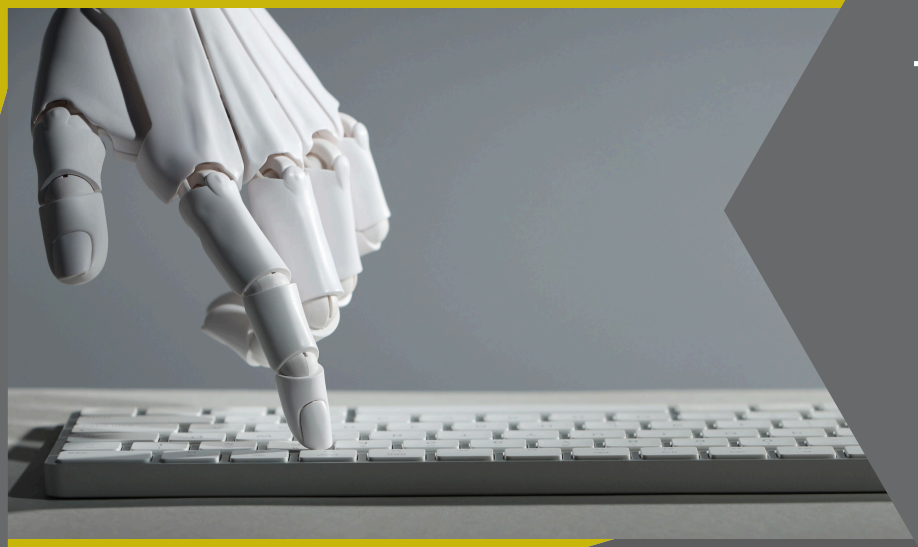

The Impacts of Using Artificial Intelligence Tools for Clinical Documentation on Healthcare Professionals, Their Practice, and Healthcare systems

Summary | Rapid review

OBJECTIVE

To synthesize recent scientific evidence on the impacts of using artificial intelligence (AI) tools for clinical documentation on healthcare professionals, their practice, and healthcare systems.

CLINICAL DOCUMENTATION BURDEN

Clinical documentation represents a significant administrative workload for healthcare professionals. It contributes significantly to professional burnout and reduces the time available for direct patient care.

ARTIFICIAL INTELLIGENCE FOR CLINICAL DOCUMENTATION

Artificial Intelligence tools for clinical documentation refer to any software or application that uses AI to support healthcare professionals in creating, organizing, and synthesizing clinical notes, reports, and summaries. These tools aim to streamline documentation processes and enhance professional satisfaction and well-being.

However, the impacts of these tools on professionals, their practice, and healthcare systems remain uncertain.

[1] CISSS : Integrated Health and Social Services Centre
[2] CIUSSS : Integrated University Health and Social Services Centre

MANDATE

In the context of increasing demand for rehabilitation services, healthcare professionals are experiencing escalating performance requirements coupled with a significant administrative burden. Clinical documentation accounts for a considerable proportion of their workload, underscoring the need to streamline and optimize this task. In this context, the Directorate of Programs for Disability and Physical Rehabilitation of the Centre intégré de santé et de services sociaux (CISSS[1]) des Laurentides sought to assess the relevance of using artificial intelligence tools for clinical documentation to better support clinicians in their practice. To this end, it has commissioned the Health Technology Assessment Unit (HTAU) of the Centre intégré universitaire de santé et de services sociaux (CIUSSS[2]) du Centre-Sud-de-l'Île-de-Montréal (CCSMTL) to conduct a rapid literature review on the topic.

CAUTION

A **rapid review** provides answers within a brief timeframe (approximately six months). Achieving this requires methodological adaptations that may limit the comprehensiveness of the search. Consequently, some relevant studies may not have been identified.

Québec

THE IMPACTS OF AI TOOLS

In total, 20 scientific studies assessing the impacts of using AI tools for clinical documentation on healthcare professionals, their practice, and healthcare systems were identified. Only one study specifically focused on rehabilitation professionals. The tools reviewed relied on various AI models and were primarily designed to automatically generate clinical notes and consultation summaries.

Impacts on healthcare professionals

Promising Results

- Reduced workload;
- Improved job satisfaction and work-life balance;
- Enhanced engagement with patients and fewer distractions during consultations.

Mixed Results

- Effects on burnout varied depending on the measurement tools used and the specific dimensions assessed.

Impacts on professional's practice

Promising Results

- Reduced documentation time;
- Decreased work performed outside regular working hours.

Inconclusive Results

- Consultation duration;
- Workflow.

Impacts on healthcare systems

Promising Results

- Improved overall clinician productivity.

Inconclusive Results

- Efficiency.

Note: No studies examined other aspects of healthcare systems performance, such as wait times, quality of care, or associated costs.

CAUTION: CONSIDERATIONS FOR RESULTS INTERPRETATION AND GENERALIZABILITY

- The overall robustness of study designs was low to moderate, with most using pre-post designs without a control group or intra-subject designs.
- The methodological quality of the majority of studies was low, due to small, non-representative samples and insufficient control of confounding factors.
- Findings relied largely on subjective measures (e.g., self-reported questionnaires) and on non-validated assessment tools.
- No studies assessed medium or long-term effects.
- Some studies were conducted in controlled experimental settings, limiting the generalizability of the findings to real-world clinical environments.

WHAT IS A RAPID REVIEW?

A rapid review is a transparent scientific approach used to synthesize knowledge from the existing literature. It aims to provide timely evidence by adapting certain methodological components of a traditional systematic review.

This work was conducted in accordance with emerging best-practice recommendations for rapid reviews, particularly those aimed at minimizing selection bias and the assessment of methodological quality of included studies.

METHODS

A literature search was conducted in three bibliographic databases (Medline, All EBM Reviews, Embase). Articles were selected according to pre-established eligibility criteria. The two main authors independently screened 20% of the publications in a blinded manner, while the first author screened the remaining references. In total, 20 studies were included.

Data extraction and methodological quality assessment were performed by the authors using a standardized tool.

PROJECT TEAM

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