

# Expectations and Understanding of Patients Attending Advanced Physiotherapy-led Orthopaedic Triage Clinics in Primary Care: A Scoping Review

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## ABSTRACT

Physiotherapy-led orthopaedic triage has been shown to reduce waiting times for specialist assessments. These triage models are now being adopted in Aotearoa New Zealand. To ensure successful implementation, it is important to work in partnership with tangata whenua (the Indigenous people of Aotearoa New Zealand), respecting Te Tiriti o Waitangi (a founding document of Aotearoa New Zealand). This scoping review explored the expectations and understanding of patients attending physiotherapy-led orthopaedic triage services. It followed the Arksey and O'Malley (2005) framework and is reported in accordance with the PRISMA extension for scoping reviews. Eligibility criteria included English-language articles focusing on adult populations that explored patient understanding, expectations, perceptions, and ideas regarding physiotherapy-led orthopaedic triage. Online database searches were conducted via Medline (EBSCO, including CINAHL and SPORTdiscus), Cochrane Library, and SCOPUS. The findings are charted within Te Pae Māhutonga Māori health promotion framework. Patients expect to receive information about pathways, diagnoses, and timeframes earlier in their journey and want easy access to pathways and clinicians. Healthcare users desire patient-centred care, where they and their general practitioner (GP) or other important advocates/whānau (extended family unit) are involved in analysing options and making decisions. This review highlights gaps in the literature regarding the Aotearoa New Zealand and Māori health contexts that require further exploration. As this service delivery model develops in Aotearoa New Zealand, there is a need to ensure services are fit for purpose.

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## INTRODUCTION

Triage is the process of determining the best care pathway based on a patient's presentation. It aims to optimise care delivery and ensure the best use of resources (Hussenbux et al., 2015). Reviews such as the one by Morris et al. (2015) show that research into physiotherapy-led orthopaedic triage to manage wait times for specialist assessment for elective non-urgent orthopaedic conditions, like osteoarthritis, has existed for approximately 30 years. There is significant variation in the definition of physiotherapy-led orthopaedic triage, but the common themes of orthopaedic triage are the presence of a referral, the aims of triage, and a clinician qualified to conduct the triage (Morris et al., 2015).

The literature supports physiotherapy-led orthopaedic triage, with evidence showing good diagnostic agreement between the therapist and the orthopaedic consultant, appropriate triage recommendations, effective management outcomes,

and reduced waiting times for orthopaedic surgical services (Trøstrup et al., 2020; Vedanayagam et al., 2021). Waiting times for specialist assessments continue to increase in the Aotearoa New Zealand public health system (Health New Zealand – Te Whatu Ora) (Abbott et al., 2022). Recently, Health New Zealand – Te Whatu Ora has implemented changes in orthopaedic pathways that incorporate physiotherapy-led triage. These changes emphasise access, equity, and collaboration between primary and secondary care (Te Whatu Ora – Health New Zealand, 2022).

Patient expectations, understanding, attitudes, beliefs, and perceptions are linked to and profoundly affect clinical and patient outcomes (Oster et al., 2024). Expectations are the cognitive appraisal of health situations and can be impacted by previous knowledge, experiences, information gathered, perceived consequences, perspectives, and emotions (Barron et al., 2007). Expectations are further compounded by a

person's social and cultural influences and are entwined in the psychosocial makeup of the person (Barron et al., 2007). Understanding patients' expectations is the basis of person-centred care, enabling patient collaboration and decision-making in healthcare (Oster et al., 2024). Person-centred care has improved patient health outcomes and efficiencies in clinician investigations and interventions (Oster et al., 2024). El-Haddad et al. (2020) conducted a study investigating patient expectations of healthcare and discovered that expectations are conceptualised into three categories: (1) Health outcomes – patients expect realistic improvements in health through treatments; (2) Individual clinicians – expectations of clinicians include qualities such as professionalism and listening skills; and (3) Healthcare systems – expectations arise from the limitations of health care systems, rules, and constraints.

Aotearoa New Zealand's unique health system includes obligations to honour Te Tiriti O Waitangi (Aotearoa New Zealand's founding document) (Came et al., 2020). Te Tiriti o Waitangi provides a constitutional framework promising Māori (Indigenous people of Aotearoa New Zealand) self-governorship and equity, including health outcomes (Goodyear-Smith & Ashton, 2019). It defines the intent to develop and implement partnerships between Māori and the Crown. In keeping with the notions presented by Reidy et al. (2025), for the context of this paper we have defined equity as the fair and just distribution of health outcomes and access to care, achieved by addressing avoidable, unjust disparities through intentional shifts in power, resources, and system structures, particularly in relation to colonisation and social determinants.

Evidence demonstrates that despite Te Tiriti obligations Māori experience health inequities. For example, a cohort study by Singleton et al. (2013) found that Māori patients undergoing primary joint arthroplasty are younger, often have poorer general and mental health, and experience worse preoperative and postoperative function compared to non-Māori. It is also reported that Māori commonly face greater barriers to accessing primary care (McGruer et al., 2019). Inequalities in healthcare affect the outcomes for Māori, Pasifika, and those from lower socioeconomic backgrounds (Goodyear-Smith & Ashton, 2019).

Numerous Māori health and wellbeing frameworks have been developed to address inequity and improve Māori health (Wilson et al., 2021). These commonly share key concepts, principles, and values such as whanaungatanga (connectedness), whakawhanaungatanga (building relationships), whānau (extended family unit), and socio-political health contexts (Wilson et al., 2021). Several Māori health models, such as Te Whare Tapa Whā, Te Pae Māhutonga, and Te Wheke, are commonly incorporated into the Aotearoa New Zealand health system to inform health system design and delivery (McIntosh et al., 2021). Te Pae Māhutonga is explicitly designed for primary and public health use to guide healthcare promotion and delivery in alignment with Māori values; hence, it is well positioned to frame services that span primary and secondary care with a te ao Māori lens (Māori world view) (McIntosh et al., 2021).

## Research question and purpose

The research question is: What are patients' expectations and understanding of physiotherapy-led orthopaedic triage? The primary purpose is to examine the research range, extent, and nature and explore how findings might impact practice. The secondary purpose is to contextualise the research in Aotearoa New Zealand's cultural context using Te Pae Māhutonga. This question has yet to be addressed in Aotearoa New Zealand, and the findings will help direct further research and provide practical recommendations for similar triage clinics across the country.

## METHODOLOGY

### Methodology considerations

This research adopts an interpretivist philosophical stance, aligning with a qualitative paradigm that embraces a naturalistic approach and views reality as subjective and open to interpretation (Grant & Giddings, 2002). Recognising the possibility of multiple subjective truths, this approach considers how populations and research interpretation may vary.

