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Challenges for the incorporation of clinicians' time in clinical practice guidelines: A scoping review

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ADMINISTRATIVE INFORMATION

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Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 December 2025 and was last updated on 30 December 2025.

INTRODUCTION

Review question / Objective This review does not have any comparators. Review objectives :This scoping review aims to systematically map and synthesize the evidence on how clinicians' time is considered in the implementation and evaluation of CPGs. By examining diverse strands of literature, this review seeks to clarify existing methodologies, identify gaps, and highlight implications for future guideline development and health system planning.
Context:Studies from any healthcare setting, including hospitals, outpatient clinics, or community settings, will be included.There are no restrictions based on country or healthcare system type; studies will be included regardless of the setting, as long as they meet the population and intervention criteria.

Background Clinicians' time is a limited and scarce resource. With increasing patient loads, growing administrative tasks, and the escalating burden of electronic health record documentation, physicians face significant time constraints in clinical practice . Studies have shown that a substantial proportion of physicians' working hours is devoted to non-clinical activities, such as scientific research and administrative management, rather than direct patient care . This imbalance in time allocation has been closely linked to physician burnout, decreased job satisfaction, and compromised quality of patient care.
Despite these challenges, clinical practice guidelines (CPGs) often fail to adequately account for the time required for their implementation. The recommendations included in CPGs are based on clinical research evidence, the expertise of healthcare professionals, and patient experiences . They are typically developed by multidisciplinary guideline panels, consisting of methodological experts, patient representatives, and healthcare providers . However, current CPGs primarily focus

on clinical efficacy and safety, with limited consideration of the feasibility of implementation in real-world clinical settings. The omission of time-related factors can hinder guideline adherence, particularly when certain recommendations require substantial time investments that exceed the practical capacity of healthcare providers. For example, a study in the United States estimated that primary care physicians would need 27 hours per day to fully implement and document all guideline-recommended preventive, chronic, and acute disease care; even adhering solely to the recommendations of the U.S. Preventive Services Task Force (USPSTF) would require 7.4 hours per day. In Norway, the number of general practitioners required to implement European hypertension guidelines far exceeds the currently available workforce. Moreover, CPGs development should also consider the time clinicians need for listening to patients, building consensus, and formulating care plans. If clinicians were to strictly follow all guidelines, they would not only struggle to care for other patients but could also contribute to the collapse of the healthcare system.

Addressing this issue requires guideline panels to estimate the time needed to treat (TNT) when determining the scope and intensity of their recommendations. A review of all lifestyle interventions recommended by the National Institute for Health and Care Excellence (NICE) in the UK and USPSTF revealed that clinicians' time was neither considered nor estimated in any of the recommendations. Furthermore, the existing evidence on the incorporation of clinicians' time in CPGs remains fragmented and limited in scope. Given the diversity and evolving nature of this research field, a scoping review will enable a systematic mapping of the current knowledge landscape, the identification of research gaps, and the guidance of future investigations in this domain. This approach aims to ensure that clinicians' time is appropriately considered in the development of CPGs, ultimately enhancing their feasibility and real-world applicability.

Rationale Clinicians' time is a limited and increasingly scarce resource. With rising patient loads, administrative responsibilities, and research duties, clinicians often face significant time pressures in daily practice. This imbalance is closely linked to burnout, reduced job satisfaction, and compromised patient care. However, most clinical practice guidelines (CPGs) emphasize efficacy and safety while giving little attention to feasibility. Recommendations that demand lengthy consultations, frequent follow-ups, or multidisciplinary input may exceed what clinicians can realistically provide. Evidence shows that full adherence to CPGs would require an impractically high workload, suggesting a gap between guideline design and real-world capacity. Despite this, the extent to which clinicians' time is considered in guideline development remains unclear, highlighting the need to better integrate time and workload as essential factors in implementation.

METHODS

Strategy of data synthesis The main databases to be searched are PubMed, Embase (Ovid) and Scopus.

Eligibility criteria 1.The study must explicitly address the consideration of clinicians' time in the implementation, or evaluation of CPGs. 2.Empirical studies utilizing qualitative, quantitative, or mixed-methods approaches will be included. Systematic reviews and scoping reviews will also be considered if they provide relevant insights into clinicians' time constraints in CPGs. 3.studies conducted in any healthcare setting, including primary care, secondary care, and specialty care, will be eligible. 4.Peer-reviewed articles, reports, and gray literature (e.g., government or health organization reports) that provide empirical data will be included. 5.No language restrictions will be applied. Non-English articles will be translated when feasible. 6.Both randomized and nonrandomized study types will be included.

Source of evidence screening and selection This review will explore a series of research questions, each designed to address a specific aspect of the incorporation of clinicians' time in CPGs.

To capture relevant gray literature, a combination of key concepts will be used to search Google and Google Scholar. Given that search results in these sources are ranked by relevance, the first few pages of results will be reviewed, continuing until no additional relevant documents are identified for five consecutive pages. Additionally, reference lists of included studies will be screened to identify further relevant literature through snowballing. To enhance the comprehensiveness of the search, experts in guideline evaluation will also be invited to provide relevant published and unpublished documents.The main databases to be searched are PubMed, Embase (Ovid) and Scopus.

The study selection process will involve a two-stage screening approach, consisting of title and abstract screening followed by full-text review. All records retrieved from the search will be imported into endnote for deduplication. Two independent reviewers (JZ and SP) will screen the titles and

abstracts against the inclusion criteria, and any discrepancies will be resolved through discussion or by consulting a third reviewer (SL) if needed. Studies deemed eligible or requiring further assessment will proceed to the full-text review phase, where the same reviewers will independently evaluate the full texts for final inclusion. Reasons for exclusion at the full-text screening stage will be documented and presented in a PRISMA flow diagram, detailing the number of studies included and excluded at each stage of the process.

Data management All records will be managed in Endnote for deduplication. Data will be extracted independently by two reviewers using a pilot-tested Excel Sheets form, with discrepancies resolved by consensus or a third reviewer. The form captures study design, setting, and CPG implementation findings. Non-English studies will be translated via Google Translate, verified when possible. Missing data will prompt author contact. Final data will be stored securely on password-protected servers for ≥5 years post-publication.

Reporting results / Analysis of the evidence The primary outcomes of this scoping review will be a comprehensive mapping and synthesis of how clinicians' time is considered in the context of clinical CPGs. Specifically, the review will summarize:

1. Conceptualization and measurement of clinician time across studies, including frameworks such as TNT, per-task time estimates, and workload quantification.
2. Macro-level approaches to workforce planning and health system modeling that explicitly incorporate clinician time as a resource constraint.
3.Implementation feasibility and time/resource burden of CPGs recommendations, highlighting areas where time requirements hinder adoption.
4.Opportunity costs of clinician time, particularly trade-offs between competing tasks or foregone activities due to guideline adherence.
5.Methodological frameworks and evaluative approaches for integrating time into guideline development, health economics, and decision-making processes.

Language restriction There are no language restrictions.

Country(ies) involved China - Department of Obstetrics and Gynecology, Key Laboratory of Birth Defects and Related Diseases of Women and Children,West China Second University Hospital, Sichuan University, Chengdu, China.

Keywords Clinician' time; Time needed to treat; Time burden; Time investment; Clinical practice guidelines.

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