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INTRODUCTION

Rehabilitation Treatment Taxonomy: Establishing Common Ground

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Abstract

This article introduces the *Archives* supplement presenting a conceptual framework for the creation of a rehabilitation treatment taxonomy (RTT). It describes the key theoretical and empirical articles and their role, and the commentaries that were solicited. More importantly, based on feedback received to date, it sketches what the RTT is proposed to address, and what it explicitly excludes; therefore, the readers will have appropriate expectations and criteria for what is offered.

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Describing what we do always has been difficult for rehabilitation practitioners. Teaching student clinicians has been very much a hands on experience, and rehabilitation is more lore than well developed theory.[1] One reason for the atheoretical state of reha bilitation may be that we lack a universally accepted set of terms and concepts to talk about rehabilitation treatment, and do not have a carefully developed taxonomy of interventions that was created using these concepts. The fact that natural recovery is ubiquitous, and that getting people activated and teaching them a new routine are the commonsense reactions to what nature does not do, are the reasons theory was never seen as useful.

The aim of this supplement is to start bringing about a change in this situation. It proposes a conceptual framework for a cross disciplinary rehabilitation treatment taxonomy (RTT) that offers terms and concepts needed to talk about treatments, and the start of a classification. The first article by Dijkers et al[2] reviews the various intervention taxonomies existing in health care and the attempts at building classifications in rehabilitation. It also de scribes the benefits to the field of rehabilitation of a commonly accepted classification of treatments.

This article is followed by 4 articles that set forth the key ideas in the conceptual framework that the research group (Dijkers, Ferraro, Hart, Packel, Tsaousides, Whyte, Zanca) has developed. Whyte[3] further develops the distinction between treatment theory and enablement theory that he first drew over 15 years ago.[4] Next, Whyte et al[5] present other crucial concepts in the framework, including ingredients, mechanism of action, and target of treat ment. It is followed by an article by Hart et al,[6] who describes that these notions set forth the idea of the tripartite structure of treat ment theories and starts delineating 4 basic groupings of treat ments that would seem to differ from one another in the ingredients used, the mechanisms of action engaged by those ingredients, and the aspects of functioning of patients that the mechanisms are hypothesized to change. A second article by Dijkers et al[7] takes up a number of difficulties encountered when one attempts to apply the framework to actual treatments. It is strongly suggested that these 4 articles (and the glossary of terms, page A9 of this supplement, and online at http://www.archives pmr.org/) be read as a whole. As our peer reviewers, who gener ally saw only one article, noted, reading only one article brings up questions that likely are answered in one of the other articles. The authors of the successive articles refer to the other articles by our group and sometimes summarize a point carefully elaborated in another article; however, in the end, reading them all as a whole is the only way of getting full exposure to the concepts being proposed.

These articles are followed by 2 more empirical ones. Hart et al[8] report on an earlier attempt to create a reliable classification of traumatic brain injury (TBI) interventions that involve patient learning and the challenges encountered in this process. These

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lessons were used by the present authors in developing their own framework, as were the opinions and experiences of the therapists who took part in focus groups and open ended interviews held by Zanca and Dijkers.[9] All of the latter clinicians had taken part in the TBI and spinal cord injury Practice Based Evidence studies, during which they developed and/or applied ad hoc classifications of interventions commonly used with these 2 diagnostic groups.

These articles are followed by a set of commentaries solicited from scholars with a special interest in the issue of classification, as applied to rehabilitation. Hoenig, who has previously published on the classification of rehabilitation environments,[10] puts the present efforts in the light of prescientific and scientific attempts to classify entities but also takes issue with a number of the de cisions made by the conceptual scheme's authors, especially how environment is treated.[11]

Cieza and Bickenbach[12] endorse the tripartite structure of treatment theories but question whether it is even possible to build an RTT deductively. They suggest that taxonomizing is/should be founded in empirical research; once rehabilitation research pro ceeds from the empirical evidence upward, "a classification would follow as a matter of course."(px)

Fasoli and Chen,[13] focusing on the Zanca and Dijkers study,[9] discuss the advantages and, especially, the challenges of a deductive, theory driven classification for describing the creative and complex nature of rehabilitation practice.

In her commentary, VanHiel[14] focuses on the enablement theory treatment theory distinction, and applies it to published intervention research. VanHiel finds the distinction attractive but questions the ease of applying it in practice.

Finally, Sykes[15] points out the commonalities between the conceptual framework of the RTT and the principles that underlie the International Classification of Health Interventions, currently under construction. Sykes also mentions areas where our conceptual framework and the principles of the International Classification of Health Interventions principles diverge.