The primary investigator's (TK) positionality as a physiotherapy-led orthopaedic triage clinician and master's student influences the review by bringing a practical rather than theoretical perspective (Thorne et al., 2002). Being based in Aotearoa New Zealand shapes the analysis, emphasising the local health system and social context (Thorne et al., 2002). Reflexivity is integral to this qualitative paradigm, acknowledging the primary investigator's active involvement in the research area and the influence of his Māori whānau on potential biases and interpretations (Palaganas et al., 2017). The other researchers DOB and NS bring their experiences as academic physiotherapists to the analysis. Prior to their research careers, they both had more than a decade working in a range of clinical settings and observed firsthand the need to address the inequities that persist in health care delivery. Both have significant experience in qualitative research design and implementation in the context of musculoskeletal health care delivery. This reflexive approach ensures greater awareness of how personal and contextual factors shape the research process.

## METHODS

A scoping review was selected as the most suitable method to address the research question, as it is specifically designed to explore the literature and answer broad research inquiries (Munn et al., 2018). This method seeks to map key concepts within a research area and examine the primary sources and types of evidence available. It is particularly useful for emerging fields where no prior reviews have been conducted (Verdejo et al., 2021). Additionally, scoping reviews facilitate the identification and analysis of gaps in the existing literature (Munn et al., 2018). While maintaining a systematic approach, they ensure rigour and trustworthiness in their process (Arksey & O'Malley, 2005; Munn et al., 2018). However, a notable limitation of scoping reviews is the absence of a detailed critique of study quality (Grant & Booth, 2009).

## Protocol

This scoping review aligns with the Arksey and O'Malley (2005) framework and recent advancements to increase rigour and trustworthiness (Levac et al., 2010; Peters et al., 2021). This review is reported in concordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018).

### 1. Identify research question

An iterative approach to the research question with reflective practice was used. The defining concepts of the research question are "physiotherapy-led orthopaedic triage" and "patients' expectations, understanding, and attitudes towards the service". Physiotherapy-led orthopaedic triage roles have varied terminology across the literature, including advanced practice physiotherapy, extended scope physiotherapy, and clinical specialist physiotherapy. All these terms are used interchangeably and identify the target clinician group (Naik et al., 2023; Trøstrup et al., 2020).

Importantly, this question explicitly asks about patients' expectations and perceptions before attending these clinics, rather than their satisfaction after attending them. This is due to the overarching theme that this approach is currently a novel concept in Aotearoa New Zealand and emphasises the importance of the patient in these concepts.

Further questions that helped define and frame the scoping review include:

- What designs, population, and clinic settings were included when exploring this research question?
- What information on expectation and understanding is available in the patient-satisfaction literature on this research question?
- How does this review align with Aotearoa New Zealand-based healthcare and Te Tiriti o Waitangi?

### 2. Identify relevant resources

Electronic library databases were used to conduct this search. The search strategy used an iterative approach with reflections on keywords, phrases, and frameworks to help refine the search as it proceeded. The databases chosen for the searches included EBSCO MEDLINE, CINAHL, and SPORTDiscus, Scopus, and Cochrane Library. The MeSH terms used in the search strategies were "Perceptions OR understanding OR expectations OR attitudes", AND "physi\*", AND "orthopaedic triage". The full search strategies for each database are available in Appendix A.

Due to limited relevant search returns, broader terms were used, such as removing community-based restrictions and including experience-based studies with components of expectation or understanding. This expanded the review by including research that explores patients' expectations, perceptions, and understanding after they have attended these clinics. This allowed for the inclusion of much richer data. Search results were provisionally screened by title. The remaining full-text articles were downloaded and read to apply the inclusion and exclusion criteria. The reference lists

of included studies were also scanned to ensure no research was missed.

### 3. Study selection (inclusion and exclusion criteria)

The student researcher conducted the initial search. Inclusion and exclusion criteria were developed to justify the research question and assess the feasibility of this review. Inclusion criteria were research with a description of the participants' understanding or expectations before seeing a physiotherapy-led orthopaedic triage service (or another interchangeable title) with advanced practice assessment for an orthopaedic specialist service. Other criteria were peer-reviewed research written in English, due to time constraints and the cost of translating materials. As this is a novel research area with limited studies, and we wanted to capture all studies relevant to the research question, no date limit was applied to the inclusion criteria. All participants needed to be adults. Quantitative, qualitative, and mixed-method study designs were included to consider all aspects of the available research.

Exclusion criteria were studies that focused on orthopaedic surgeon-led services and those that examined the experiences of outcomes related to triage services. Policy-based documents were also excluded. This decision represents a delimitation of the review and was made because examining policy was not feasible within the timeframe and might detract from the research question. All studies were saved in an electronic database software (EndNote 20, Clarivate).

### 4. Charting the data and reporting findings

Reporting of methodologies, study designs, participant information, and findings were extracted and presented. A framework is used to present the thematic results of the included studies. We positioned the findings using a Māori health framework to bring the Aotearoa New Zealand context and health equity to the forefront of summarising and reporting the findings. Te Pae Māhutonga, a model commonly used in Aotearoa New Zealand for health promotion, was considered the most appropriate choice (Durie, 1999; Ratima, 2010). Discussions with the research team and a Māori health leader (Dr Aitken, Ngāti Ruapani and Ngāi Tūhoe) helped confirm this model's appropriateness. This model is linked to the Ottawa Charter for Health Promotion, which enables people to improve and have control over their health (World Health Organization, 2009). Health promotion encourages the foundations of advocating for favourable health conditions, enabling equity, patient control, and the ability to make healthy choices. Coordination among all concerned, including communities, organisations, and authorities, is a major aspect of the Ottawa Charter for health promotion (World Health Organization, 2009).

Te Pae Māhutonga is a framework named and modelled on the Southern Cross constellation (Durie, 1999). It includes four key tasks for health promotion (Southern Cross) and two prerequisite or guiding points (guiding stars). This framework acts as a map or a guide to bring together the components of health promotion for Māori, which benefits all New Zealanders. It is important to note that the model's aspects

overlap, allowing for an iterative approach to integrating findings within this model.

The four key tasks include:

*Mauriora (Access to te ao Māori)*: To have a cultural identity, which is important for Māori and other Indigenous health populations. This describes how healthcare programmes have incorporated the Māori world and Māori worldviews (te ao Māori) while considering the cultural aspects of access and information provision.

*Waiora (Environmental protection)*: This is linked to the external world and includes the spiritual element that connects environments and people. This includes appreciating environmental protection and considering a safe and comfortable environment. This could also be how the environment has supported whānau and support services.

