

## Tishya Wren, Ph.D.

Many advances have been made in the study of human movement, particularly in terms of technical development and research sophistication. However, much less progress has been made in translating this work into clinical and real-world applications. I believe that even under the status quo significant progress will continue to be made in laboratory-based research. The area that needs to be strengthened with new approaches and increased emphasis is translating these research developments so they can positively influence clinical care, function, and participation. Towards this end, the following recommendations are proposed:

Recommendation 1: Develop specific implementations of **research methods** that easily interface with the processes and procedures already in use in clinical settings.

Clinicians are busy attending to their clients and keeping their practices running. They often do not have the time, resources, or expertise to adopt new methods or technology that requires even moderate changes to how their practices operate. To facilitate the adoption of new biomechanics methods and technologies, they must be “packaged” in a format that is easy to incorporate into the existing practice. For example, instead of simply publishing a new algorithm for estimating injury risk, the developer could provide a module that calculates the risk index within the users’ existing software. This extra step would make it much easier to adopt the new method and thereby increase the likelihood that it actually be used outside the research setting. Such easy-to-adopt implementations will become especially important as research leads to increasingly complex methodologies, such as those required for multi-scale and image-based modeling.

Recommendation 2: Communicate the essence of **research findings** so they can be understood by clinicians and lay people.

One of the barriers preventing effective translation of research findings into clinical practice is the failure to clearly communicate a “take-home” message that clinicians and lay people can apply in their practices and lives. This is particularly true if the research uses methods that fall outside of the clinician’s own area of expertise and training, as is often the case with today’s interdisciplinary research. As researchers, we tend to focus on methods and details since these need to be presented to our colleagues. However, those less specialized can get bogged down in these details and miss the big picture. If research findings can be summarized in a simple manner, presenting a clear “take-home” message, their importance is more likely to be recognized and incorporated into clinical practice. Once the main message has been understood, clinicians would be better equipped to examine the subtleties related to the overall finding.