

Guide to Evidence-Based Physical Therapist Practice

Second Edition

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PREFACE

My original goal for writing this text was to create a single, user-friendly resource for physical therapy students and physical therapists learning to apply evidence in routine clinical practice. I wanted to make the evidence-based physical therapist practice (EBPT) process accessible *and* relevant—which sounded simple enough until I started putting fingers to keyboard! Typical of a naïve first-time author, finishing the first edition gave me satisfaction and relief in equal measure. The enthusiasm with which students and colleagues have responded to the work, however, has been overwhelming and humbling. Their validation that the text delivered on its intended purpose was the only motivation I needed to commit to an updated version. Their thoughtful feedback provided important direction for the enhancements described here.

Guide to Evidence-Based Physical Therapist Practice, Second Edition remains faithful to my original objective. Consistent with the First Edition, this text contains chapters that provide sufficient information about research methods to allow the nonresearcher to understand and evaluate research designs as well as chapters that specifically outline the evidence appraisal process. This second edition also retains the format of the first edition. Content is organized into four sections and incorporates the patient/client management model described in the American Physical Therapy Association's *Guide to Physical Therapist Practice*, Second Edition. Features designed to facilitate learning—such as key terms at the beginning of each chapter and exercises at the end of each chapter—are preserved. Sample evidence appraisal worksheets also remain. Finally, the examples included throughout the text continue to be specific to physical therapist practice and are frequently drawn from contemporary published research.

Part I: Principles of Evidence-Based Physical Therapist Practice

Part I is comprised of three chapters that set the stage for the use of evidence in patient/client management. Chapter 1 addresses the history behind the evidence-based practice movement in health care, the various labels and definitions used to describe this approach to patient care, and barriers to its application in real-time clinical practice. An important contextual change to this material is the adoption of the World Health Organization's

International Classification of Functioning, Disability and Health in lieu of Nagi's disablement model.

Chapter 2 examines the nature of evidence and its different forms, including the uses and limitations of hierarchies structured according to the quality of different study designs. Updated examples of "levels of evidence" rating criteria are included here. The key point remains that different research designs are suited to answering different types of clinical questions therapists may have about their patients/clients.

Chapter 3 guides readers in the development of clinical questions that are the start of the EBPT process. The types of clinical questions have been expanded to include those pertaining to clinical measures and clinical prediction rules in addition to the original material discussing questions about diagnostic tests, prognostic indicators, interventions, outcomes, and self-report outcomes measures relevant to physical therapist practice. Strategies for locating studies are described with an emphasis on the use of scientific and medical electronic search engines. Updated information about and screenshots of five of the most commonly used search engines are provided.

Part II: Elements of Evidence

The first four chapters of Part II review the different components of a research article with an emphasis on the features that enhance or diminish a study's quality. The goal is not to teach readers how to become researchers; rather, it is to increase their understanding of and confidence with what they are reading. Readers are referred to the seminal research methods texts cited throughout these chapters if they desire additional detail about the development and execution of various research design elements.

Chapter 8 is devoted to a discussion of research validity—a key consideration in the evidence appraisal process. This chapter has been expanded to differentiate the validity concerns for evidence pertaining to the different elements of the patient/client management model.

Chapter 9 is an attempt to demystify the most intimidating feature of research for many readers by illustrating the parallels between statistical tools and the instruments used in clinical practice. The tables in this chapter have been reformatted to make it easier to identify the relevant information about each statistical test listed. An important point remains the challenge of balancing statistical significance with clinical relevance.

Part III: Appraising the Evidence

Part III has undergone the most significant change in the second edition. Chapter 10 has been expanded to differentiate more clearly between the appraisal processes for evidence about diagnostic tests and clinical measures. Chapters 11 and 12 continue to focus on the evidence appraisal process for research about prognostic factors and interventions, respectively.

Chapter 13 in the first edition addressed the evidence appraisal process for studies about outcomes. This material has been moved to subsequent chapters and replaced by a

discussion of the evidence appraisal process for research about clinical prediction rules. The new information was added in response to the gradually increasing prevalence of clinical prediction rules relevant to physical therapist practice.

Chapters 14 and 15 now contain material pertaining to the evidence appraisal process for outcomes research and studies about self-report outcomes measures, respectively. The original combination of this material into one chapter proved a bit cumbersome for me and for my students. To my knowledge, the inclusion of this content remains unique to this text.

Chapter 16 (originally Chapter 14) focuses on the appraisal of summaries of evidence in the form of systematic reviews and clinical practice guidelines. Updated consensus statements regarding the quality standards for these types of evidence are provided here.

All of these chapters benefit from updated examples of published research as well as clarifying revisions to the critical appraisal worksheets. The worksheets in Chapters 13 and 15 are new. The underlying principle that remains throughout is that EBPT requires students and clinicians to work with the best available evidence that, often times, is weakly designed. Physical therapy research still has a long way to go to address with sophisticated methods all of the questions we have about the wide variety of patients/clients with whom we work. Until such studies are completed, readers must determine for themselves whether the evidence they locate is useful *despite* its limitations.

Part IV: Evidence in Practice

Part IV refocuses on the application of evidence in the context of patient/client management. Chapter 17 (originally Chapter 15) considers the challenge of integrating evidence with patient/client values and preferences in the context of ethical decision making and patient-centered care. The influence of subjects' values and preferences on study outcomes, and efforts to conduct trials that address these challenges, also are discussed. New information regarding the use of paper and electronic decision aids is included.

Chapter 18 (originally Chapter 16) ties all of the material together through the use of hypothetical patient/client scenarios. The scenarios illustrating the use of evidence about diagnostic tests, prognostic factors, interventions, and outcomes research have been retained from the first edition, as has the scenario regarding the use of physiologic evidence. New scenarios illustrating the use of evidence about clinical measures and self-report outcome measures have been created.

The caveats that I stated in the preface to the first edition remain true today. The inclusion of particular studies for use as examples in this text does not imply superior quality over other choices I may have made. Similarly, these articles are not intended to reflect standards of practice to which readers should adhere. Readers must decide for themselves whether these studies are useful and relevant on their own merits.

I also want to reemphasize my original closing remarks. Regular practice is essential in order to increase the efficiency and effectiveness of the EBPT process. The classroom provides the necessary structure for this skill acquisition and application whereas the clinical practice environment may prove less accommodating. My sense, however, is that the culture

is shifting—an increasing number of my professional and post professional students indicate active and creative incorporation of EBPT in “real-world” clinical practice settings. We must maintain that momentum if we are to fulfill our professional aspirations and deliver on our promises to our patients/clients. My hope is that *Guide to Evidence-Based Physical Therapist Practice*, Second Edition will help us do both!

ACKNOWLEDGMENTS

The momentum for this update has been stimulated and sustained by the generous feedback of my colleagues who have adopted the text for their courses or for use in their clinical practices. Your comments have confirmed that my reasons for writing this book in the first place were shared by many of you. I'm honored and humbled by your support. Students also should be recognized for their input because in the end, they are the real test of a textbook's success! Thanks also to my Jones and Bartlett Learning editorial team, Maro Gartside and David Cella, for continuing to have faith in my ability to produce a meaningful piece of work, even if I'm not always on top of my e-mail! Finally, I must give a shout out to my family and closest friends and colleagues who withstood another round of intense focus and occasional mania while I was engaged in this effort. I'm quite sure I can't thank you enough for hanging in there with me, but I will try!