*Toiora (Healthy lifestyles)*: This is linked to the lifestyles and choices that lead to health outcomes. This includes taking in and understanding information to make health choices and building trust in healthcare through rapport, honesty, and positive behaviours. To strive for equity, this could also be incorporated into seeing the right health professional early in the journey.

*Te Oranga (Participation in society)*: Includes consideration of socioeconomic circumstances. It is defined as the goods and services people can use, and their voice in deciding how they are used to enable thriving and meaningful life. This incorporates the confidence that patients can access services and feel a sense of ownership of them.

The guiding points are:

*Ngā manukura (Leadership)*: This section focuses on the impact of community leaders, alliances, and relationships between health services and community leaders. It establishes the capacity to be flexible with the community and healthcare, coordination among services, the community, and leaders, and effective relationships and alliances. This could also be regarded as the removal of sectoral boundaries.

*Te mana whakahaere (Autonomy)*: The community user has ownership and control over their health. Health workers should not undermine autonomy when making decisions regarding wellbeing and health. This can be reflected in person-centred care.

5. Consultation with stakeholders

Consultation with stakeholders was not conducted, which is a limitation of this review. This was due to timing and funding constraints.

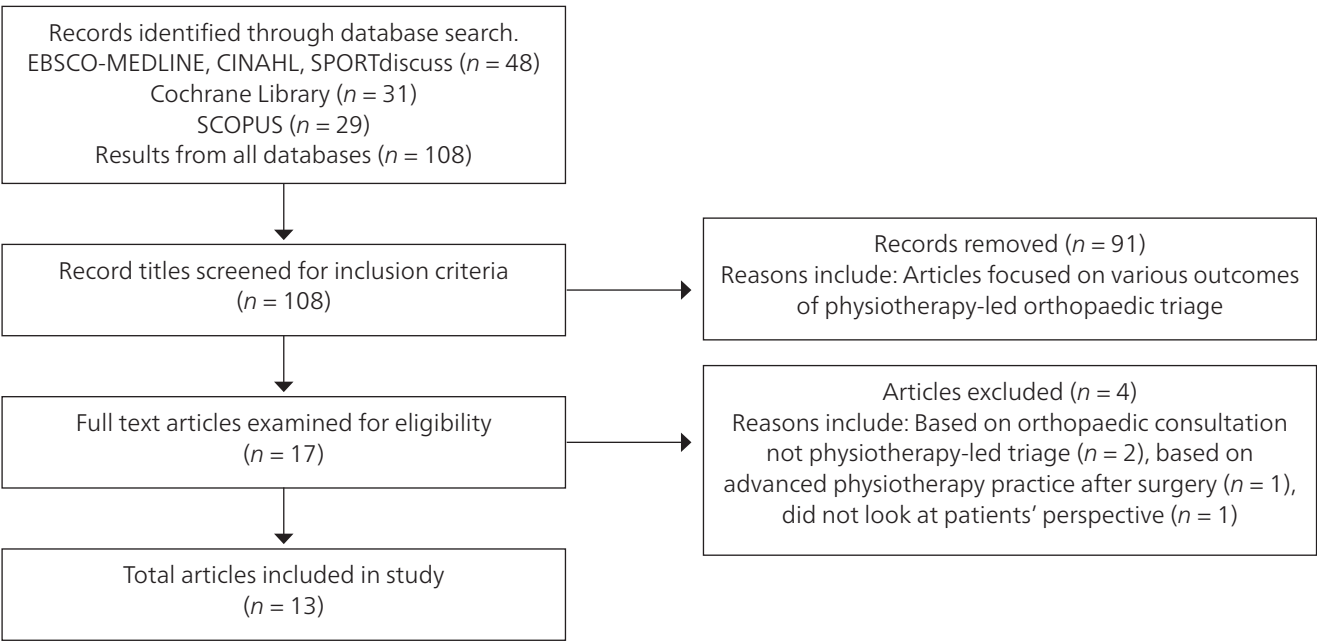
RESULTS

The primary researcher conducted the database search in March 2024. Figure 1 shows the study selection process for the sources of evidence. A total of 108 research articles were identified in the initial searches (including iterative changes). The article titles were screened against the inclusion and exclusion criteria, and 91 did not meet the inclusion criteria. Seventeen full-text articles were read, and 13 were included in this review.

Characteristics of included studies

The included studies were conducted across the United Kingdom (Jasim et al., 2023; Joseph et al., 2014; Reeve & May, 2009; Ryan et al., 2020), France (Kechichian et al., 2024), Canada (Bath & Janzen, 2011; Desjardins-Charbonneau et

Figure 1  
PRISMA Diagram of the Selection Process for Sources of Evidence





al., 2016; Rempel et al., 2017), Sweden (Gustavsson et al., 2023; Samsson et al., 2016), Denmark (Bødskov et al., 2022), Australia (Mutsekwa et al., 2022), and Ireland (Fennelly et al., 2020). The dates of the included studies ranged from 2009 to 2024. Ten of the 13 studies were published within the last 10 years (Table 1). Two studies included participants who had not attended a physiotherapy-led orthopaedic assessment clinic or a similar facility (Desjardins-Charbonneau et al., 2016; Joseph et al., 2014). Two studies involved participants awaiting assessment in their respective clinics (Reeve & May, 2009; Rempel et al., 2017). The remaining eight studies (Bath and Janzen, 2011; Bødskov et al., 2022; Fennelly et al., 2020; Gustavsson et al., 2023; Kechichian et al., 2024; Mutsekwa et al., 2022; Ryan et al., 2020; Samsson et al., 2016) included aspects where they explored participants' expectations, perceptions, and understanding after attending a clinic. This focus was included because it provided rich information and addressed the question of patients' expectations and understanding of these clinics. Aspects that accounted for expectations of treatment outcomes or satisfaction were not included in the analysis. The study by Jasim et al. (2023) was an outlier, exploring patients' perspectives on the orthopaedic arthroplasty pathway. This pathway did not involve a physiotherapy-led orthopaedic triage clinician; instead, a GP acted as the triage clinician during the pathway. This study was included in the review as physiotherapy management and clinician triage were integral aspects of the pathway.

The study designs included quantitative, qualitative, and mixed-method studies. The qualitative studies utilised focus groups and one-on-one semi-structured interviews for data collection, which were then analysed thematically (Fennelly et al., 2020; Jasim et al., 2023; Joseph et al., 2014; Kechichian et al., 2024; Mutsekwa et al., 2022; Reeve & May, 2009; Ryan et al., 2020). The quantitative studies employed surveys for data collection and typically utilised either a randomised controlled trial or a cross-sectional study design (Bath & Janzen, 2011; Desjardins-Charbonneau et al., 2016; Gustavsson et al., 2023; Samsson et al., 2016). Two studies (Bødskov et al., 2022; Rempel et al., 2017) also employed a mixed-methods design, using quantitative survey data in combination with qualitative approaches, including free-text comments in the survey or one-on-one semi-structured interviews.

