Book review

Measuring Walking: A Handbook of Clinical Gait Analysis:
Richard Baker, Mac Keith Press, 6 Market Road, London, N7
9PW, 2013, ISBN: 978-1-908316-66-0, Paperback, 246 pp.

Methodologies and the application of human movement analysis have undergone remarkable expansion and advancement in recent decades. As a result, a challenge for practitioners of clinical gait analysis is to deliver a standardized evidence-based measurement service to patients within a dynamically changing field. The book, Measuring Walking: A Handbook of Clinical Gait Analysis by Richard Baker, provides a comprehensive description of a standardized method for performing an impairment-focused form of clinical gait analysis.

The scope of this book is that of a practical guide. It contains 15 chapters and two appendixes. The introduction begins with a brief historical perspective, introduces the concept of clinical gait analysis and ends with foundational concepts which serve well to frame the remaining chapters. Next, the reader is introduced to basic measures, graphing conventions, data scaling and how gait speed influences variable magnitudes. A central theme of the effort, "the conventional gait model" is detailed in text and depicted using a series of figures while a practical guide for using the conventional model and hints on how to collect data round out chapter three. Prior to reviewing electromyography, in consultation with Adam Shortland, alternative models and advanced processing techniques are overviewed.

Going much further than traditional gait analysis manuals, this book contains practical aspects of the physical examination, in consultation with Pam Thomas and Jill Rodda and a review of general measures of walking ability including gait indexes. Chapter 10, which explores relationships between clinical measures and gait analysis data, serves as a launching pad as it introduces key concepts behind the book's impairment-focused form of clinical gait analysis. Next, a review of quality assurance measures serves as a well-positioned cognitive tether prior to introducing the reader to the realm of interpretation and reporting of gait data, written in consultation with Jennifer McGinley, Fiona Dobson, and Pam Thomason.

Taking advantage of the materials in chapter 10, the interpretation and reporting chapter covers a breadth of topics including general principles, the four stages of impairment-focused interpretation, example reports and the process of treatment recommendation. In consultation with Jennifer McGinley, concepts pertaining to accuracy and measurement variability provide the reader with insights into comparing gait analysis results to normative data and factors to consider when comparing serial clinical gait studies from a single subject. Useful insights into setting up a clinical gait analysis service and how to set up and maintain a gait analysis laboratory serve as the bookend to a series of informative, well balanced and practical chapters.

This book serves as a useful guide for novice technical staff, clinicians and administrators who aspire to establish and maintain clinical gait analysis services. Experienced staff hailing from well-established clinical gait analysis centers and academics will discover passages containing enlightenment as well as material for healthy discussion and debate. The strength of this book lies in the comprehensive and thoughtful manner in which technical and clinical aspects of clinical movement analysis unite to form a conceptual roadmap for the implementation of a clinical gait analysis service.

As a practical guide, this book falls ever so slightly short of its lofty mark. Example documents that would support a clinical gait service, such as forms to facilitate the referral of patients, document the physical examination, record key aspects of gait trial collections, serve as a template report and clinical recommendation, document gait data archiving, and streamline the process of billing for service would form a useful addition. Inclusion of materials that inform the reader on how to overcome barriers resulting from the financial challenges with funding a clinical gait laboratory and the various approaches, within the world's healthcare systems, one might effectively employ to overcome those challenges would also serve as informative and useful discussions.

In summary, Measuring Walking: A Handbook of Clinical Gait Analysis provides the reader a conceptual framework and comprehensive methodology for executing an impairment-focused form of clinical gait analysis. This book effectively captures decades of experience and knowledge and offers a no-nonsense, practical approach for navigating through the complex and often controversial field of biomechanics towards the establishment of a standard clinical gait analysis service.

Steven J. Stanhope *
University of Delaware, Kinesiology and Applied Physiology,
5 Innovation Way, Newark, DE 19711, United States
E-mail address: stanhope@udel.edu

31 August 2013

* Tel.: +1 302 831 3496.