



Reconceptualising patient-reported outcome measures: what could they mean for your clinical practice?

Michelle M Holmes *PHD student School of Psychology, University of Southampton, Southampton, UK*

Felicity L Bishop *Associate Professor School of Psychology, University of Southampton, Southampton, UK*

Jonathan Field *Back2Health, Petersfield, UK*



Patient-reported outcome measures are increasingly being used to collect patient outcomes on a routine basis in healthcare. This article will overview how patient-reported outcome measures were developed, their current use in clinical practice and will discuss the impact they may have when used within treatment of non-malignant pain.

What are patient-reported outcome measures?

'Patient-reported outcome measures' (commonly abbreviated to PROMs) is an umbrella term for standardised instruments and questionnaires collecting data on patients' perceptions and views about their health. When completed, they typically produce a numerical score.¹⁻⁷

PROMs can be used to measure constructs of health, health status, quality of life and quality of care, as well as the processes, structures and outcomes of care.^{5,8,9} PROMs capture patient views, feelings and subjective experiences unlike traditional methods such as biophysical measures.¹⁰

The development of PROMs were initially devised for use within health research, especially randomised-controlled clinical trials (RCTs).¹¹ Traditionally, health has been measured using negative end-points, such as mortality, or through assessing biological factors, these are an objective approach of measurement to quantify health.¹² However, it was acknowledged that these traditional measures may not provide a comprehensive record of patient experience of illness and treatment,

highlighting a need for progression to other outcome measures.^{13,14} Although the quantification of biological features is associated with patient experience, non-biological factors are also important aspects of patient outcomes, as well as playing a fundamental role in influencing patient outcomes.¹⁴ This led to the development of general health measures to be used within RCTs that assessed and quantified the many facets to health and illness.¹²

Why use PROMs in clinical practice?

The use of outcome measures was incorporated into clinical practice as patients' subjective views were deemed as valuable information to evaluate healthcare as well as assessing the efficacy of conventional medical treatment.^{11,15} In the early 1990s, PROMs were used in three main ways within clinical practice, to increase knowledge over disease trajectories, evaluate the effectiveness of treatment on individual patients and assess the quality of the care provided.¹¹ These outcomes were thought to be intrinsically linked to processes of providing quality healthcare, and so PROMs were used to inform clinicians about health management and aid the

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development of treatment plans.^{11,16}

The National Institute for Clinical Excellence (NICE) stated that the collection of patient views may enable realistic interpretations of the evidence during appraisal of medical, surgical and therapeutic technologies, diagnostic techniques, pharmaceuticals and health promotion activities.¹⁷ PROM data were suggested to provide an insight into the effectiveness, appropriateness and acceptability of the technology, as well as the impact of a health technology on patients' physical or psychological symptoms, disability, functioning and overall quality of life. A report in 2005 by Appleby and Devlin³ for the Kings Fund acknowledged a shift from measuring healthcare to examining quality and performance from the perspective of the patient, recognising that patient views are vital to their care. Within the National Health Service (NHS), routine measurement was suggested to have two main uses: to provide information on health of patients and any health gains from treatment and additionally could be useful in allocating resources, priority setting and future planning of the NHS.³

The NHS created a report in 2008, highlighting the importance of using PROMs to measure patient's perspective of effectiveness of care.¹ In 2009, a new Standard NHS Contract for Acute Services was introduced, in accordance with this guidance, all licensed providers of Unilateral Hip replacements, Unilateral Knee replacements, Groin Hernia Surgery or Varicose Vein Surgery funded by the NHS are expected to invite patients to

complete a pre-operative and post-operative PROMs questionnaire. Thus, from origins in clinical research by 2009, PROMs had become part of routine clinical practice in parts of the NHS.

What impact do PROMs have in clinical practice?

The use of PROMs in clinical practice has triggered research to identify what impact(s) this new practice might have on the process of care and subsequent patient outcomes.

An early review, conducted by Greenhalgh and Meadows,¹⁸ aimed to assess current evidence by examining RCTs exploring the use of PROMs in routine clinical practice. The authors found a limited amount of evidence suggesting that using PROMs may positively influence the detection of psychological problems and facilitate communication between clinicians and patients.¹⁸

A number of other reviews have since assessed the impact of using PROMs in clinical practice, examining evidence from controlled trials and RCTs. As a result of claims that PROMs could provide additional information to clinicians and improve patients care, Espallargues and Valderas¹⁹ conducted a systematic review assessing the effectiveness of providing feedback on PROMs to clinicians. The review included 21 RCTs examining the provision of patients' health status to clinicians. The authors concluded that the impact of providing feedback on PROMs to clinicians was unclear but that PROM use may modify elements of the healthcare provided through increased diagnosis of conditions and use of health services.¹⁹

Reviews have also focused on specific areas of healthcare settings or conditions. Many empirical studies have focused on oncology and the impact of adopting PROMs for patients, clinicians and healthcare organisations. A recent review examined whether the use of PROMs in active anticancer treatment was associated with patient outcomes, health

service outcomes and processes of care.²⁰ The review included RCTs and non-randomised studies where PROM data were sent to clinicians or patients to improve patient care. The results were narratively synthesised and effect sizes estimated for some outcomes. Use of PROMs in oncology settings was found to be associated with increased supportive care, improved symptom control and patient satisfaction.²⁰ However, the reviewers concluded that there were limited significant findings with small effect sizes and additional research was needed.

