabilitation Sciences and Engineering
Organ systems and body functions and related PRM diagnostics
PRM interventions
Miscellaneous
Integrative Rehabilitation Sciences
Rehabilitation systems and services research
Comprehensive rehabilitation intervention research
Rehabilitation administration and management
Miscellaneous
Human Functioning Sciences
Theory and models of functioning
Classification of functioning
Measurement of functioning
Functioning epidemiology
Functioning impact assessment
Ethical issues and human rights
Miscellaneous

PRM: Physical and Rehabilitation Medicine.

Table II. *Comprehensive list of abstract topics (for abstract submission)*

Clinical PRM Sciences
Description: The Clinical Rehabilitation Sciences study how to provide best care with the goal of enabling people with health conditions experiencing or likely to- experience disability to achieve and maintain optimal functioning in interaction with their immediate environment. It contains clinical research on best care including guidelines and standards, organization and quality management, coordination as well as education and training of professionals in rehabilitation, evaluation of the rehabilitation team and multidisciplinary care.

Pain
- Acute pain
- Chronic generalized pain syndromes
- Complex regional pain syndromes
- Miscellaneous

Musculoskeletal conditions
- Inflammatory joint diseases (e.g. rheumatoid arthritis, ankylosing spondylitis)
- Degenerative joint diseases (e.g. osteoarthritis)
- Bone diseases (e.g. osteoporosis)
- Regional pain syndromes of the neck and upper extremity
- Regional pain syndromes of the pelvis and lower extremity
- Back pain and spine disorders
- Musculoskeletal trauma (e.g. fractures) and sports injury
- Miscellaneous

Neurological and mental conditions
- Stroke
- Traumatic brain injury
- Spinal cord injury
- Autoimmune and inflammatory neurological conditions (e.g. multiple sclerosis)
- Neurodegenerative diseases (e.g. dementia)
- Language and speech disorders
- Nerve injury
- Mental disorders (e.g. depression, bipolar disorders)
- Miscellaneous

Internal medicine conditions
- Heart, cardiovascular and lymph diseases
- Pulmonary diseases
- Bladder and bowel disorders
- Cancer
- Metabolic disorders (e.g. obesity, diabetes mellitus)
- Burns
- Miscellaneous

Social integration programmes
- Community-based rehabilitation
- Vocational rehabilitation
- Support, assistance and independent living
- Disability evaluation and compensation
- Miscellaneous

Paediatrics

Geriatrics

Sports in rehabilitation and sports rehabilitation

Miscellaneous

Biosciences in Rehabilitation
Description: The Biosciences in Rehabilitation are basic sciences that aim to explain body injury, adaptation and repair from the molecular to the cellular, organ system and organism level, and to identify targets for biomedical interventions to improve body functions and structures.

Tissue injury (e.g. inflammation, repetitive strain)

Cell and tissue adaptation (e.g. plasticity, molecular mechanisms)

Biological mechanism of interventions (e.g. learning)

Miscellaneous

Biomedical Rehabilitation Sciences and Engineering
Description: The Biomedical Rehabilitation Sciences and Engineering are applied sciences that study diagnostic measures and interventions including physical modalities suitable to minimize impairment, control symptoms and to optimize people's capacity.

Organ systems and body functions (based on the first level of the ICF component body functions) and related PRM diagnostics (e.g. cardiovascular functions and physical endurance, lung function testing, or imaging techniques)
- Mental functions
- Sensory functions and pain
- Voice and speech functions
- Functions of the cardiovascular, haematological, immunological, and respiratory systems
- Functions of the digestive, metabolic, and endocrine systems
- Genitourinary and reproductive functions
- Neuro-musculoskeletal and movement-related functions
- Functions of the skin and related structures
- Miscellaneous

PRM interventions
- Exercise
- Muscle training
- Ergonomics
- Joint mobilization and manipulation techniques
- Massage and myofascial techniques
- Lymph therapy (manual lymphatic drainage)
- Heat and cold
- Hydrotherapy and balneotherapy
- Light and climate
- Electrotherapy (including functional electro-physiologic stimulation)
- Pharmacological interventions (e.g. pain, spasticity, anti-inflammatory drugs)
- Nerve root blockades and local infiltrations
- Acupuncture
- Nutrition and diet
- Virtual reality
- Nutritional therapy
- Rehabilitation technology including implants, prosthesis, orthoses
- Robots, aids and devices
- Miscellaneous

Miscellaneous

Integrative Rehabilitation Sciences
Description: The Integrative Rehabilitation Sciences design and study rehabilitation systems, services, comprehensive assessments and intervention programmes that integrate biomedical, personal factor and environmental approaches suited to optimize people's performance.

Rehabilitation systems and services research
- Health policy and law
- Rehabilitation economics
- Community-based participatory research
- Miscellaneous

Comprehensive rehabilitation intervention research
- Rehabilitation programme evaluation (e.g. home-based rehabilitation)
- Rehabilitation technology assessment (e.g. tele-rehabilitation)
- Technology transfer
- Patient and proxy education
- Miscellaneous

Rehabilitation administration and management
- Integrated care and service concepts
- Case management
- Structures and processes in rehabilitation institutions
- Miscellaneous

Miscellaneous

Table II. *Contd.*

Human Functioning Sciences
Description: The Human Functioning Sciences are basic sciences from the comprehensive perspective that aim to understand human functioning and to identify targets for comprehensive interventions.
Theory and models of functioning (e.g. disability creation process)
Classification of functioning (e.g. ICF Core Sets; ICF up-date and revision)
Measurement of functioning (e.g. ICF Core Instruments; FIM; operationalizations of ICF categories)
Functioning epidemiology (population-based comparative studies of functioning across conditions, cultures, and time, e.g. on employment of people with disabilities)
Functioning impact assessment (e.g. prediction of the implications of policy and legislation on functioning)
Ethical issues and human rights
Miscellaneous

PRM: Physical and Rehabilitation Medicine; ICF: International Classification of Functioning, Disability and Health; FIM: Functional Independence Measure.

to avoid confusion, which may result from a two-dimensional structure, and for simplicity, all condition-oriented topics representing clinical areas have been assigned to the clinical or professional rehabilitation sciences.

Table I shows the proposed brief list of topics for PRM congresses, suitable, for example, for congress announcements and organizing a congress structure as proposed in the joint letter by Negrini et al. (9). Table II shows the proposed comprehensive list suitable for the abstract submission process.

Considering the importance of the clinical PRM sciences and the main interest of most congress participants, these are mentioned at the top of the list.

The complexity of PRM represented in the comprehensive topic list can be symbolized by the complex transport system of historical Bruges (Fig. 2). Although complex, it corresponded to a culture of trade and human interaction very much in line with the art of rehabilitation medicine, integrating a wide range of directions, professions and stakeholders. Fig. 2 also gives a visual impression of a sense of order that reduces but still depicts complexity. We hope that our proposed list also contributes to bringing order to the complexity of PRM.

Fig. 2. The street system of historical Bruges as a symbol for order in the complexity of Physical and Rehabilitation Medicine. Published with permission from the National Library of Israel (10).

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