Clinician's Commentary on Lacey et al.¹

Few would question the importance of ensuring that graduates of entry-to-practice training programmes have the knowledge, skills, and attitudes to use research in their clinical decision making and as part of evidence-informed practice. However, how these scholarly practitioner competencies² are best acquired, and whether the learning outcomes result in better quality, effective care, are critical questions for educators. In their *Physiotherapy Canada* article, Lacey and colleagues¹ not only demonstrate the knowledge and skills they obtained by conducting research as students but also offer insight into how student research projects can contribute to the physiotherapy profession. By analyzing the research projects that students undertook and the impact of these projects as perceived by the project supervisors, Lacey and colleagues¹ conclude that the students' research increased their supervisors' research productivity and capacity as well as their ability to supervise graduate students. In an era in which dedicated time for research is rare, building capacity through student projects offers many benefits. Supervisors deemed student research projects to have an impact on clinical practice, knowledge translation, postgraduate and clinical education, and health policy.

Lacey and colleagues¹ defined *impact* as the use of research findings in the field and the completion of projects or activities. Granted, measuring the impact of research is not an easy feat; however, measuring the outcomes of student research should consider the overall objective of being a scholarly practitioner: "committed to ongoing learning for the purposes of improving client outcomes through seeking, creating, applying, dissemination and translating knowledge to physiotherapy services."^{2(p.13)} Engaging in research as a student may lead to improved use of research evidence in clinical decision making,³ thereby improving client outcomes; however, physiotherapists are also known to be inconsistent in the use of evidence in their practice.⁴ Academic institutions can make participation in student research projects mandatory, but the actual impact on clinical practice of using entry-to-practice skills acquired or project outcomes continues to be debated.^{4,5}

The gap between research and practice is being addressed by applying multiple strategies, such as dissemination practices (e.g., knowledge translation) and implementation science. Although integrating research into health care practice is critical, effectiveness remains only one element of quality care. In its report *Crossing the Quality Chasm*, the Institute of Medicine⁶ advocated for a shift toward a culture of measuring and reporting for learning and improvement. As the cost of health care rises exponentially and every decision has an opportunity cost,⁷ measuring impact through sustained improvements is as important as the pre-post effectiveness that constitutes most clinical research. Taking a quality improvement (QI) approach to measuring impact (*quality improvement* is a systematic approach to making changes that improve clinical practice and health system performance, enhance professional and/or organizational development, and improve patient and population health outcomes,"^{8(p.4)} differing from research in which the intent of research is "to extend knowledge through disciplined inquiry or systematic investigation"^{9(p.5)}) provides greater opportunity to make positive changes in the health care system—one that affords better uptake of the evidence.^{4,10}

Opportunities for improvement become obvious when one can identify the gap between practice and research evidence. Equipping graduates of entry-to-practice programmes with knowledge and skills in the area of QI has the potential to improve the integration of research evidence by improving the system. With this in mind, one university programme has shifted the student requirement away from conducting research and toward QI projects. Students continue to learn the fundamental knowledge and skills for evidence-based practice, such as critically appraising the literature, that form the backbone of measuring quality and change in practice. With an understanding of the dimensions of quality care (safe, timely, effective, efficient, equitable, and patient-centred),⁶ students can work with clinicians to identify a quality gap; establish measures; and then identify, test, and implement changes. Many readers will be familiar with the Plan-Do-Study-Act model.¹¹ Given that the majority of graduates of physiotherapy training programmes go into clinical practice, not research, QI skills may prove to be more important than learning how to complete ethics applications and other research-specific skills.

Lacey and colleagues¹ are to be commended for their solid research into impact and for challenging us to consider what engaging in scholarly inquiry looks like for each of us and how we measure impact in our daily practice. For the physiotherapy profession to lead the change in an evolving health care system,⁷ it is imperative that impact be measured through the lens of continuous QI: better patient outcomes, better system performance, and better professional development.¹⁰

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