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A Team Approach: Demonstrating Sport Rehabilitation's Effectiveness and Enhancing Patient Care Through Clinical Outcomes Assessment

Sports medicine, and sport rehabilitation in particular, embodies the spirit of the team approach to health care, which has traditionally been framed as the athletic trainer, physical therapist, and physician working together to improve the health of the patient. That team approach remains a vital element of optimizing patient care. However, we would like to propose a new kind of team based not on interprofessional boundaries but on intraprofessional boundaries. This new team consists of a partnership between clinicians, educators, and scholars and is vital for successful evidence-based practice (EBP) and evaluation of patient outcomes.

In the traditional medical model, research is presumed to move in a unidirectional manner from the laboratory, or bench, into clinical practice. The classic paradigm of this approach manifests most frequently in the pharmaceutical industry, where drugs are originally developed and tested in basic-science research labs and then phased into clinical practice through a series of clinical steps that most frequently end once efficacy has been demonstrated and approval to market the drug has been obtained. This thematic issue on clinical outcomes assessment is a perfect follow-up to the recent thematic issue on clinical and translational science published by the *Journal of Sport Rehabilitation*.[1] The editors of that issue emphasized the bidirectional flow of information and highlighted the important role that clinicians must play in clinical translational science. We strongly recommend that anyone interested in this thematic issue on clinical outcomes assessment go back and examine the outstanding thematic issue on clinical translational science. This thematic issue expands on the concepts presented in the clinical translational issue by focusing on an important aspect of the translational continuum: clinical outcomes assessment.

The research enterprise in medicine exists primarily in academic medical centers. However, less than 1% of Americans receiving health care services actually receive their care at academic medical centers.[2] Frequently, bedside studies conducted in this environment are subject to a variety of controls leading to conclusions regarding treatment efficacy (internal validity) but not treatment effectiveness (external validity). For a variety of reasons, bedside efficacy studies do not regularly translate into effective care in usual clinical practice environments.[3] In addition, it is estimated that only 14% of new medical research is translated into clinical practice, and this translation takes an average of 17 years.[4] Clearly, a new approach to producing patient-oriented research that is readily implemented into clinical practice is warranted.

It is interesting that the paradigm of bench-to-practice translation is far less dominant in the sport rehabilitation context, where things often happen in reverse as

new therapies stem from innovative clinicians. The example of accelerated rehabilitation after anterior cruciate ligament (ACL) reconstruction serves to demonstrate how innovation at the point of care sparked research at every level of the clinical translational continuum. Although a great deal of research has been conducted to examine clinician-based outcomes after ACL reconstruction (eg, strength, laxity, range of motion), those measures don't always correlate well to patient-based outcomes. Ultimately, the primary indicators for determining the superiority of accelerated versus standard rehabilitation are patient-oriented measures (eg, pain, function, disability). Significant research has been done to demonstrate the excellent patient-oriented outcomes that can be achieved after ACL reconstruction. However, most comparative research examining ACL reconstruction outcomes has been conducted to examine differences in surgical techniques (eg, patellar tendon vs hamstring grafts). Despite the prevalence of this procedure in sport rehabilitation, systemic reviews and meta-analyses comparing the effectiveness of different rehabilitative approaches from multiple high-quality clinical trials are still lacking. Therefore, little can be stated definitively regarding the optimal rehabilitative strategies for improving patient outcomes after ACL reconstruction.

There is no question that our surgeon colleagues have done a far better job of systematically studying the comparative outcomes of their interventions (ie, various surgical procedures, conservative vs surgical treatment). A fundamental problem with this is that the descriptions of the rehabilitation protocol in surgical outcomes studies usually don't receive more than a passing statement such as "all patients received a standardized rehabilitation protocol." Therefore, at the end of the day, we are left to attribute the outcomes that are reported to the comparative surgical technique and cannot make meaningful inferences about the effectiveness of the rehabilitation protocol. The collective sport rehabilitation world needs to begin producing a much greater body of evidence comparing the effectiveness of various rehabilitative approaches on patient-oriented outcomes. To put this need in perspective, it is worth considering the federal government's emphasis on funding research on the comparative effectiveness of health care interventions.

