From the Editor-in-Chief's Perspective ...

Welcome to the *International Journal of Massage and Bodywork* (IJMTB)—a journal intended to be a resource for researchers, educators, and practitioners. I have fostered interactions among these three sometimes disparate groups in the fascia research congresses that I organized [Boston 2007 and Amsterdam 2009 (www.fasciacongress.org)]. It is my sincere hope that individual papers in this journal, while focusing on one of these areas, will cover implications for the other two. The integration of these three areas is the path to the most challenging and rewarding advances.

Most writers are accustomed to giving their papers to a colleague to read before they submit those papers to a journal. I encourage authors to seek colleagues in two or three of these other areas *before* they write or complete a research project. Ask those colleagues to participate in the design of the project or the analysis of the data, to write a portion of the manuscript, and to critically review the entire manuscript (taking account of authorship requirements[1]). Lest I scare off the clinicians and educators, let me state my belief that *every* paper contains data, if only the details of a course and the number of students taught, or a description of a clinical treatment and information about the person giving and receiving it. Similarly, every research paper carries implications for clinical practice.

Let me provide a few examples of how you might proceed.

A researcher could prepare a summary of the proposed research and ask a clinician for reactions concerning the information that the final paper should contain if it is to provoke the most direct application to clinical practice. The result might be the collection of just a little more data for the project.

A clinician preparing a case study could involve an educator to comment on how the case might affect student training, or a researcher to suggest projects that might follow from the report. Both advisors might suggest mechanisms by which the results in the case report were obtained, and this process might again lead the author to collect a little more information than would otherwise have been the case.

Our journal has established separate review sections for articles in research, education, and clinical practice. In each section, reviewers have expertise covering all three areas. As a result, authors will face thought-provoking questions that are designed to help them improve their manuscripts. For the novice author, this questioning can be daunting. Authors won't be expected to be able to answer all the questions raised by the reviewers; authors are just asked to think about the questions and either to incorporate them or to explain any disagreement. The questions raised by the reviewers will be precisely the types of questions that other readers will have, and so it helps to indicate in the paper the issues that were thought through in the process of writing.

Because the goal of our journal is to present papers from each of the three disciplines to readers in each of the three disciplines, let me dispel a few myths each group may have about themselves and each other:

- **Myth 1:** The common perception is that clinicians do not do research. In fact, every new client is a single-case research project. The clinician examines the patient, makes a hypothesis about what will help, provides the intervention, and then evaluates the results.
- **Myth 2:** In contrast to practicing clinicians, scientists are perceived as always being rational and numbers driven, when actually they face multiple choices, lack clear data on how to proceed, and must make intuitive choices. Dr. Peter Huijing, a physiologist sponsoring the Second International Fascia Research Congress, put it very succinctly: "I am just as intuitive as [the clinician] when I make my choices—the difference is that I get to collect data to prove my choice right or wrong."

But why would clinicians want to go to the effort to collect data when they have clearly observed that the patient is improving?

It may indeed be the case that the person has improved as a result of the clinician's treatment. However, the clinician will need help from researchers to find out whether other factors may also exist. And the answer is important both to the clinician and to educators:

- There was no change at all; the practitioner just thought that a change occurred. People are very good at seeing patterns (witness the speed of facial recognition or of voice recognition from a few words). But psychology experiments clearly demonstrate that people see patterns where in fact no pattern actually exists.
- The client was showing random fluctuations in function. Any extreme measurement is likely to be followed by a less extreme measure. In science,

this fluctuation is known as regression toward the mean.
- The client did indeed improve, and the condition would have improved with just the passage of time. It is possible that the client's own healing mechanisms were at work all along and that they are responsible for the change, which would have unfolded in the same way without treatment.
- The client did indeed improve—because of something else that happened at the same time as the massage treatment.
- The treatment itself was not effective, but the "natural healing response" or a placebo reaction was elicited by a combination of the client's and the therapist's expectations.
- The client is indeed better as a result of the manual therapist's intervention, but the aspect of therapy that was effective is *not* what the therapist thinks it was.
- The client would have improved just as much with less treatment (30 minutes instead of 60 minutes, once weekly rather than twice weekly).
- The intervention must be carried out exactly as practiced by the clinician; any change in treatment protocol results in less or no response.
- The client would have improved even more if the treatment had been changed slightly.

