

ANALYSIS OF PROMS IMPLEMENTATION IN EFFORTS TO IMPROVE PATIENT SATISFACTION WITH HOSPITAL SERVICE QUALITY: A LITERATURE REVIEW

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ABSTRACT

Patient-Reported Outcome Measures (PROMs) are essential tools in modern healthcare, focusing on patients' experiences and perceptions of their health conditions and received treatments. These instruments enable healthcare professionals to obtain direct information from patients regarding symptoms, treatment effects, and overall quality of life. PROMs support the implementation of *patient-centred care* and facilitate data-driven clinical decision-making. This literature review was conducted systematically using Medline (PubMed) and Google Scholar databases for studies published between 2020 and 2024. The reviewed articles included qualitative, mixed-methods, and systematic review studies guided by the PRISMA framework. The findings indicate that PROMs have consistently shown positive impacts on improving healthcare quality across various clinical settings. In primary care, PROMs enhance doctor patient communication, while in oncology, they serve as important prognostic indicators for assessing quality of life, survival, and treatment effects. For chronic diseases such as *multiple sclerosis* and *chronic obstructive pulmonary disease (COPD)*, PROMs assist in symptom evaluation and strengthen multidisciplinary coordination. Despite existing challenges such as time constraints, limited training, and technological barriers, *electronic PROMs (e-PROMs)* are considered an effective solution due to their efficiency, accuracy, and user acceptance. Institutional policy support, integrated digital systems, and continuous capacity building for healthcare professionals are essential to ensure the sustainable implementation of PROMs for improving the quality of healthcare services.

Keywords: PROMs implementation; patient-centred care; patient satisfaction; healthcare quality.

Introduction

Over the past few decades, healthcare delivery has shifted toward a more patient-centered model. One of the instruments supporting this transformation is the *Patient Reported Outcome Measures (PROMs)* a standardized questionnaire that allows patients to directly report their health status without interpretation by healthcare professionals. PROMs encompass various domains such as symptoms, physical and emotional functioning, and health-related quality of

life (HRQoL). They have been widely utilized in clinical research, service quality audits, and therapeutic decision-making (Churrua et al., 2021; Kluzek et al., 2022).

Although the benefits of PROMs in enhancing clinical communication, enabling early symptom detection, and improving patient satisfaction are well documented, their routine clinical implementation continues to face numerous challenges. Barriers such as limited time, insufficient staff training, and inadequate technological infrastructure remain major obstacles to the systemic integration of PROMs (Nguyen et al., 2021; Bull & Pole, 2024).

In chronic diseases such as *Chronic Obstructive Pulmonary Disease* (COPD) and cancer, PROMs hold potential as independent prognostic indicators beyond conventional clinical parameters. Several studies have shown that PROMs scores covering aspects such as physical function, fatigue, and perceived quality of life can predict clinical outcomes such as survival rates and postoperative complications (Moss et al., 2021; Quinten et al., 2013). For example, in Australia, osteopaths demonstrated limited understanding of respiratory PROMs in COPD management, influenced by intrapersonal, organizational, and policy-related factors (Engel et al., 2024).

Nevertheless, the literature also highlights a gap between scientific evidence and real-world practice. The use of PROMs remains largely confined to randomized clinical trials, while their application in routine healthcare services is still suboptimal (Moss et al., 2021; Greenhalgh et al., 2018). Therefore, comprehensive implementation strategies are required, including investments in integrated digital systems, healthcare professional training, and policy frameworks that support the normalization of PROMs use as part of standard clinical care (Bull & Pole, 2024; Litchfield et al., 2021).

This review underscores the importance of understanding the context, mechanisms, and barriers surrounding PROMs utilization, as well as the need for cross-sectoral approaches to integrate the patient's voice into clinical decision-making and health policy development (Greenhalgh et al., 2018; Kluzek et al., 2022).

Methods

This literature review was conducted using a systematic review approach to identify, analyze, and synthesize research findings related to the implementation of *Patient-Reported Outcome Measures* (PROMs) in post hospital care. Articles were searched using databases such as PubMed and Google Scholar. The keywords used were: *Patient-Reported Outcome Measures (PROMs), nursing, hospital*.

The inclusion criteria of the reviewed articles consistently focused on studies evaluating the use of PROMs in clinical contexts. The selected studies included both quantitative and qualitative primary research, such as randomized controlled trials (RCTs), cohort studies, and semi-structured interviews. The study populations comprised patients with chronic conditions, including cancers of the abdominal cavity (urological, gynecological, colorectal, pancreatic, gastric, and hepatic), chronic obstructive pulmonary disease (COPD), as well as primary care and mental health service users. The studies were required to be written in English and to present PROMs data that could be isolated or specifically analyzed. Several studies also included healthcare professional perspectives such as those of general practitioners and osteopaths focusing on their perceptions, barriers, and experiences in implementing PROMs in daily clinical practice.