According to the US Department of Health and Human Services (HHS),[5] "The purpose of comparative effectiveness research (CER) is to provide information that helps clinicians and patients choose which option best fits an individual patient's needs and preferences." Comparative effectiveness research funding in the amount of $1.1 billion was allocated in the American Recovery and Reinvestment Act of 2009 (ARRA). These funds were distributed to the Agency for Healthcare Research and Quality (AHRQ; $300 million), the National Institutes of Health (NIH; $400 million), and the Office of the Secretary of HHS ($400 million). The ARRA created the Federal Coordinating Council for Comparative Effectiveness Research to coordinate CER and compare interventions for improving patients' health and the broader health of our nation. According to HHS,

> These funds are to support research assessing the comparative effectiveness of health care treatments and strategies, through efforts that:
>
> 1. Conduct, support, or synthesize research that compares the clinical outcomes, effectiveness, and appropriateness of items, services, and procedures that are used to prevent, diagnose, or treat diseases, disorders, and other health conditions.

2. Encourage the development and use of clinical registries, clinical data networks, and other forms of electronic health data that can be used to generate or obtain outcomes data.[6]

It is interesting that the phrase *comparative effectiveness research* is being replaced by AHRQ because it was so negatively affiliated with the fictional "death panels" depicted in the media during the health care reform debates.[7] In its place, the AHRQ is using *patient-oriented outcomes research*. This thematic issue on clinical outcomes assessment represents a significant effort to highlight the importance of comparative effectiveness research, or patient-oriented outcomes research, in sport rehabilitation. It is clear from the literature that efforts to more critically examine the effectiveness of health care services are intended to improve patient care and subsequently improve our patients' health-related quality of life.

Determining the most effective treatments for improving our patient outcomes is a daunting challenge for the sport rehabilitation community. This brings us back to our original thesis, that a team approach to engaging in clinical outcomes assessments for the purpose of producing patient-oriented outcomes research is necessary if we want to demonstrate the value of sport rehabilitation services and improve patient care. The field of sport rehabilitation is a multidisciplinary area of practice. Clinicians, educators, and scholars share equal responsibility to assess the outcomes of care provided by our professions.

At the front lines, ensuring that the patients we serve are receiving the most effective care available, are the clinicians who provide health care services. According to Dr Donald M. Berwick, administrator of the Centers for Medicare and Medicaid Services, "Only those who provide care, can improve care."[7] The importance of research occurring at the point of usual clinical care (ie, effectiveness research) is demonstrated through the relatively recent emphasis on practice-based research. Practice-based research is defined as research conducted by providers in clinical practice and that typically occurs in an individual or small group of clinical practices with the overarching goal of improving patient care by improving clinical practice.[4] The primary goal of practice-based research is to study the delivery of recommended care to the right patient, at the right time, and it is critical to identify new clinical questions and gaps in care." Practice-based research represents the final step in the translation of research from the bench to the bedside to clinical practice.[4]

In order to enhance patient care, the effectiveness of a particular patient care intervention or treatment must be established through clinical research, and these findings must then be disseminated and translated back into clinical practice. Ultimately, this process of assessing patient-oriented outcomes for the purpose of determining treatment effectiveness and then translating these findings into practice for clinical decision making serves as the cornerstone of EBP. Currently, many clinicians simply lack the time, training, and centralized support services to aggregate their individual patient outcomes into a broader context that would serve to inform how they will provide care to future patients. Therefore, partnerships between scientists and clinicians to conduct practice-based CER are necessary.