Researchers need the clinical observations of massage therapists just as badly as therapists need researchers. The history of medicine is replete with astute clinical observations that have led to major scientific breakthroughs. The classic example in public health is one physician's observation that cholera cases in London were directly related to the distance a person lived from a certain public well[2]. This observation was made at a time when microbiology did not yet exist. It was based on a theory of intestinal involvement that had been developed by the clinician 10 years earlier and that differed from the accepted theory of disease transmission by inhaling vapors. The insight led to a rapid resolution of the epidemic by removal of the pump handle, but it was many years before the causative agent was identified.

Educators need clinicians and researchers alike. Clinical practices are established over time, but rote acceptance of established practice can limit the ability to improve the therapy. Effective and some ineffective aspects may both have persisted, with no means of telling the difference. It is the systematic approach of science that allows these aspects to be separated.

- **Myth 3:** Numbers are incorrectly perceived as always being objective and the collection of numbers as synonymous with doing science. More decimal places are seen as more accurate, and statistics are viewed as providing the right answer.

Statistical significance is an artificial construct, which is confused with clinical significance. By definition, statistically significant results can occur by chance (p levels of .05 signify 1 in 20 times), and a lack of statistical significance does *not* mean that the hypothesis is not true. Especially in small clinical studies, just a little more data may be required. Furthermore, people assume that if something is published, it must be true.

One of my goals for this journal is to assist students and practitioners in the field of bodywork to learn a minimum competency—to develop the ability to locate, understand, critically evaluate, and apply research evidence into clinical practice. In this way, the practitioner can remain current and provide better care to his or her clients. Our founding editor, Dr. Hymel, has developed a basic course on research methods with guidance for faculty, which comes in 6–, 15–, and 24–class hour versions[3]. The course will interest practitioners who want to read research reports, undertake literature reviews, write case studies, participate in a research team, or conduct their own research.

My goal for you, the reader, is that you develop skills sufficient to examine the data in a published article and decide if you reach the same conclusions as the authors do. Three key details are found in high-quality research reports of human clinical studies, and if you find these details, you can generally rest assured concerning the remainder of the study design:

- **Randomization:** The specific method of randomization should be described (for example, a table of random numbers, drawing a number from a hat).
- **Experimenter blinding:** A description is given of the steps taken to prevent both the experimenter and the personnel measuring the research outcome from finding out the group to which the subject has been assigned.
- **Sample size calculation:** Before the experiment begins, the sample size needed given the expected effect of the intervention is calculated.

Clinicians and educators may feel overwhelmed at this point, thinking that a research perspective is too difficult to grasp. To make research accessible, I authored a series of 12 articles for clinicians, "Physiatric Research—A Hands-On Approach," which was a special supplement to the *American Journal of Physical Medicine*[4–15] and is now available online at no charge(http://www.physiatry.org/Research_Articles.cfm). These articles may be of additional support to readers newer to the research process. Article I guides the researcher on how to ask the research question (descriptive, normative, or cause-and-effect). Remember, if the question is not well formulated, it does not matter how well the study is designed. Article II, the conceptual literature review, will be useful in making sense of the vast amount of medical literature now available. Article III shows how existing clinical data can be used for exploratory retrospective studies, and ar-

ticle IV sets out some practical research designs. Articles V, VI, VII and VIII detail how to set up data entry, project management, and other tasks expected of the principal investigator, including preliminary examination of data before analysis. Article IX focuses on data analysis: to read most medical research publications, you need some familiarity with just a few statistical tests.

Many journals have a checklist used by reviewers for submissions. I have modified the checklist used by the *British Medical Journal*[16] so that it can be used before a study is started and during development of the project. Using the checklist may make writing up the results much easier. The checklist questions are these:

- What is the purpose of the study?
- Will the study design achieve the stated objectives?
- What is the source of the subjects?
- Given the sample size, how large a difference in the key hypotheses is likely to be able to be detected?
- What is the response rate?
- What are the references for the statistical procedures used?
- Are the statistical analyses appropriate?
- How will the material be presented?
- How will confidence intervals for the main results be calculated?
- How will conclusions be drawn from the statistical analyses?

I encourage all readers and writers to contact the section editors with their questions. No question is too simplistic or too large. If you are unsure of some issue, there are probably many others with the same question who have just not spoken up. We will do our best to address these issues individually and in a more global way by providing reference materials or changes to the journal's submission guidelines.

Again, I recommend that all prospective authors consult the guidelines for biomedical articles[1]. I have assisted many students at all levels of preparation, and the most succinct advice I can give is this: You need at least four people on your team. Actually, at any given time, three are sufficient to keep momentum going, but having four allows for vacations and other responsibilities to encroach. And it is good to seek people from outside your own discipline. Scientists will find clinicians eager to share clinical observations needing testing, and clinicians will find scientists with ideas and no access to patients. You may be surprised, but most individuals do answer their telephones to speak with someone interested in their work.