Furthermore, the included articles emphasized the implementation of PROMs in routine healthcare services rather than in research-only settings. The inclusion criteria covered studies discussing the effectiveness of PROMs in improving patient–clinician communication, detecting symptoms, guiding clinical decision-making, and their potential prognostic value for clinical outcomes such as quality of life and survival. Some studies also examined systemic challenges such as limited time, inadequate digital infrastructure, and the need for healthcare staff training. Studies focusing solely on instrument validation without clinical context or those unrelated to real-world PROMs implementation were excluded. This approach ensured that the reviewed literature contributed directly to understanding and developing effective strategies for integrating PROMs into healthcare systems.

The inclusion criteria for this review were as follows:

1. International research articles published between 2020 and 2024.
2. The study focuses on the implementation of PROMs.
3. Research designs include qualitative studies, quantitative studies, systematic reviews, and mixed-methods approaches (Engel et al., 2024; Green et al., 2021; Ronneberger et al., 2023).
4. Full-text articles available.

Selection process: From a total of 90 identified articles, title and abstract screening was performed, yielding 22 potentially relevant studies. After further full text review, 8 articles met all inclusion criteria.

Data extraction: Extracted data included study title, publication year, authors, research design, setting/sample, and main findings. The extracted data were compared and synthesized to identify emerging patterns, similarities, and differences across studies.

Result and Discussion

Main Findings

- Claudia Bull & Jason D. Pole (2024) identified major challenges in integrating PROMs and PREMs technologies into digital health systems. Their recommendations include strengthening digital infrastructure, normalizing the routine use of PROMs/PREMs, and developing system-level frameworks to support implementation.
- Charlotte L. Moss et al. (2021) demonstrated that PROMs serve as independent prognostic indicators for both quality of life and survival among cancer patients. The use of PROMs also enhances patient clinician communication and overall patient satisfaction.
- Roger Engel, Danielle Baxter, Lee Muddle, Brett Vaughan, and Sandra Grace (2024) found that osteopaths in Australia rarely use respiratory PROMs, limiting their use primarily to musculoskeletal cases and third-party assessments. Key barriers include intrapersonal factors (knowledge and attitudes) and environmental constraints (scope of practice). The study recommends further education on the role of osteopaths in chronic respiratory disease management and the use of PROMs to strengthen multidisciplinary collaboration.
- Antje Ronneberger, Kathrin Luque Ramos, Sascha Köpke, Tobias Vogelgesang, and Jürgen Kasper (2023) reported that PROMs were used to assess symptoms, quality of life, and patient satisfaction in individuals with multiple sclerosis (MS). Their findings showed that PROMs support the identification of patient needs and improve communication between patients and healthcare providers.
- Ian Litchfield, Sheila Greenfield, Grace M. Turner, Samuel Finnikin, and Melanie J. Calvert (2021) emphasized that PROMs have strong potential to enhance person-centered care. However, their implementation in primary care remains limited. Barriers include insufficient evidence of PROMs effectiveness in general practice, lack of time, inadequate training, and inconsistent policy support. General practitioners (GPs) require stronger evidence, clearer guidance, and practical strategies to integrate PROMs effectively.
- Elizabeth A. Green, Richard J. Adams, Sarah L. Barker, and Thomas H. Hughes (2021) found that PROMs are highly valuable in monitoring treatment side effects and quality of life among cancer patients. Despite these benefits, barriers such as time constraints,

electronic system integration, and administrative workload persist. PROMs data were shown to facilitate patient clinician communication and support patient-centered clinical decision-making.

- Hanh Nguyen, Phyllis Butow, Haryana Dhillon, and Puma Sundaresan (2021) identified barriers to PROMs implementation at the patient, healthcare provider, and system levels. These include time limitations, technological challenges, and difficulties integrating PROMs into clinical workflows.
- Jennifer Y. Yu, Talia Goldberg, Nicholas Lao, Brian M. Feldman, and Y. Ingrid Goh (2021) reported that electronic PROMs (e-forms) are statistically equivalent to paper-based versions, yet more efficient in terms of time and cost. Most patients and caregivers preferred e-forms, supporting their adoption as a standard practice for PROMs data collection in pediatric rheumatology clinics.

Discussion

All reviewed studies consistently agree that *Patient-Reported Outcome Measures* (PROMs) are essential instruments for evaluating health outcomes based on patients' own experiences and perceptions, rather than solely on clinicians' assessments. PROMs are utilized to monitor symptoms, treatment effects, quality of life, patient satisfaction, and the effectiveness of both medical and non-medical interventions.