The key articles in this supplement were written, revised based on peer review, and accepted over the period of October 2012 to May 2013, and the commentaries were written and revised be tween February and July 2013. The peer review comments and the criticisms and suggestions in the commentaries made clear some of the shortcomings of our ideas, or at least of their presentation. This was underscored by 16 hours of spirited and collegial dis cussion during a workshop with some commentators and others held June 17 through June 19, 2013, in Rockville, Maryland. Ruth Brannon, MA, Mary Chamie, PhD, Alarcos Cieza, PhD, MPH, Rebecca Craik, PhD, Anne Forest, PhD, Rob Forsyth, PhD, BMBCh, MA, Allen Heinemann, PhD, Helen Hoenig, MD, MPH, John Hough, PhD, James Lenker, PhD, OTR/L, Susan Lin, ScD, OTR/L, Mary Ellen Michel, PhD, Susan Michie, DPhil, CPsychol, FBPS, AcSS, Koen Putman, PhD, Joan Rogers, PhD, OTR/L, Margaret Rogers, PhD, Monica Sampson, MA, CCC SLP, Mary Slavin, PT, PhD, Pimjai Sudsawad, ScD, Lyn Turkstra, PhD, Mike Weinrich, MD, Nancy White, PT, DPT, OCS, Marieke van Puymbroeck, PhD, CTRS, and Carolee Winstein, PhD, PT, read the articles and commentaries then available and joined us for a free flowing discussion of strengths and weaknesses of the con ceptual framework, alternatives and extensions, and suggestions for methods in which the RTT can be developed as a resource of and for the entire field of rehabilitation.

We took careful note of the problems they had with the ter minology, the ideas they thought were ready to roll out, and the ideas they believed needed more consideration. Because terms tend to persist long after they have been found to be lacking (eg, each year there still is a handful of articles that use head injury instead of TBI), we prioritized a review of our terms and made several changes. The articles and commentaries presented here incorporate, with the permission of the editors of *Archives* to make post peer review changes, the revised terminology. More sub stantive changes require careful consideration and tryout using real life examples and may be presented in a future publication, along with further RTT issues and developments. It is hoped that many of these will be contributed by *Archives* readers who, whether they agree or disagree with us, consider a framework for a classification of rehabilitation treatments important enough to command their attention.

For now, we want to make sure *Archives* readers see the RTT conceptual scheme in the right perspective. The following para graphs are offered in an attempt to supplement or emphasize what is written in the articles.

First, the conceptual framework limits the scope of the clas sification to be created to what the clinician (therapist, nurse, physician) does to and for the patient, or has the patient do. Everything else—the structure of rehabilitation (in Donabedian's terminology[16]) and all "process," insofar as it is not therapy focused on changing the patient's functioning and personal factors (as defined in the *International Classification of Functioning, Disability and Health* [ICF][17])—is excluded. Our argument is that elements and processes, such as clinician expertise and interdis ciplinary coordination and quality assurance efforts, may influence what is done or not done for a patient; however, only what is actually done can change the patient for the better.[18]

Second, the conceptual framework, illustrated in figure 1, places the therapeutic hour in the context of the entire rehabili tation enterprise. The care of the individual patient is embedded in the rehabilitation program with its structure and coordinating processes, which in turn is part of a larger health care system of care. Clinicians (potentially of many types and with diverse treatment orientations) deliver treatments 1, 2, and 3 aiming to achieve several macro outcomes—maybe self management, physical independence, and acceptance of one's disability, in a particular case. To achieve those, they provide, after an initial assessment, the 3 treatments, confident that they will be able to bring about positive change in the 3 corresponding targets. A feedback loop and continuing assessment are used to make sure that their treatments are achieving those targets and are likely to achieve and maintain the distal outcomes.

Third, the formal assessments undertaken at the start of a rehabilitation episode (admission to rehabilitation) and at interim points to reassess status and formulate new treatment goals, while crucial to the success of treatment, are not considered treatment in themselves and are excluded from the taxonomy. Their exclusion and the exclusion of the whole of clinical reasoning from the scope of a treatment taxonomy were a bone of contention both in the Zanca and Dijkers focus groups[9] and in the workshop.[13] We assert, however, that the role of the RTT is not to describe the decision making process per se, but to provide a means of iden tifying and describing the treatments that result from that process

List of abbreviations:

ICF	***International Classification of Functioning, Disability and Health***
RTT	**rehabilitation treatment taxonomy**
TBI	**traumatic brain injury**