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Has the Foundation for Physical Therapy Advanced the Body of Knowledge?

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Has the Foundation for Physical Therapy Advanced the Body of Knowledge?

In June, the Foundation for Physical Therapy (FPT) will celebrate the 25th anniversary of the Marquette Challenge, a nationwide, student-run fundraising effort to benefit physical therapy research. There is much to celebrate. Since its inception in 1989, 165 schools have participated in the Challenge, raising more than \$2.3 million. In the same time period, FPT has awarded 551 doctoral scholarships, 42 research grants, and 17 post-doctoral fellowships. Some of these awards were funded by students through the Challenge; many were made possible by other creative FPT funding initiatives and generous individual donors. These fundraising figures and award tallies are impressive; they also are important because they reflect our profession's commitment to research. However, the real measure of the success of FPT is the extent to which it has helped advance the body of knowledge that informs physical therapist practice. Has there been success in that realm, too?

To gain insight into this question, we examined the quantity and quality of physical therapy literature addressing 3 conditions commonly treated by physical therapists: low back pain, spinal cord injury, and cerebral palsy. The silver anniversary of the Challenge provided a temporal context for this exercise. A literature search—limited to a single database and 3 conditions and using specific search limits*—was conducted in MEDLINE for the 25-year period preceding the Challenge (1964–1988) and for the 25-year window since the Challenge began (1989–2013). Articles retrieved were cross-referenced to a database of all physical therapists funded by FPT. We reasoned that advances in the physical therapy literature—using a single database of articles as an example—would manifest as increases in the quantity of articles retrieved. Moreover, if FPT had a role in enhancing the body of knowledge, then FPT funding could be tracked to published articles.

The results of our MEDLINE searches suggest that the quantity of physical therapy literature has increased considerably in the past 25 years. From 1989 to February 2013, an astounding 2,100 papers on physical therapy for low back pain were identified using our limited search strategy. Two hundred forty-six of these papers were systematic reviews; 564 were randomized controlled trials. According to the Centre for Evidence Based Medicine at Oxford University,¹ the systematic review is the highest form of external evidence examining treatment effectiveness, and the randomized controlled trial is second in this category. Therefore, these observations suggest improvements over the past 25 years, not only in the quantity but also in the quality of research related to physical therapy and low back pain.

Advances in the quantity and quality of the research evidence also are apparent in the areas of spinal cord injury and cerebral palsy. Using only MEDLINE and our limited search strategy, we found that the total number of articles before and after 1988 went from 312 to 1,530 for spinal cord injury and from 411 to 816 for cerebral palsy. The combined number of systematic reviews and randomized controlled trials addressing physical therapy and

* The search strategy in MEDLINE used subject headings “physical therapy modalities,” “low back pain,” “spinal cord injuries,” and “cerebral palsy.” When narrower terms were present within the tree structure, subject headings were exploded. The AND operator was used to combine the subject heading for each diagnosis with “physical therapy modalities.” Limits included the appropriate date range (1964–1988, 1989–2013) and paper type (systematic review, randomized controlled trial, single subject, cohort studies, case-series, case-control studies). Searches were conducted on February 21, 2013.

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spinal cord injury was 2 in the first timeframe and 139 in the second. For cerebral palsy, these values were 7 and 202.

These numbers are similar to the findings of more comprehensive bibliometric examinations of the physical therapy literature.²⁻⁴ In 1990, approximately 20% of articles published in *Physical Therapy* (PTJ) were anecdotal; by 2010, anecdotal reports had disappeared from the journal.² In the same timeframe, the mean evidence index score (a measure of evidence quality) for articles appearing in PTJ rose from 0.63 to 2.8 (maximum=6).^{2,5}