Two included studies (Bath & Janzen, 2011; Fennelly et al., 2020) had 70% and 80% of participants, respectively, identifying as living in rural areas. Another study focused on a university community (Desjardins-Charbonneau et al., 2016). No other included studies collected rural/urban demographics. Although only reported in eight of the included studies, a range of education levels was observed among participants (Table 1). However, no study integrated this point into its findings or discussions. There was limited reporting of the ethnicity or socioeconomic status of participants across the studies. Two studies noted that all their participants were white British or white European (Jasim et al., 2023; Reeve & May, 2009).

## Charting of data to Te Pae Māhutonga framework

### *Mauriora – Access to te ao Māori*

No identified studies incorporated Indigenous or cultural aspects into their designs or findings (Table 2). Specifically, there were no references to concepts such as whānau/family-centred care and support, or the need to provide a culturally safe environment.

### *Waiora – Environmental protection*

Two articles (Fennelly et al., 2020; Reeve & May, 2009) discussed the patients' perspectives on the environment or the environment of the assessment clinic, and the results highlighted two main aspects. Some participants felt the hospital was the best environment for a clinic, as it is perceived to be where experts are located and that services are close to the experts, i.e., the radiology department for X-rays may be in the next room (Fennelly et al., 2020). Conversely, some participants reported that having the clinic closer to home made access more manageable, and the familiar surroundings made them feel more comfortable (Reeve & May, 2009).

### *Toiora – Healthy lifestyles*

All studies discussed participants' perceptions and expectations regarding the importance of information, education, understanding, and trust (Table 2). Additionally, findings showed that most participants expected the therapist to aid in creating a management plan and understanding treatment options. Most commonly, participants wanted more information about pathways, clinics, and timeframes (Bødskov et al., 2022; Fennelly et al., 2020; Kechichian et al., 2024; Mutsekwa et al., 2022; Reeve & May, 2009; Samsson et al., 2016). Participants frequently wished to receive information earlier in their pathway journeys, along with details about the clinics' roles and pathways (Jasim et al., 2023; Kechichian et al., 2024). This process helped participants understand what to expect, fostering trust and a therapeutic alliance (Kechichian et al., 2024). Some participants felt that insufficient information about services, pathways, and clinicians impacted their expectations and, consequently, their attitudes (Jasim et al., 2023). One study describes that participants expected to see an orthopaedic surgeon but were, in fact, satisfied after seeing the advanced practice physiotherapist/triage physiotherapist (Bødskov et al., 2022). In contrast, Rempel et al. (2017) found that 70% of study participants indicated that, if considered inappropriate for surgery by the physiotherapy-led triage clinician, they would still want to see the surgeon for confirmation and reassurance. Additionally, participants in the study who did not receive information about pathways were less willing to participate in a non-physician screening assessment (Rempel et al., 2017). Mutsekwa et al. (2022) found that participants had less familiarity with novel pathways and physiotherapy-led orthopaedic triage roles. However, familiarity and trust in these services improved after attending these clinics.

Accessible knowledge is an expectation of participants attending physiotherapy-led orthopaedic triage clinics. This includes receiving a clear diagnosis and understanding it

**Table 1**  
Characteristics of Included Studies

Author (date) Country of origin	Aims of the study	Sample size and demographics	Methods	Outcome measures/intervention type
Bath and Janzen (2011) Canada	Evaluate patient's and referring care provider's satisfaction associated with a spinal triage service delivered by physiotherapists in collaboration with orthopaedic surgeons.	<i>n</i> = 108 patients who had completed an assessment with the physiotherapist; 61 provided comments. Grade 12 education or less = 44%. Rural settings = 70%.	Quantitative survey. Preassessment measures used within study. Part of survey asks about patient expectations.	Survey developed by researchers included two questions with a 5-point Likert scale response. Free space provided in for comments.
Bødskov et al. (2022) Denmark	Evaluate patient's levels of satisfaction with diagnostic examination in the shoulder clinic; determine whether a difference exists between levels of satisfaction among patients examined by APPs and orthopaedic surgeons; explore patient's experiences with being examined by APPs.	<i>n</i> = 133 patients recruited from shoulder clinic, who were appropriate to see the orthopaedic surgeon or APP. 9 of these participated in qualitative interviews. Secondary school education or less = 51%.	Quantitative survey and qualitative semi-structured individual interviews. One survey question asked about patient expectations.	VSQ-9 with five response options: Excellent, very good, good, fair, and poor.  Qualitative interviews themed with deductive content analysis.
Desjardins-Charbonneau et al. (2016) Canada	Assess the perceptions of physiotherapists as primary care practitioners and APPs for the treatment of patients with musculoskeletal disorders.	<i>n</i> = 513. Convenience sample of university community – students and staff. All had college education or higher.	Quantitative survey.	Questionnaire comprised 37 questions regarding diagnostic ability, efficacy and safety, effects on access to care, and uses of health resources. Answers could be multiple choice or 4 or 5-point Likert scale responses. Thematic analysis.
Fennelly et al. (2020) Ireland	Explore patients' journeys, experiences, and preferences when using musculoskeletal APP triage services in Ireland.	<i>n</i> = 10 participants post-consultation with the APP. Secondary school education or less = 90%. Rural areas = 80%. Within a week of seeing the orthopaedic consultant ( <i>n</i> = 199) or physiotherapy-led orthopaedic triage ( <i>n</i> = 249). More than an elementary school education = < 15%.	Qualitative semi-structured interviews. Explores patients' preconceptions of APP.	
Gustavsson et al. (2023) Sweden	Compare perceived quality of care after physiotherapist-led triage with standard practice in a secondary care setting for patients with primary hip or knee osteoarthritis.		Quantitative randomised control trial.	A short form of QPP questionnaire, to assess perceived quality of care. Answered with a 4-point Likert scale. One question asked if patients' expectations were met.