In conclusion, I am excited to have every one of you with me on this new journey to bring educators, clinicians, and researchers together to explore massage and bodywork—challenging, confirming, and broadening what we know, and in the process, educating ourselves in an interdisciplinary manner. I look forward to leading this effort and being in close touch with you online in this first year of our journal and in person at the next fascia research congress in Amsterdam, Netherlands, October 27–30, 2009 (see the announcements section of this issue of IJMTB). Special post-congress workshops for clinicians will be held the day after the scientific congress, and time will be allocated for questions from clinicians after each scientific presentation during the congress. I leave you with an outline to help newer authors know what each article should cover, and I have provided a few key questions to consider:

- **Abstract and keywords:** What is the most important information for your reader?
- **Introduction:** What is the question you are trying to answer? How does your paper relate to other published papers?
- **Methods:** How were people included in your article? How many people did you exclude? How did you collect your information?
- **Statistics:** How confident are you that you have come to the correct conclusion?
- **Results:** Can you plot all data points in a graph in addition to mean and standard deviation?
- **Discussion:** How do you interpret your results in the light of other knowledge? Are other explanations possible? What does your paper suggest for future inquiry?

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COMPETING INTERESTS

The author declares that there are no competing interests.

REFERENCES

1. International Committee of Medical Journal Editors (ICMJE). *Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication.* ICMJE website. http://www.icmje.org. Published n.d. Updated October 2007. Accessed June 23, 2008.
2. Brody H, Rip MR, Vinten-Johansen P, Paneth N, Rachman S. Map-making and myth-making in Broad Street: the London cholera epidemic, 1854. *Lancet.* 2000;356(9223):64–68.
3. Hymel GM. *Research Methods for Massage and Holistic Therapies.* St. Louis, MO: Elsevier Mosby; 2006.
4. Findley TW. Research in physical medicine and rehabilitation: I. How to ask the question. *Am J Phys Med Rehabil.* 1988;68(1):26–31.
5. Findley TW. Research in physical medicine and rehabilitation: II. Reviewing the literature, or how to read more articles than you every want to see in your entire life. *Am J Phys Med Rehabil.* 1989;68(2):97–102.

6. Findley TW, Daum MC. Research in physical medicine and rehabilitation: III. The chart review, or how to use the clinical data for exploratory retrospective studies. *Am J Phys Med Rehabil.* 1989;68(3):150–157.
7. Riley R, Findley TW. Research in physical medicine and rehabilitation: IV. Some practical applied research designs. *Am J Phys Med Rehabil.* 1989;68(4):196–201.
8. Findley TW, Stineman M. Research in physical medicine and rehabilitation: V. A practical approach to data entry and early exploratory analysis. *Am J Phys Med Rehabil.* 1989;68(5):240–251.
9. Findley TW, Daum MC, Macedo JA. Research in physical medicine and rehabilitation: VI. Research project management. *Am J Phys Med Rehabil.* 1989;68(6):288–299.
10. Findley TW, Daum MC, Stineman M. Research in physical medicine and rehabilitation: VII. The principal investigator. *Am J Phys Med Rehabil.* 1990;69(1):39–45.
11. Buchner DV, Findley TW. Research in physical medicine and rehabilitation: VIII. Preliminary data analysis. *Am J Phys Med Rehabil.* 1990;69(2):154–169.
12. Findley TW. Research in physical medicine and rehabilitation: IX. Primary data analysis. *Am J Phys Med Rehabil.* 1990;69(4):209–218.
13. Davis A, Findley TW. Research in physical medicine and rehabilitation: X. Information resources. *Am J Phys Med Rehabil.* 1990;69(5):266–278.
14. Findley TW, DeLisa JA. Research in physical medicine and rehabilitation: XI. Research training: setting the stage for lifelong learning. *Am J Phys Med Rehabil.* 1990;69(6):323–329.
15. Johnston MV, Findley TW, DeLuca J, Katz RT. Research in physical medicine and rehabilitation: XII. Measurement tools with application to brain injury. *Am J Phys Med Rehabil.* 1991;70(1):40–56.
16. Gardner MJ, Machin D, Campbell MJ. Use of check lists in assessing the statistical content of medical studies. *Br Med J (Clin Res Ed).* 1986;292(6523):810–812.