Studies such as those by Ronneberger et al. (2023) and Moss et al. (2021) emphasize the prognostic role of PROMs and their contribution to improving communication between patients and healthcare providers.

Several challenges in implementing PROMs were identified across the literature. These include limited time and administrative burden (Green et al., 2021; Nguyen et al., 2021), inadequate training among healthcare professionals (Litchfield et al., 2021; Engel et al., 2024), suboptimal integration of electronic systems (Yu et al., 2021; Green et al., 2021), narrow professional perceptions regarding the role of PROMs (Engel et al., 2024), and concerns about data reliability and subjective bias (Bull & Pole, 2024).

Despite these challenges, the literature highlights numerous benefits of implementing PROMs. These include enhancing patient clinician communication, improving patient satisfaction with healthcare services, supporting the monitoring of chronic conditions and treatment effects, facilitating faster patient centered clinical decision making, serving as important prognostic tools in oncology (Moss et al., 2021), and improving service efficiency through the adoption of electronic PROMs (Yu et al., 2021).

Study Title	Authors&Year	Setting/ Sample	Method/ Design	Main Findings
Implementing PROMs in routine clinical care: a qualitative exploration of GP perspectives	Claudia Bull & Jason D. Pole, 2024	25 <i>general practitioners</i>	Qualitative investigation	While illustrating the potential benefits of PROMs across various contexts, the implementation of PROMs requires sufficient logistical support to function effectively.
An assessment of the use of patient reported outcome measurements (PROMs) in cancers of the pelvic abdominal cavity: identifying oncologic benefit and an evidence-practice gap in routine clinical practice	Charlotte L. Moss et al. (2021)	21 <i>research articles</i>	Systematic Review	PROMs have been shown to be independent prognostic indicators for quality of life and patient survival, while also enhancing communication and patient satisfaction.
The use of respiratory patient reported outcome measures (PROMs) in the management of COPD:	Roger Engel, Danielle Baxter, Lee Muddle, Brett Vaughan, Sandra Grace (2024)	Seven osteopaths from the initial study were interviewed via Zoom (45 minutes).	Qualitative semi-structured interviews were conducted based on the Social	The use of PROMs was limited to musculoskeletal cases and third-party assessments. Further education is needed regarding the role of osteopaths in

Study Title	Authors&Year	Setting/ Sample	Method/ Design	Main Findings
Perceptions of Australian osteopaths			Ecological Model (SEM).	managing chronic respiratory diseases and the use of PROMs to enhance multidisciplinary collaboration.
Patient-Reported Outcome Measures (PROMs) in the Management of Multiple Sclerosis: A Systematic Review	Antje Ronneberger, Kathrin Luque Ramos, Sascha Kopke, Tobias Vogelgesang, Jurgen Kasper (2023)	Thirty two international studies on the use of PROMs in patients with multiple sclerosis.	Systematic review conducted following the PRISMA guidelines	PROMs were used to assess symptoms, quality of life, and patient satisfaction among individuals with multiple sclerosis. The findings indicated that PROMs assist in identifying patient needs and enhance communication between patients and healthcare providers.
<i>Implementing PROMs in routine clinical care: a qualitative exploration of GP perspectives</i>	Ian Litchfield, Sheila Greenfield, Grace M. Turner, Samuel Finnikin, Melanie J. Calvert (2021)	Twenty five general practitioners (GPs) from across the United Kingdom were recruited through Doctors.net.uk using	Qualitative study using semi-structured interviews, analyzed based on the Consolidate Framework for	PROMs are considered to have strong potential for enhancing person-centred care; however, their implementation in primary care remains limited. Barriers include insufficient evidence of PROMs

Study Title	Authors&Year	Setting/ Sample	Method/ Design	Main Findings
		convenience sampling.	Implementation Research (CFIR).	effectiveness in general practice, time constraints, lack of training, and unsystematic policy support.
Implementing Patient-Reported Outcome Measures (PROMs) for Oncology Patients in Clinical Practice: A Mixed-Methods Study	Elizabeth A. Green, Richard J. Adams, Sarah L. Barker, Thomas H. Hughes (2021)	A total of 152 oncology healthcare professionals (physicians, nurses, therapists) and 20 cancer patients from a university hospital in the United Kingdom participated in the study	Mixed methods study (quantitative and qualitative using online surveys and in-depth interviews)	The study showed that PROMs are highly useful for monitoring treatment side effects and the quality of life of cancer patients. However, their implementation remains limited by time constraints, lack of electronic system integration, and administrative burden. PROMs data facilitate communication between patients and healthcare providers and support patient-centred clinical decision-making.
<i>A review of the barriers to using Patient-Reported Outcomes</i>	Hanh Nguyen, Phyllis Butow, Haryana Dhillon, Puma	A study examining the use of patient-reported	Systematic literature review of 14	Barriers were identified at the patient, healthcare provider, and system