Author (date) Country of origin	Aims of the study	Sample size and demographics	Methods	Outcome measures/intervention type
Jasim et al. (2023) United Kingdom	Explore participants' views about planned improvements to the total joint arthroplasty pathway. Looks at the GP as the gatekeeper for orthopaedics. Not a physiotherapist as the triage clinician.	Focus groups: Group 1 ( $n = 5$ ) and 2 ( $n = 4$ ) patients with a replacement. Group 3 ( $n = 5$ ) patients who had not had a replacement. All subjects identified as white British or white other.	Qualitative focus groups.	Thematic analysis. Has rich information about patients' expectations and understanding of orthopaedic services.
Joseph et al. (2014) United Kingdom	Determine the most advantageous features of triage services for patients with musculoskeletal conditions.	Two focus groups: Experts ( $n = 7$ ) and patients ( $n = 4$ ). Patients had experienced healthcare in the public and private sectors due to a musculoskeletal condition or injury. No relevant information on demographics.	Systematic review with qualitative focus groups.	Thematic analysis for qualitative aspect.
Kechichian et al. (2024) France	Explore the experiences and perceptions of patients attending first-contact physiotherapy-led care for low back pain in multidisciplinary team primary healthcare clinics.	$n = 10$ patients who consulted a FCP for low back pain in the model. Nil relevant demographic information.	Qualitative semi-structured interviews. Part of interview investigates patient perspectives.	Thematic analysis. Discusses patients' expectations as a theme.
Mutsekwa et al. (2022) Australia	Exploring patient's acceptability, experience, and perceptions of four allied health extended scope physiotherapy models of care in a tertiary health service.	$n = 29$ , who had been referred to the clinics (either dietitian first gastroenterology clinic; physiotherapy pelvic floor primary contact clinic; orthopaedic primary contact clinic; physiotherapy vestibular and speech therapy ear nose, and throat primary contact clinic). Secondary school education or less = 54%.	Qualitative semi-structured interviews. Part of interview included exploring patients' expectations of the clinics.	Thematic analysis.
Reeve and May (2009) United Kingdom	Establish the dimensions of quality that were important to patients for an ESP spinal screening service, and to determine if there were any substantial differences compared with previous physiotherapy satisfaction literature.	$n = 12$ , taken from a sample of patients on a waiting list who had been referred to the ESP screening service from their GP. All participants were white British.	Qualitative semi-structured interviews (prior to the ESP consultation).	Thematic framework analysis.

Author (date) Country of origin	Aims of the study	Sample size and demographics	Methods	Outcome measures/intervention type
Rempel et al. (2017) Canada	Survey patients with low back and low back-related leg pain who had been referred for a surgical assessment regarding their attitudes towards having a nonphysician healthcare provider assess their suitability for low back surgery.	n = 80 patients referred for elective surgical assessment at one of five spinal surgeon clinics. Most had tertiary education and above.	Quantitative cross-sectional survey. Also had quantitative comments in a questionnaire.	19-item questionnaire (developed for this study), about expectations regarding wait times for consultation and, willingness to pay, travel, and be screened by nonphysician healthcare providers. Questions answered with a 5-point Likert scale.
Ryan et al. (2020) United Kingdom	Address patients' experiences of being managed within a NHS sciatica pathway, involving spinal triage roles conducted by specialist physiotherapists.	n = 14 patients under the care of a specialist physiotherapist triage practitioner. Setting was physiotherapy outpatients where spinal triage role is conducted. Nil relevant demographic information.	Qualitative semi-structured interviews. Explored patients' perceived needs from care.	Thematic analysis.
Samsson et al. (2016) Sweden	Evaluate patients' perceived quality of care in a physiotherapist-led orthopaedic triage in primary care compared with standard practice.	Patients who were seen by physiotherapist-led triage (n = 83) or orthopaedic consultant (n = 80). Questionnaire administered 5 days following the consultation. Most had at least an upper secondary school education.	Quantitative randomised control trial.	QPP questionnaire, 4-point Likert scale. Questions included if expectations were met, and how important aspects of the clinic were to patients.

Note. APP = advanced practice physiotherapist; ESP = extended scope physiotherapist; FCP = first contact practitioner; NHS = National Health Service; QPP = Quality from the Patient Perspective questionnaire; VSQ-9 = Visit Specific Satisfaction Instrument.

(Bath & Janzen, 2011; Bødskov et al., 2022; Joseph et al., 2014; Reeve & May, 2009; Ryan et al., 2020). Participants also express the need to have sinister causes screened and cleared, and reassurance regarding the assessment provided to them early in their journeys (Gustavsson et al., 2023; Kechichian et al., 2024; Mutsekwa et al., 2022). Participants deem it important to be offered options, with risks, benefits, and costs discussed, and to have this developed into an action plan (Bath & Janzen, 2011; Fennelly et al., 2020; Joseph et al., 2014; Reeve & May, 2009; Ryan et al., 2020).

Participant trust in the clinician and service is vital, and this was a finding in multiple studies. The participant's knowledge of the competence and background of the clinician was deemed important in three studies (Fennelly et al., 2020; Joseph et al., 2014; Samsson et al., 2016). Other studies found that trust was built through relationship and rapport building (Jasim et al., 2023) and by seeing the right health professional at the right time (Kechichian et al., 2024). Rapport and trust could significantly affect the participant's journey through triage pathways, with negative experiences or relationships impacting their progress (Jasim et al., 2023). Having trust meant they had confidence in the diagnosis and treatment options (Desjardins-Charbonneau et al., 2016). Previous experiences with physiotherapy in a private or hospital setting affected people's trust and expectations both positively and negatively (Fennelly et al., 2020; Reeve & May, 2009). This led to the patient wanting to be listened to, understood, and treated with empathy (Ryan et al., 2020; Samsson et al., 2016).

#### *Te Oranga – Participation in society*

Access, navigating pathways, the referral processes, and timeframes were major aspects of patient participation. This point was reflected throughout all studies. The first barrier many patients found was obtaining a referral (Jasim et al., 2023). It was often felt that general practitioners (GPs) and physiotherapy-led orthopaedic triage clinicians were gatekeepers to manage demand (Jasim et al., 2023). To navigate the pathway, one had to see the gatekeepers, fail their management, and convince them to refer on. These delays in the process then appeared to be exacerbated, with multiple waitlists at each stage of the journey (Joseph et al.,



2014; Ryan et al., 2020). This issue led to barriers to making appointments and navigating health systems (Jasim et al., 2023). Difficulty scheduling and setting appointment times was challenging for patients to manage, resulting in a patient giving up on pursuing care (Kechichian et al., 2024). Value was placed on the ease and flexibility of booking appointments (Mutsekwa et al., 2022; Reeve & May, 2009). One study commented that patients felt the pathway was too rigid and that protocol-driven services were limiting (Ryan et al., 2020). Other society-based barriers included the costs of attending appointments, such as time off work, transport, parking (Bødskov et al., 2022; Fennelly et al., 2020; Mutsekwa et al., 2022; Ryan et al., 2020).

