Clinical Commentary on Collinge et al.¹

Clinical practice guidelines (CPGs) are recommendations for clinical practice that combine clinical insights with research evidence and societal, cultural, and patient perspectives.² They are intended to facilitate timely and appropriate clinical decisions that can potentially improve patient outcomes and reduce the use of health care services and the associated costs. However, implementing a CPG involves complex processes that are unfortunately far from foolproof;³ previous research has documented a variety of factors that compromise efforts to change clinicians' behaviour.⁴ CPG development can also be extremely resource intensive.^{5,6} Thus, rigorous evaluations of guideline adherence by clinicians are not only needed to demonstrate the success of a CPG but critical for generating new CPGs and adapting existing ones.³ To date, few instruments have been developed and validated for this purpose, particularly in physiotherapy.⁷ Collinge and colleagues' study¹ is important because it represents the critical first steps toward establishing a feasible and acceptable method of evaluating clinicians' adherence to the Alberta Ambassador Program CPG for low back pain (LBP).⁸

Collinge and colleagues¹ evaluated the use of vignettes, or written case simulations, to assess guideline adherence. Using a paper-and-pencil questionnaire originally designed by Rutten and colleagues⁷ to assess physiotherapists' adherence to the Dutch guidelines for non-specific LBP, they measured guideline adherence by comparing respondents' answers to questions about patient vignettes to responses determined *a priori* by developers of the CPG. The survey questions were adapted by Collinge and colleagues¹ and administered to physical therapy students during a 1-hour session, with the express purpose of assessing their knowledge of and adherence to recommendations from the Ambassador LBP guideline.

In their article, Collinge and colleagues¹ draw several important lessons for assessing guideline adherence. First, their study highlights the need to balance feasibility and utility with content validity. Several methods of evaluating guideline adherence have previously been tested and reported in the literature, but only a few have been applied in a physiotherapy context—including self-report questionnaires⁹ and the use of a semi-structured treatment recording form^{10,11}—all of which have inherent limitations. Although self-report measures of guideline adherence are easy to use and demonstrate adequate content and face validity, they have been shown to overestimate practitioners' level of guideline adherence;¹² semi-structured treatment recording forms have also been preferred over other methods because of their low cost and accessibility, but they do not necessarily provide a sufficiently broad case mix to assess clinical performance.¹³ Finally, chart abstractions and direct observations have been considered, but they are resource intensive (i.e., require time and training of personnel) and may be subject to a Hawthorne effect (i.e., clinicians' performance may be better under observation).¹³

Educators and researchers in health services have used vignettes, or written case simulations, to measure processes for some time;¹³ however, their use in assessing clinicians' compliance with CPGs is relatively new. Collinge and colleagues' results show initial support for the use of vignettes in both cross-sectional and longitudinal assessment of adherence to

specific process outcomes.¹ They conclude that vignettes are a promising alternative for assessing guideline adherence in the Canadian context, since this method offers optimal feasibility and utility for collecting data: vignettes are relatively inexpensive, are easy to use, and allow researchers to tailor the instrument by manipulating variables to suit the purpose of the assessment.¹⁴

Collinge and colleagues' findings also highlight the content validity of the proposed vignette-based assessment tool. It is common practice to identify and use specific quality indicators to measure practitioners' clinical performance.¹⁵ Quality indicators—elements of actual clinical practice that can be measured—should include both processes and outcomes of care.^{13,15} Instruments that assess guideline adherence in physiotherapy have previously relied on either measures of patient outcomes or clinician self-report alone, neither of which can comprehensively describe clinical performance.⁷ Importantly, the instrument proposed by Collinge and colleagues emphasizes the assessment of process elements of care for people with LBP.¹ For example, the proposed guideline tool asks respondents to differentiate various classifications of LBP; to identify red flags; and to provide recommendations for physiotherapy-specific management as well as referral to other health professionals. These are important clinical decision processes that are not only related specifically to the evidence-based process guidelines set out by the Ambassador LBP guideline but consistent with a more comprehensive approach to managing people with LBP.

As with any assessment procedure, selection of appropriate clinical performance criteria is essential to the validity of assessing guideline adherence.¹⁶ In the study by Collinge and colleagues,¹ investigators followed similar rigorous procedures to those employed by Grol and colleagues¹⁶ to ensure that the most appropriate criterion measures were chosen to assess guideline adherence. Collinge and colleagues¹ used multiple expert sources, including an expert physiotherapist who had been involved in developing the Ambassador LBP guideline. Further, establishing criterion measures in this manner produced a sufficiently varied case mix to reflect authentic clinical practice, an essential element in assessing guideline adherence.¹³ Importantly, the content of the four vignettes used in the study represents clinical scenarios and clinical decisions that are relevant to Canadian physiotherapists;¹ the vignettes not only capture the breadth of commonly encountered clinical scenarios but also represent important clinical data, such as red and yellow flags, that should have a significant influence on the decision-making processes used to manage people with LBP, including the presence of non-optimal prognostic indicators and signs and symptoms of serious pathology.

Interestingly, results from Collinge and colleagues' study suggest that physiotherapy students generally followed the CPG recommendations but did not necessarily attribute their decision-making process to the CPG.¹ This phenomenon deserves further clarification: it challenges a model previously proposed by Pathman and colleagues,⁴ who, in a study of physicians' adherence to pediatric vaccine recommendations, proposed that four sequential cognitive steps are associated with guideline adherence; one assumption of their model is that knowledge and

awareness of the guideline is a critical cognitive step that precedes agreement, adoption, and, finally, regular adherence to the guideline. In light of Collinge and colleagues' findings,¹ future research could examine whether, and to what extent, continued adherence to guideline recommendations is affected by knowledge and awareness of the CPG.

In summary, although CPGs have the potential to improve patient care, their implementation and use must be rigorously evaluated. As Collinge and colleagues point out, assessing guideline adherence is not easy; however, their recent study is an important starting point for developing more robust assessments of guideline adherence among physiotherapists. Specifically, Collinge and colleagues have helped to define and validate explicit criteria for measuring adherence to the Ambassador LBP guideline, thus enabling future research to compare adherence across studies.¹ Collinge and colleagues offer a taxonomy for describing and assessing the process of care that is important for adhering to this CPG and may also help us to identify areas where practice is weak. Use of the proposed criteria, which reflect the spectrum of care delivery, provides the foundation for a comprehensive measure of guideline adherence in managing people with LBP. As the health care climate and the body of literature on LBP change, not only will it be important for CPGs to continually evolve to reflect these changes, it will also be necessary to conduct ongoing evaluations of the extent to which CPGs are implemented in clinical practice.

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