Although the clinician is a vital member of this intraprofessional team, educators also play a key role. For example, in the athletic training profession, a greater emphasis on EBP is going to be made explicit in the new fifth edition of educational competencies. Therefore, educators will teach a new generation of clinicians the

importance of outcomes assessment, the foundation of EBP. Education should occur through several mechanisms, including introduction of concepts in the classroom followed by the translation of concepts to action in standard clinical practice settings where clinicians must be modeling this behavior.[8] The challenge to educators is not only in teaching the concepts but also in creating a practice environment where outcomes assessment is routinely modeled and is a standard component of patient care. Students who never see outcomes assessment modeled in clinical practice will likely fail to adopt a practice pattern that incorporates the routine assessment of patient outcomes. Creating a culture where students are educated through both didactic and clinical experiences, including modeling, will produce future clinicians who value and routinely collect patient outcomes. However, a fundamental element of EBP is collecting and analyzing high-quality, patient-oriented evidence. Generating evidence is where the scholars should play a major role in the team approach to clinical outcomes assessment.

Research scholars must collaborate with clinicians to measure patient outcomes for the purposes of developing valid and reliable instruments appropriate for use in our patient populations and identifying effective treatment interventions. Only through systematic assessment of health care outcomes can we identify the interventions that work most effectively for our patients, which requires a joint effort between the research and clinical communities. In addition, there are concerns that some of the common patient-based outcome measures are not sensitive enough for our high-functioning athlete patients and may have ceiling effects when used with this population. Ceiling effects would decrease the usefulness of an outcome tool by limiting the ability to use it to measure change over time. Some recent investigations suggest ceiling effects with some patient-oriented outcomes instruments when used with athletic populations. Further research is needed to best identify the instruments appropriate for our high-demand patients, and, when shortcomings of tools are identified, instruments must be developed to better meet our patients' needs.

Intraprofessional teams of clinicians, educators, and scholars are integral for demonstrating the effectiveness of sport rehabilitation interventions and improving patient care in the sport rehabilitation realm of health care. Assessment of patient outcomes is important, and each member of the team adds value, whether it is providing patient care that is driven by patient outcomes, preparing future students to be clinicians who value outcomes evaluation and will eventually incorporate it as standard care, conducting investigations to identify effective treatments and intervention, or some combination of these. The creation of intraprofessional teams throughout sport rehabilitation will expedite the development of patient-oriented outcomes research. It's time we all begin to model the team approach of sport rehabilitation by reaching out to a colleague with whom we can collaborate to implement outcomes assessments into clinical practice, teach outcomes assessment in a classroom or clinical environment, or begin to investigate the clinical outcomes of our interventions. The only way to demonstrate the effectiveness of sport rehabilitation services and improve our patient outcomes by improving patient care is to work together as a team.

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Guest Editors

References

1. Merrick MA, Dolan MG, eds. Clinical and translational science in sport rehabilitation. *J Sport Rehabil*. 2010;19(4 theme issue):355–454.
2. Tierney WM, Oppenheimer CC, Hudson BL, et al. A national survey of primary care practice-based research networks. *Ann Fam Med*. 2007;5:242–250.
3. Sung NS, Crowley WF Jr, Genel M, et al. Central challenges facing the national clinical research enterprise. *JAMA*. 2003;289:1278–1287.
4. Westfall JM, Mold J, Fagnan L. Practice-based research—"blue highways" on the NIH Roadmap. *JAMA*. 2007;297(4):403–406.
5. US Department of Health and Human Services. *Report to the President and the Congress on Comparative Effectiveness Research*. 2010. http://www.hhs.gov/recovery/programs/cer/execsummary.html.
6. US Department of Health and Human Services. *Comparative Effectiveness Research Funding*. 2010. http://www.hhs.gov/recovery/programs/cer/index.html.
7. Slutsky J. *Patient-Centered Outcomes Research: Closing the Gaps between Research, Practice and Policy. Agency for Healthcare Research and Quality*. Paper presented at the Association of Schools of Allied Health Professions Annual Conference, Charlotte, NC. October 20, 2010.
8. Snyder AR, Valovich McLeod TC, Sauers EL. Defining, valuing, and teaching clinical outcomes assessment in professional and post-professional athletic training education programs. *Athl Train Educ J*. 2007;2(2):31–41.