Timeframe expectations were also identified as an important societal factor in managing their health. This included the expectation of seeing a clinician within one month of referral (Rempel et al., 2017) or promptly (Bødskov et al., 2022; Desjardins-Charbonneau et al., 2016; Fennelly et al., 2020; Joseph et al., 2014; Kechichian et al., 2024; Mutsekwa et al., 2022; Rempel et al., 2017).

#### *Ngā manukura – Leadership*

The main feature of Ngā Manukura is the cooperation between stakeholders. This can be between the orthopaedic triage therapists, the surgeon, the GP, the community leaders, or with whānau and patients themselves. Patients felt this was of high importance as it fosters trust (Kechichian et al., 2024) and confidence (Bødskov et al., 2022; Mutsekwa et al., 2022; Rempel et al., 2017; Ryan et al., 2020). Services appearing compartmentalised and non-collaborative can prove difficult for patient navigation and progression along pathways (Ryan et al., 2020).

#### *Te mana whakahaere – Autonomy*

Participants value a pathway that has a patient-centred approach. This can involve individualised treatments (Bath & Janzen, 2011) and involving the participant in decision-making and empowering them to make healthy decisions (Bath & Janzen, 2011; Fennelly et al., 2020; Gustavsson et al., 2023; Reeve & May, 2009; Ryan et al., 2020; Samsson et al., 2016). Participants felt that, at times, being proactive and independent in their pathway was very burdensome and difficult, especially while living with pain (Ryan et al., 2020). Participants thus valued support and guidance to make decisions and proactively manage their pathways (Fennelly et al., 2020; Joseph et al., 2014; Ryan et al., 2020). Participants often supplemented the information the healthcare professional provided with information from talking to friends and family and internet searches (Ryan et al., 2020).

## DISCUSSION

This review explored the expectations, understanding, beliefs, and perceptions of patients attending physiotherapy-led orthopaedic triage clinics. The initial question was directed to the community and primary care-based settings. However, with a limited number of studies investigating this area of research, the inclusion criteria for the setting needed to be expanded to include all physiotherapy-led orthopaedic triage models. This included clinics within orthopaedic surgeon clinics, clinics based in physiotherapy outpatient departments,

and clinics based in primary care. This step permitted the inclusion of additional relevant literature and a more in-depth analysis of themes.

Using the Te Pae Māhutonga framework to organise the findings enabled alignment with the Aotearoa health context and supported reflection of Te Tiriti o Waitangi obligations. The data from the review did not fit perfectly into the model, which is to be expected and can be seen as a strength. It highlighted the gaps concerning Aotearoa New Zealand relevant knowledge. Further findings focused on the significance of information and connectedness with patients. Communication is a central theme, not just with patients but also with leaders in the patient health community. This includes GPs, whānau, community leaders, and other specialists.

### Importance of information

A central theme in all the included studies is that patients want information. In the model Te Pae Māhutonga, this is *Toiora*. It means patients want information to make informed decisions and change behaviours. The information that patients request includes details about the orthopaedic management pathways, individual diagnoses, treatment options, and the risks associated with these options. Clinician recommendations within an expected and timely timeframe are also crucial for patients. The findings show that patients want this information early in their journey and preferably before assessment. Knowledge and education are significant aspects of treating musculoskeletal and orthopaedic conditions (Correia et al., 2022). They help patients understand their conditions and actively make management choices (Correia et al., 2022). Interestingly, a qualitative study by McGruer et al. (2019) found that few Māori women with osteoarthritis reported experiencing education about their condition, suggesting areas for improvement.

The findings regarding the importance of information have practical implications, including the need to deliver the information that patients would like to have, such as how orthopaedic pathways work, information on the qualifications and experiences of clinicians, and making this diagnostic information tailored to the patient. There was no preference as to how the information should be provided; however, it must be accessible and understandable to the patient and simple to implement (Metcalf et al., 2022; Wang & Voss, 2022). It is important to avoid information overload, and we need to ensure education is delivered in a patient-focused and relevant way to empower the patient and whānau to make informed decisions (Wang & Voss, 2022).

### Communication and leadership

The second central theme was *Ngā manukura*. This was displayed as leadership and communication with leaders such as whānau, GPs, or community leaders. Communication between the triage clinician, the GP, or other clinicians relative to the patient is vital to the individual's healthcare success. Whānau, extended family, and community are paramount in Māori society, and, thus, decisions (including health decisions) are made collectively (McGruer et al., 2019; Walker et al., 2006). In rangatiratanga (right to exercise authority,

**Table 2**

*Charting of Findings in Te Pae Māhutonga Framework for Health Promotion*

Author (date)	Tasks				Guiding points	
	Mauriora: Access to te ao Māori <sup>a</sup>	Waiora: Environmental protection <sup>b</sup>	Toiora: Healthy lifestyles <sup>c</sup>	Te Oranga: Participation in society <sup>d</sup>	Ngā manukura: Leadership <sup>e</sup>	Te mana whakahaere: Autonomy <sup>f</sup>
Bath and Janzen (2011)			Patients want a better understanding and accurate diagnosis. They want to be able to make sense of their symptoms. Keen to plan things that they can do/ solutions and strategies.			Patients want communication and empathy, and individualised information.
Bødskov et al. (2022)			Patients hope to have clarification on their condition and be pain-free. Few patients expect to be assessed by an orthopaedic surgeon but were satisfied with APP. Difficulty with insufficient information.	Parking and access were a problem, as were waiting times.	The lack of collaboration between GP services and clinics was seen as negative.	
Desjardins-Charbonneau et al. (2016)			Patients have trust and confidence in diagnosis and treatment. 58% were confident or extremely confident in APPs competence in triaging patients for surgical care. 63% confident that APPs make adequate decisions regarding their health.	72% of patients feel that APP use will reduce wait times.		
Fennelly et al. (2020)	Attractive for appointments to be at the hospital as this is where patients feel the experts are, and other services are co-located.		Patients want to be given information about clinics. Patients' knowledge of clinicians' competence and professionalism gives them ease, as well as knowing what the options are. Some see the APP as another step; this was more common in people who had seen a physiotherapist previously and were frustrated when they received the APP letter. But they were happily surprised once they had seen the clinician and had an assessment. (However, some patients were unsure that they had not seen the specialist/surgeon).	Timely access. The inconvenience of attending hospital appointments, the cost of travel, time off work, bus services, etc., were all barriers.		Patients want to be actively listened to, and to be offered guidance. Patients want to be involved in decisions.

