Point of View

Concept Analysis of Clinical Reasoning in Physical Therapist Practice

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Huhn and colleagues extended an invitation to contribute to the discussion and research directions related to clinical reasoning from the perspective of physical therapy. Their study—which, in our opinion, was well designed and well executed—focused on concept analysis for clinical reasoning in physical therapy. The conceptualization of clinical reasoning is recognizable to physical therapists in the Netherlands, and most of the salient themes described by Huhn et al are embedded in an applied form in the clinical reasoning process and in Dutch clinical practice guidelines (CPGs). Of particular interest to us was the manner in which the authors made the transition from concept analysis to clinical reasoning in physical therapist practice.

This Point of View aims to open the discussion of 2 topics among *PTJ* readers: (1) the transition from concept analysis to the transparent application of clinical reasoning in practice, and (2) measurability of clinical reasoning in physical therapy. The authors were conscious of the lack of international core texts and recognized this omission as a limitation of their study. We first draw attention to original core texts from the Netherlands, particularly texts describing clinical reasoning as embedded in Dutch CPGs, which have been translated into English under the auspices of the Royal Dutch Society for Physical Therapy (KNGF) and published in international peer reviewed journals. Subsequently, we describe methods to measure clinical reasoning from patients’ health records using quality indicators (QIs).

Transition From Concept to Clinical Reasoning in Practice

Physical therapy has a long tradition in the conceptual description of the process of clinical reasoning. Clinical reasoning, including decision-making, has been embedded in Dutch CPGs since 1993, particularly in the first draft of the KNGF guidelines for patient health records (Guidelines for Physiotherapeutic Records) in 1993 (last updated in 2016), in different textbooks, and in peer reviewed journals. Guideline-based definition of clinical reasoning is a process by which the physical therapist, interacting with the patient and significant others, iteratively and adaptively determines, step-by-step, the optimal diagnostics, treatment options, and patient-related outcome measurements. This process is grounded in a combination of guideline recommendations, clinical expertise, and experience and takes into consideration the patient’s values and expectations. Reporting of clinical data is based on accepted professional standards, including classifications, particularly the *International Classification of Functioning, Disability and Health* and the Classification of Physical Therapy Modalities.

In contrast to international CPGs—for example, for low back pain or neck pain—Dutch physical therapy CPGs include an embedded process of clinical reasoning that consists of 9 steps: I, administration; II, history taking; III, objectives of examination; IV, clinical examination; V, analysis and conclusion; VI, treatment plan; VII, treatment; VIII, evaluation; and IX, discharge. All steps were described in detail in the KNGF’s *Guidelines for Physiotherapeutic Records* and in applied form for patients with whiplash-associated disorders. In the study by Huhn et al, we recognize the elements of the step-by-step process of clinical reasoning in their summary of salient themes in the concept analysis (attributes, antecedents, consequences, and related terms).

The increasing agreement on the clinical reasoning process is expected to have profound positive implications for education, teaching, research-related clinical reasoning, and clinical practice in the Netherlands and hopefully also internationally. We are optimistic that this development will lead to a more transparent and consistent approach to clinical reasoning in physical therapy.

Measurability of Clinical Reasoning: From Concept to Patient Record

Most of the research related to clinical reasoning consisted of qualitative studies without the use of benchmarks to measure the quality of clinical reasoning. A variety of clinical reasoning strategies is now in use, and tools for clinical reasoning are currently being developed and tested. Most studies have shown that physical therapists possess reflective and adaptive skills and reflect on their decisions in all phases of the process of clinical reasoning.

As we have commented previously, the quality of clinical reasoning can be improved both with the use of quantitative measures such as QIs and without it (ie, via videoing consultations). The development, implementation, and evaluation of clinical reasoning-focused QIs embedded in CPGs can be
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regarded as a relatively new field of physical therapy research.

Physical therapists collect considerable amounts of patient-related data during the iterative steps of clinical reasoning, usually in a standardized patient health record.\(^6\) The patient health record can be described as a system that collects a minimum data set from patients who are the focus of a physical therapist clinical reasoning process, although no collective national electronic patient record for physical therapy currently exists in the Netherlands. Most of the electronic patient health records are organized according to the 2016 draft of the KNGF guidelines for primary care.\(^6\)

Routinely collected data are playing an increasingly important role in the measurability of the clinical reasoning process and in improving the quality of health care.\(^24\) However, few studies in physical therapy utilizing routinely collected data in relation to clinical reasoning have been published to date.\(^24\)

Patient health records are designed to achieve a broad range of goals (eg, monitoring quality of care; providing internal and external feedback; promoting communication among patients, physical therapists, and physicians; identifying patterns of health profiles over time; reducing variation in diagnoses and treatment; determining patient-related outcomes over time; and benchmarking performance).\(^20,25-27\) Hoque et al.\(^28\) found that the use of patient health records had a positive effect on health care processes and clinical outcomes.

Physical therapists require new skills to manage a new generation of patient health record systems, and differences have indeed been reported in the organization of information during the process of clinical reasoning; paper records have a more narrative character, whereas computer-based records were organized with a more analytical character.\(^29\)

The measurability of the clinical reasoning process, indirectly via patient health records and facilitated by measurable elements including QIs, is considered one of the cornerstones of the quality of care in primary care.\(^22\) QIs have been defined as “measurable elements of practice performance for which there is evidence or consensus that they can be used to assess the quality of the care provided.”\(^30\) QIs may relate to structures (eg, staff, equipment, appointment systems), processes (eg, clinical reasoning), or outcomes of care (eg, a patient’s functioning, disability, and participation).\(^31\) QIs have been widely used over the past 25 years to analyze and evaluate the quality of physical therapist care.\(^32,33\)

The most commonly used method for development of QIs in the Netherlands is an iterated consensus rating procedure (similar to that used internationally). A number of Dutch studies of different patient groups have generated a set of guideline-based QIs, expressed as percentages ranging from 0% to 100%, in which patients were subjected to a methodically performed clinical reasoning process of physical therapist care.\(^24,34-39\)

The KNGF, in consultation with physical therapists working in primary care, has set the target standard for QIs related to the steps of the clinical reasoning process to a minimum of “substantial” (66%–75%). The international physical therapy profession would benefit from a consensus-based set of QIs for all the steps of the clinical reasoning process, including the use of benchmarks by both the beginning and the more experienced physical therapist.

Conclusions

Quality improvement has become a central tenet of health care, primarily in hospitals but also increasingly in primary care physical therapy. The Netherlands has a long tradition, encompassing the past 30 years, of developing, implementing, and evaluating CPGs using a range of classifications and best available evidence. A variety of methods can be used to safeguard processes of quality measurement and improvement, and one of the most commonly used methods is the development and application of QIs as measurable elements of care.

As we have concluded previously,\(^28\) the set of QIs embedded in the clinical reasoning process within Dutch CPGs can be used as a starting point for the development of a general set of QIs designed to measure the quality of primary care physical therapy. International consensus on a set of QIs, performance targets, and scoring procedures would considerably improve the comparability of international studies of the quality of clinical reasoning-related research.

We hope that this Point of View will provide an impetus to reach greater international consensus on clinical reasoning in physical therapy.

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