Undoubtedly, many factors have contributed to these advances in the physical therapy literature. Scientists and clinicians from around the globe are contributing to the rehabilitation literature, and funding for their work comes from a variety of sources, certainly not limited to FPT or to Challenge contributions. Yet, we found evidence suggesting that FPT has played a role in enhancing the physical therapy body of knowledge. In our limited MEDLINE search, of all the papers examining physical therapy and spinal cord injury in the past 25 years, 10.9% had at least one author who was funded by FPT at some point in their career. These numbers were 9.0% for cerebral palsy and 9.4% for low back pain. MEDLINE indexes more than 700,000 papers per year, and the studies presented in these articles are funded by sources within and outside the United States, including the National Institutes of Health and the National Science Foundation, which had a combined 2012 research budget of \$37.8 billion. FPT reports an annual research budget of approximately \$525,000. Despite its comparatively modest budget, FPT has had a measurable impact on the rehabilitation literature. This impact is likely due to the FPT's goal of seeding emerging investigators who build their research programs with FPT funding and then go on to successfully compete for larger grants. This practice multiplies the effect of every dollar spent and gives our profession an excellent return on our research investment.

Twenty-five years ago, when the first author of this editorial was a physical therapy student, a teacher told her that it was never appropriate to say that physical therapy works. Coming from a rigorous research background, the teacher was aware that, in 1989, the effectiveness of physical therapy interventions had not been examined systematically. Our review of the literature was not comprehensive; however, our cursory review does begin to tell a story. Today, we advise students to practice in an evidence-based manner, and we provide them with some of the skills needed to apply evidence in practice. Evidence-based practice is integrated into the vision statement of the American Physical Therapy Association and is included in the curriculum of every accredited physical therapy education program in the nation. Students learn to acquire, appraise, and apply the evidence for physical therapist practice. All this is possible because evidence *exists*. And evidence exists, in part, because of FPT.

So, we return to our original question: Has FPT succeeded in advancing the body of knowledge that informs physical therapist practice? There is preliminary evidence to say yes. And the silver anniversary of the Challenge seems an appropriate time to celebrate FPT, the generation of students who have contributed to the Challenge, and all of the FPT's supporters for their role in research progress.

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PTJ Sessions at APTA Conference 2013

2013 Rothstein Roundtable—Medicare Mandate for Claims-Based Functional Data Collection: An Opportunity to Advance Care, or a Regulatory Burden?

Friday, June 28, 8:00–9:30 am

Speakers: Linda Resnik, PT, PhD, OCS, Moderator; Alan Jette, PT, PhD, FAPTA; Mary Stilphen, PT, DPT; Dan Ciolek, PT

The rehabilitation community has been buzzing with activity as clinicians and administrators implement Medicare's mandated claims-based functional data collection. This year's Rothstein Roundtable consists of a panel of administrators and health services and health policy researchers who will debate the potential benefits—and the potential pitfalls—of this regulation. Join researchers and providers to discuss how functional status data collection might ultimately impact the provision of and reimbursement for outpatient therapy services. Participate in the conversation to share your opinions and concerns and to strategize. Can the mandate be an opportunity? The Rothstein Roundtable is named in honor of *Physical Therapy (PTJ)* Editor-in-Chief Emeritus Jules Rothstein, PT, PhD, FAPTA, who believed passionately in the importance of scholarly debate and dialogue.

PTJ Symposium: Advancing the Evidence Base in Rehabilitation for Military Personnel and Veterans

Friday, June 28, 1:00 pm–3:30 pm

Speakers: John Childs, PT, PhD, OCS, Moderator; Alice Aiken, PT, PhD, CD; Helen Brown, PT; Dan Rhon, PT, DPT, DSc, OCS

PTJ's upcoming special issue on military rehabilitation captures the latest research and international perspectives on physical therapy in the military—specifically on the implications of the recent wars in Iraq and Afghanistan for the physical therapy and rehabilitation professions. In this symposium, the authors share some of their research, clinical cases, and evaluations of existing rehabilitation programs and new technologies. As US military personnel return home with a wide array of long-term injuries, this symposium offers insights that physical therapists in all settings can apply to patient care.

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