Author (date)	Tasks			Guiding points		
	Mauriora: Access to te ao Māori <sup>a</sup>	Waiora: Environmental protection <sup>b</sup>	Toiora: Healthy lifestyles <sup>c</sup>	Te Oranga: Participation in society <sup>d</sup>	Ngā manukura: Leadership <sup>e</sup>	Te mana whakahaere: Autonomy <sup>f</sup>
Gustavsson et al. (2023)			Patients want their disorders confirmed.			Patients consider it important to be involved in the decision-making process related to their continual care.
Jasim et al. (2023)			Disconnected communication leaves patients feeling powerless with insufficient information to make such informed decisions. Patients want information earlier in their journey. Relationships with key professionals could significantly impact their experience and progress – negative interactions with surgeons halted their progress. GP recommended non-surgical management, which resulted in little or no improvements or too much pain to engage, with patients viewing this as a mechanism for managing service demand.	Patients found pathways difficult to navigate. Obtaining a referral was a far greater challenge and concern.		
Joseph et al. (2014)			Patients felt they need to demand and bully healthcare workers to help them progress along pathway. Patients want competency in clinicians. Patients are satisfied if clinicians decide to reroute treatment and provide their decision with an explanation. Patients want plans for treatments.	Access is a major barrier, and having to see a GP first before triage was described as a further barrier. Patients want more rapid access. GP can be a barrier. Patients find having to go to the GP to get a referral difficult.		Patients want support with the pathways.  Patients want greater control in management.

Author (date)	Tasks				Guiding points	
	Mauriora: Access to te ao Māori <sup>a</sup>	Waiora: Environmental protection <sup>b</sup>	Toiora: Healthy lifestyles <sup>c</sup>	Te Oranga: Participation in society <sup>d</sup>	Ngā manukura: Leadership <sup>e</sup>	Te mana whakahaere: Autonomy <sup>f</sup>
Kechichian et al. (2024)			<p>Patients would like reassurance. Education and explanations were important to them.</p> <p>Concern with the administration team's lack of information given to patients about the roles and what to expect.</p> <p>Competence in clinician.</p> <p>Seeing the right person at right time.</p> <p>"Physios are more specialised for these types of problems with joints".</p>	<p>Patients expect to be quickly managed.</p> <p>One patient was concerned that she was prescribed three physiotherapy sessions, and when she tried to get an appointment with a physiotherapist, she couldn't find one, so she gave up.</p>	<p>Cooperation between different departments and professions fosters trust.</p>	<p>Active listening and a patient-centred approach used by first-contact practitioners enabled patients to feel involved in their management.</p>
Mutsekwa et al. (2022)	<p>Patients have less familiarity with novel roles and pathways. This improved after attending the clinic.</p> <p>Patients want information that is understandable.</p> <p>Patients want diagnosis and exclusion of more sinister pathologies, which will be communicated in the first few sessions.</p>			<p>Timely access and shorter wait times to care. The long wait times were a source of anxiety.</p> <p>Patients value easy and efficient procedures with referral process and ease of arranging and attending appointments.</p> <p>Concerns about the costs of going to appointments and time off work.</p>	<p>Patients desired continuity and relationships with healthcare workers, with adequate follow-up.</p> <p>Better communication between GPs and health professionals improves patient's confidence.</p>	

Author (date)	Tasks			Guiding points		
	Mauriora: Access to te ao Māori <sup>a</sup>	Waiora: Environmental protection <sup>b</sup>	Toiora: Healthy lifestyles <sup>c</sup>	Te Oranga: Participation in society <sup>d</sup>	Ngā manukura: Leadership <sup>e</sup>	Te mana whakahaere: Autonomy <sup>f</sup>
Reeve and May (2009)		Some felt hospital was the best environment as this is where the experts are perceived to be and where further investigations (i.e. radiology) are close by.  Some wanted location closer to home to make travel easier; familiar surroundings were more comfortable for patients.	Written information is considered helpful and can be referred to. Patients want more information about pathways and processes, and timeframes. Patients would like results framed in understandable terms. Patients want to come away with an action plan. Previous experiences, especially with physiotherapists, could affect patients' trust.	Patients want flexibility in appointment times, especially concerning work and transport.		Expect a competent diagnosis and together decide on management. Patients respect good communication, building rapport, and speaking to patients as equals.
Rempel et al. (2017)			45% of participants selected less than 3 on the Likert scale questionnaire for willingness to undergo nonphysician healthcare provider screening. 88% had some willingness. 70% of participants who, if ruled out for surgery as an option, would still want to see a surgeon for confirmation. 8.8% would not require confirmation from a specialist. 75% willing to pay or consider paying for nonphysician screening.	Expecting a timely screen within 1 month of referral.	Concerns from patients regarding concordance between surgeon and nonphysician assessment results.	



Author (date)	Tasks				Guiding points	
	Mauri ora: Access to te ao Māori <sup>a</sup>	Wai ora: Environmental protection <sup>b</sup>	Toi ora: Healthy lifestyles <sup>c</sup>	Te Oranga: Participation in society <sup>d</sup>	Ngā manukura: Leadership <sup>e</sup>	Te mana whakahaere: Autonomy <sup>f</sup>
Ryan et al. (2020)			<p>Risks, benefits, and alternatives were not transparent for patients, nor was the way the pathway worked. Patients want their needs and circumstances heard. Some felt that care being protocol-driven limited this.</p> <p>Patients felt they lacked the skills to access and evaluate information.</p>	<p>Accessing specialist opinion is difficult and protracted due to gatekeeping by GP and triage physiotherapist.</p> <p>Problematic having to first attend and then fail this appointment, as well as having new waiting lists at each stage in a pathway.</p> <p>High costs for patient access.</p>	<p>Services appear compartmentalised and non-collaborative, with the exception of a MDT meeting.</p>	<p>Noted to be difficult and burdensome for patients to be independent and proactive to meet their healthcare needs.</p> <p>Patients want control over their pathways. However, they did not know the pathway, so had no control.</p> <p>Feel the pathway is not person-centred.</p> <p>Patients were required to be independent and proactive with information and opinions of others and found this to be burdensome and difficult.</p> <p>They felt that pain negated their ability to make decisions and navigation of health pathways.</p> <p>Also difficult for patients to remain positive and motivated throughout this.</p> <p>High importance for the opportunity to participate in decision making.</p>
Samsson et al. (2016)			<p>High importance for receiving information. Want a healthcare person who listens and is understanding. Reported high importance for competence.</p>			

Note. APP = advanced practice physiotherapist; GP = general practitioner; MDT = multidisciplinary team.

