

Practice-Based Research Networks: Making Clinical Research a Reality in Athletic Training

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Evidence-based practice (EBP) has become a ubiquitous term for athletic trainers (and other health care providers), but further efforts are necessary before we fully implement EBP principles on a profession-wide level. To paraphrase, EBP is a philosophy by which clinicians base their clinical decisions on a combination of the best available research evidence, prior clinical experience, and the goals and values of the individual patients being treated. In order for any professional discipline to completely incorporate EBP principles into the daily practice of its clinicians, systematic advances in both how existing research evidence is integrated into clinical decision making and in the types of research being produced are needed.

Biomedical research is often described as occurring along a 3-item spectrum of basic, translational, and clinical research. *Basic research*, also called bench-top research, comprises laboratory studies on genes, cells, in vitro tissues, cadavers, and animals. According to the tenets of EBP, basic research is at the bottom of the evidence pyramid. Nonetheless, basic research is extremely important for identifying physiologic mechanisms of injury, disease processes, and potential therapies. *Translational research* consists of studies of living human participants in laboratory experiments. To date, this type has by far been the most common type of inquiry performed by athletic training researchers. Although such studies typically produce results that are more clinically relevant than does basic research, they still lack the ecologic validity of studies performed in true clinical-practice settings. *Clinical research* involves the study of actual patients receiving health care interventions from their own clinicians in real-world settings. A common term used to describe this type of research is *clinical outcomes*. The results of clinical research studies should provide clinicians with a higher level of evidence than do the results of translational or basic research. To fully actualize EBP in athletic training, we as a profession must produce more clinical research findings from the different practice settings in which athletic trainers treat patients.

Near-universal agreement exists regarding the importance and value of clinical research derived in real-world athletic training practice settings. As such, the National Athletic Trainers' Association has, through several concerted efforts, emphasized the importance of clinical outcomes research to its members. Unfortunately, the reality is that very few athletic trainers are currently systematically recording their clinical outcomes for entry into a central data repository that can be accessed for

research purposes. Athletic trainers often work in isolation or as part of small staffs at schools and colleges, and the infrastructure to build a clinical outcomes tracking system can (rightly) seem daunting. Thus, the need for multisite clinical outcomes studies that can be conducted through a central data repository becomes obvious. The advent of practice-based research networks (PBRNs) to track athletic training clinical outcomes should provide the necessary infrastructure to allow many more athletic trainers to share their clinical outcomes for research purposes.

In a pair of manuscripts in the current issue of *JAT*, researchers from A.T. Still University thoroughly review the concepts of PBRNs and describe the characteristics of their fledgling AT-PBRN, which is compiling clinical outcomes from secondary school athletic trainers. In their literature review, Sauers et al (Practice-based research networks, part I: clinical laboratories to generate and translate research findings into effective patient care. *J Athl Train*. 2012;47(5):549–556.) provide the theoretical framework of PBRNs and insights into practical issues, such as protection of human participants and patients' personal health information in the context of PBRNs. In the descriptive study that follows, Valovich McLeod et al (Practice-based research networks, part II: a descriptive analysis of the athletic training practice-based research network in the secondary school setting. *J Athl Train*. 2012;47(5):557–566.) report initial clinical outcomes and offer insight into clinical practice trends in the secondary school athletic training setting. It is important to note that, in this article, the authors report data from secondary schools only; however, the AT-PBRN is also gathering data from the collegiate and clinic settings. As clinical outcomes data accumulate, our ability to answer specific clinical research questions will be enhanced. The higher level of clinical evidence provided will allow athletic trainers to more wholly embrace the philosophy of EBP to help guide their clinical decisions.

Other health care professions have established PBRNs as a central part of their commitment to EBP. Examples are seen in orthopaedic surgery (Multicenter Orthopaedic Outcomes Network [MOON]), physical therapy (PTClin-ResNet), and chiropractic (Integrated Chiropractic Outcomes Network [ICON]). The athletic training profession has been espousing the importance of tracking clinical outcomes for decades, but to make substantive progress, we need clinicians en masse to begin contributing their data to athletic training-specific PBRNs. The efforts by

the researchers at A.T. Still University and the clinicians who are already providing data to their PBRN should be lauded for their current work, but the payoff for the profession will come much sooner if more athletic trainers

contribute. Go to www.coreat.org/PBRN to learn more about the AT-PBRN, including details on how you can become involved. Consider this an open invitation to participate!

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