Study Title	Authors&Year	Setting/ Sample	Method/ Design	Main Findings
<i>(PROs) and PROMs in routine cancer care</i>	Sundaresan (2021)	outcomes (PROs) in real-time within oncology clinical practice; research-based or trial studies were excluded	primary studies.	levels, including time limitations, technological challenges, and difficulties integrating PROMs into clinical workflows.
Electronic forms for patient reported outcome measures (PROMs) are an effective, time-efficient, and costminimizing alternative to paper forms	Jennifer Y. Yu, Talia Goldberg, Nicholas Lao, Brian M. Feldman, Y. Ingrid Goh (2021)	A total of 225 patients and caregivers at a pediatric rheumatology clinic participated. After excluding incomplete data, 196 participants were included in the final analysis. There were no age restrictions, and PROMs were	Program evaluation and quality improvement study using quantitative and qualitative approaches	Electronic forms (e-PROMs) were found to be statistically equivalent to paper versions, more efficient in terms of time and cost, and preferred by the majority of patients and caregivers. This study supports the integration of e-PROMs as a standard practice for PROMs collection in pediatric rheumatology clinics.

Study Title	Authors&Year	Setting/ Sample	Method/ Design	Main Findings
		completed by patients, caregivers, or both.		

Synthesis Analysis

The reviewed studies covered a wide range of populations, including general practitioners, nurses, therapists, oncology patients, and those with orthopedic and pulmonary conditions. Overall, all studies consistently demonstrated that Patient Reported Outcome Measures (PROMs) primarily aim to assess patients' quality of life, symptoms, and satisfaction (Ronneberger et al., 2023; Moss et al., 2021; Nguyen et al., 2021). However, the context of PROMs implementation varies across different fields: in oncology, PROMs are mainly applied to evaluate prognosis and treatment effects (Green et al., 2021), whereas in primary care and nursing, the focus is on enhancing patient clinician communication and promoting patient-centred care (Litchfield et al., 2021; Bull & Pole, 2024).

The sample sizes across studies ranged from 7 to 196 participants, with one systematic review including 32 articles.

The research methodologies varied, encompassing qualitative studies, quantitative studies, systematic reviews, and mixed methods designs (Engel et al., 2024; Green et al., 2021; Ronneberger et al., 2023).

The most frequently reported barriers included limited time availability, insufficient training, technological constraints, and suboptimal integration of electronic systems (Nguyen et al., 2021; Yu et al., 2021). Nevertheless, PROMs were widely recognized for their ability to improve communication, increase patient satisfaction, and support patient-centred clinical decision-making.

Digitalization has emerged as a key driver in transforming PROMs implementation. Yu et al. (2021) demonstrated that electronic PROMs (e-PROMs) not only improve time and cost efficiency but also enhance the patient experience. This finding aligns with the recommendations of Green et al. (2021) and Bull & Pole (2024), who emphasize the need for

policy support, continuous professional training, and integrated information technology systems to ensure the sustainable implementation of PROMs in healthcare settings.

Conclusion

Key Summary

Overall, Patient-Reported Outcome Measures (PROMs) have proven to be effective tools for evaluating health outcomes from the patient's perspective, covering aspects such as symptoms, quality of life, and satisfaction with healthcare services (Ronneberger et al., 2023; Moss et al., 2021).

Despite their effectiveness, implementation remains challenged by time limitations, lack of healthcare staff training, and inadequate information system support (Litchfield et al., 2021; Bull & Pole, 2024; Nguyen et al., 2021). Innovation through electronic PROMs (e-PROMs) offers a potential solution to improve efficiency, accuracy, and acceptability among both patients and healthcare professionals (Yu et al., 2021). The successful adoption of PROMs across healthcare sectors largely depends on organizational policy support, continuous professional education, and robust integration of information technology systems (Green et al., 2021; Engel et al., 2024). Therefore, the comprehensive implementation of PROMs significantly contributes to advancing patient-centred care and enhancing the quality of healthcare services across clinical and hospital settings.

Closing and Recommendations

This literature review emphasizes that the effective implementation of PROMs requires a multidimensional approach, which includes:

1. Organizational support in terms of policy and technological infrastructure,
2. Competence and positive attitudes among healthcare professionals,
3. Active participation of patients, and
4. Utilization of digital technology (e-PROMs) to enhance efficiency and sustainability.

Through these strategies, PROMs can serve as a key instrument in realizing patient-centred healthcare and improving service quality across both hospital and community care settings.

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