<sup>a</sup> Rests on secure cultural identity. Factor is important in health. To promote identity. How has health care incorporated te ao Māori? Or indigenous worldview? <sup>b</sup> Linked to the external world and spiritual element. Interaction of people and surroundings. How has the environment, location and health been considered? The safe, comfortable environment. <sup>c</sup> Messages delivered are clear to help improve the potential for Māori. People have the choice to improve their health. Education and communication: How information is delivered affecting change. Is this consistent and effective? <sup>d</sup> The services available and the voice in deciding how these are made available. Access: Why do people participate and have the confidence that they can access good health services. <sup>e</sup> Local leadership in the community. No single group has the skills or links to make large change. Bring whānau into health. Working together: How does communication between professions, services, leaders, and the community affect change? <sup>f</sup> Need a sense of patient ownership and control. Communities and whānau must have autonomy and self-determination in promoting their health. Health workers are working in patient-centred care and not leading the community/whānau in health changes. This includes patient participation in programmes. Person/whānau-centred care: Is understandable for patients. Indicators and measures are relevant to the community.

chieftainship, and ownership), self-determination and autonomy in shaping health are important for aligning health with Te Tiriti o Waitangi (McGruer et al., 2019; Walker et al., 2006). Thus, communication with the collective empowers patients to make decisions with their whānau and community in mind. Ailments in Māori (including osteoarthritis) affect whānau, the local community, and wider society. They affect their roles in these structures and can bring negative emotions and experiences (Dixon et al., 2021). To achieve improved communication and leadership, the findings of this review suggest that transparent communication chains and relationships between physiotherapy-led orthopaedic triage clinicians, GPs, and local communities should be created and nurtured. Acknowledging and welcoming whānau in clinics, creating collective dialogue, and person-centred care for the patient and whānau would remove barriers to patients making appointments and accessing services and pathways.

### Gaps in the literature

All the study participants in this review appeared to have a white European background, presenting a Western preference of healthcare service delivery. Moreover, there were no aspects of culture, or minority or indigenous peoples described in any of the studies, and none of the studies were conducted in Aotearoa New Zealand. This finding limits the applicability to Aotearoa New Zealand and determining whether Māori health needs are met in this health context, showing a need for future research. To be aligned with te Tiriti o Waitangi, culture and equity must be considered. Mauriora and waiora can be considered the acknowledgement and promotion of cultural identity and belonging, along with the interactions and relationships with and within the environment (Durie, 1999). This includes spiritual connections and access to spiritual lands and places such as marae and whānau (Durie, 1999). The lack of data for these two aspects helps to identify gaps that need to be investigated and acknowledged. Future research should explore the understanding and expectations that people hold about physiotherapy-led orthopaedic triage services in the context of Aotearoa New Zealand. Moreover, the use of Indigenous frameworks, such as Te Pae Māhutonga, to position the research would be valuable.

### Strengths and limitations

To our knowledge, this is the first scoping review of patients' expectations and understanding of physiotherapy-led orthopaedic triage. A strength of this review is the framework used for conducting and reporting, which ensures rigour and trustworthiness. Using Te Pae Māhutonga as a framework helped identify gaps specific to the Aotearoa New Zealand cultural context, aiding identification of areas of future research specific to Aotearoa New Zealand.

The literature includes multiple clinician titles, terminology, and definitions, which may have influenced the search strategy and number of included studies. To address this, we checked reference lists of included articles, though significant overlap and interchangeable terminology persist (Naik et al., 2023; Trøstrup et al., 2020). Interestingly, no identified studies were conducted in the United States, possibly due to health system differences rather than terminology, as the search

strategy accounted for variations like "physiotherapist" and "physical therapist". Studies included were from countries with similar health systems facing similar challenges.

The decision was made to focus on physiotherapy-led orthopaedic triage to assess feasibility and address the specific research question. Future studies could expand the scope to include innovative approaches in different disciplines, such as speech-language therapists working in ear, nose, and throat specialities.

The decision to include experience-based studies (post-assessment) regarding expectations and understanding made the extraction of information more difficult. While the addition of further rich information has enhanced the findings, it may also be seen as a limitation. This could be clarified by further studies examining understanding and expectations prior to physiotherapy-led orthopaedic assessment.

### Clinical and practice-based recommendations

Practical and clinical recommendations emphasise patient education from the patient's first health access point to their discharge from service. This needs to include information about pathways, clinicians, diagnoses, treatment options, and timeframes. Effective active communication strategies with GPs, whānau, and communities are required. This could help break down barriers, especially regarding patient access, and create effective shared decision-making. This can also help to direct policy within these types of services.

### CONCLUSION

The findings of this review on patients' expectations and understanding of physiotherapy-led orthopaedic triage are thematically reported within the Te Pae Māhutonga framework. Patients expect to receive information about pathways, diagnoses, and timeframes early in their journey. Patients want ease of access to pathways that limit barriers. Patients demand patient-centred care where they are involved in decisions and where good communication channels exist between primary and secondary care. This review reveals significant gaps in the literature, viewed through an Aotearoa New Zealand health context and equity lens. It emphasises the urgent need for Aotearoa New Zealand-specific health research to adapt physiotherapy-led orthopaedic triage services to our unique health system and to develop robust frameworks ensuring equitable health outcomes.

### KEY POINTS

1. Patient-centred care and communication. The review emphasises the importance of providing clear, timely information about care pathways, diagnoses, and timeframes, ensuring patients feel informed and supported throughout their healthcare journey.
2. Culturally responsive practice. By applying the Te Pae Māhutonga Māori health promotion framework, the research highlights the need for culturally appropriate care that aligns with Te Tiriti o Waitangi, fostering equity and trust in service delivery.

3. Collaborative decision-making. The findings advocate for greater involvement of GPs, whānau, and other advocates in shared decision-making processes. This would enhance patient satisfaction and ensure services are tailored to individual and community needs.

## DISCLOSURES

Nil.

## PERMISSIONS

Nil.

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## CONTRIBUTIONS OF AUTHORS

TK conceived the review and undertook searches, data extraction, charting, and analysis. He also contributed to developing the design, methods, manuscript production, and editing of the review. DOB contributed to developing the design, methods, analysis, manuscript production, and editing. NS contributed to developing the analysis, manuscript production, and editing.

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# Appendix A

## SEARCH STRATEGY

Medline via EBSCO (with CINAHL and SPORTDiscus) database search conducted on 30 March 2024
Search terms
1. Perceptions OR understanding OR expectations OR attitudes AND physi* AND orthopaedic triage
= 4 results
2. Removal of physi*
= 6 results
3. Final ortho* triage AND physi*
= 48 results
4 accepted to the next stage after reading titles
Cochrane library
Search terms
1. Ortho* triage
= 31 results
3 accepted to next stage after reading titles
SCOPUS
Search terms
1. Perceptions OR understanding OR attitudes OR expectations AND physi* AND orth* AND triage
= 29 results