Clinician's Commentary on Richards et al.¹

Changing clinical practice is challenging. Health care professionals and researchers are just beginning to understand some of the factors that can influence the behaviour of individual providers, let alone health care teams; organizations; and provincial, national, and international networks.^{2,3} We use this understanding to develop strategies that will foster consistent and appropriate application of recommended health care practices,⁴ such as the use of standardized assessment tools.

Richards and colleagues¹ took on this challenge when they designed an intervention to help physical and occupational therapists integrate 25 standardized assessment tools in three inpatient stroke rehabilitation settings. They carefully orchestrated an intervention that included engagement of rehabilitation providers to identify the tools and a timeline for their administration, assessment manuals, clinical champions who led local education and training sessions, and use of a data management software called REDCap⁵ supported by the provincial health ministry to enable data access for analysis. The research team ensured equipment and space were sufficient at each site, thus removing these factors as barriers to implementing the tools. After a trial period to improve familiarization, they asked rehabilitation providers to implement the 25 standardized assessment tools and document their use.

Richards and colleagues¹ focused their analysis on physical and occupational therapists' adherence to 12 of the 25 measures. They observed an impressive level of use of the majority of the standardized assessment tools. For instance, in a sample of 264 inpatients post-stroke, 88%–90% were administered the Berg Balance Scale and a shoulder pain rating scale; 63%–72% were administered the Chedoke-McMaster Stroke Assessment's Impairment Inventory and 10-metre walk test – comfortable pace; and near 50% were administered the 10-metre walk test – fast pace, 6-minute walk test, Box and Block test, and nine-hole peg test. The authors commented that the multifaceted approach probably ensured administration of these tools.

Reflecting on previous reports, the high percentage of therapists using the 10-metre and 6-minute walk tests in Richards and colleagues¹ study is indeed impressive because self-reported use of these measures in 2005 was low: 14.8% and 11.1%, respectively.⁶ In contrast, much higher percentages of therapists have previously reported using the Berg Balance Scale (83.5%)⁷ and the Chedoke-McMaster Stroke Assessment (61.1%),⁶ rates that are similar to those observed by Richards et al. These self-reported rates may have been vulnerable to over-reporting, as Richards et al. point out.

Nevertheless, these comparisons raise a number of questions. It is known that context⁸ (e.g., existing resources, practices, and leadership of an organization) can influence practice change and that therapists tend to use measures they are familiar with.⁹ Thus, it would be interesting to know which of the measures in Richards and colleagues¹ were familiar to therapists and how frequently these measures were used before the intervention phase. These data would help to shed light on whether the multifaceted intervention potentially reinforced practice for some measures and improved practice for others. Moreover, it would be interesting to know the characteristics of the participating

hospital settings, specifically, the size and affiliations of the hospital, and the nature of the relationship between the researchers and the therapists. This information would help the reader understand the resources and relationships that may have influenced practice and to imagine whether similar results could be achieved in their own hospital settings.

In addition to context, details about the intervention or implementation strategy would help readers better understand how the intervention could have helped to foster clinical practice change.¹⁰ Multifaceted interventions, such as the one applied by Richards and colleagues,¹ are considered complex,¹¹ and each component is designed to play a role. The toolkit was one component intended to improve knowledge about administration and scoring. Rehabilitation professionals want to have a core set of assessment tools, and they prefer brief instruction manuals on application, scoring, and interpretation.¹² It would be interesting to know the format of the assessment manual used in Richards and colleagues and how it was made available to therapists (e.g., print, electronic, integrated into an electronic health record system) to inform the science of designing toolkits.¹³ The authors also described the clinical champion at each site as having a key influence. Efforts have been made to improve understanding of the role and influence of clinical champions, defined as individuals who are respected and valued by colleagues.¹⁴ This makes information about the qualifications of and process for selecting clinical champions in research important.

The tremendous efforts made by Richards and colleagues¹ have proven that it is possible to develop the standards and infrastructure across three organizations with provincial government support in order to achieve consistent use of standardized assessment tools to provide data for monitoring quality and conducting research in stroke rehabilitation. The success of their efforts makes the reader want to understand the mechanisms by which it was achieved. By embracing the field of implementation science, we can begin unpacking the black box of the complex interventions we design to appreciate which of our behaviour change efforts work, for whom, and in what circumstances.

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