An additional area of interest has been the use of PROMs within psychiatric settings. Gilbody et al.²¹ conducted a review to assess how measuring health-related quality of life (HRQoL) could improve the quality of psychological care in psychiatric and non-psychiatric settings, and for those with common mental disorders. RCTs and quasi-randomised trials were included in the review and results pooled using a random effects model. The reviewers concluded that there was limited evidence to support the use of PROMs in clinical practice in these settings, with no overall difference in treatment outcome and limited evidence suggesting improvement in patient satisfaction.²¹

Another review examined qualitative research on clinicians' experiences of using PROMs.⁸ Authors used thematic analysis to synthesise 16 studies. The analysis raised issues on the practicalities of collecting data, clinicians' values of PROM data and how clinicians made sense of the information provided. Additionally, one theme stated that some clinicians viewed PROMs to have the potential to impact on the processes of care, such as influencing communication, shared decision-making and planning care.⁸

Why use PROMs in the treatment of non-malignant pain?

Recently, we conducted a systematic review on implementing PROMs in

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clinical practice in non-malignant pain, such as rheumatoid arthritis, back pain and surgical pain, aiming to identify the potential impact(s) of implementing PROMs in routine clinical practice on the process and outcome of healthcare for non-malignant pain. The systematic review identified 13 eligible studies. The synthesis of results suggested that PROMs may be included in the initial consultation to assess patients, and for decision-making regarding the patients care. During the course of the patient's treatment, PROMs can be used to track the progress of a patient, evaluate the current treatment and change the course of care if required. The use of PROMs is also thought to influence the therapeutic relationship between patient and clinician. Post-treatment, PROMs may also have a direct influence on other outcomes, such as pain and patient satisfaction. Due to the weaknesses in quality of studies, and a lack of generalisability, it is not currently possible to provide a comprehensive understanding of how PROMs have an impact in clinical practice for pain. The empirical literature to date produces a general picture of the potential impact PROMs may have throughout the treatment process.

Furthermore, theoretical literature suggests that PROMs initiate several processes which may influence outcomes. PROMs can be used to assess the impact of disease, injury or specific symptoms from the patient's perspective.²² This may increase clinician knowledge surrounding patients' pain and the impact it may have. PROMs are thought to provide data for discussion and facilitate communication between the patient and clinician.^{11,18,23} The measures can enable patients to communicate any needs or concerns they may have. This enables clinicians to identify any patient education need and prescribe specific support and tailored education or counselling. In this respect, the identification of problems may reduce

the number of questions to be asked by the clinician, shortening the patient history examination and leaving more time for treatment or discussion of treatment options. However, there is also the potential for PROMs to have adverse effects; asking patients to regularly monitor and report on their pain could lead to hypervigilance and increase avoidance behaviours, negatively impacting quality of life.

PROMs may additionally facilitate the provision of individualised patient-centered care.¹⁸ Data available from PROMs enable both the clinician and patient to identify and prioritise key patient issues, with PROMs providing information on what is the most troublesome or the biggest priority for treatment. Additionally, improved communication may further lead to greater patient satisfaction.^{18,19,23}

PROMs are also used to monitor treatment response.¹⁹ PROM scores provide the means to assess the effect of treatment, understand patients' progress and identify if the treatment plan is appropriate. Identification of problems, monitoring of changes and discussion of treatment options through PROMs data can assist clinicians' decisions surrounding changing treatment or providing additional treatment.^{4,18,19,22} Clinicians may change treatment, prescribe drugs, change or reduce medication, order further tests or provide additional advice on self-management. Through enhanced communication, individualised tailored advice and increased patient satisfaction, patients' self-efficacy may improve, increasing the likelihood of behaviour change, adherence to treatment or enhancing their ability to self-manage their health.²²

Conclusion

PROMs may potentially affect the process and outcomes of patient care when used in the treatment of non-malignant pain. The research base evaluating the use of

PROMs in routine clinical practice is relatively new with an underdeveloped theoretical basis for their use. Overall, the research suggests that PROMs may lead to improvements clinically and psychologically for patients. However, as the findings across studies are not consistent and the mechanisms through which PROMs operate have not been established, further research in this area is needed.

Acknowledgements

The authors thank Professor George Lewith and Dr David Newell. This study forms part of MH's PhD project funded by the University of Southampton, the Anglo-European College of Chiropractic, the Royal College of Chiropractors and Southampton Complementary Medicine Research Trust.

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