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MASTERCLASS

Shared decision making and physical therapy: What, when, how, and why?

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Abstract
Background: Shared decision making is a means of translating evidence into practice and facilitating patient-centred care by helping patients to become more active in the decision-making process. Shared decision making is a collaborative process that involves patients and clinicians making health-related decisions after discussing the available options; the benefits and harms of each option; and considering the patient's values, preferences, and personal circumstances.
Methods: This paper describes what shared decision making is, why it is important, when it is appropriate, and key elements. We report on physical therapists' current use of and attitudes to shared decision making and explore factors that influence its uptake. Lastly, we examine what is needed to promote greater use of this approach.
Results: Key elements in the shared decision making process are: identifying the problem that requires a decision; providing an explanation of the health problem, including, where appropriate, the natural history of the condition; discussing the available options and the potential benefits and harms of each option; eliciting the patient's values, preferences, and expectations; and assisting the patient to weigh up the options to reach an informed decision. When applied in practice, shared decision making has been found to improve patient-clinician communication; improve patients' accuracy of their expectations of intervention benefits and harms, involvement in decision-making, and feeling of being informed; and increase both patients' and clinicians' satisfaction with care.
Conclusion: Despite physical therapists' enthusiasm for shared decision making, uptake of this approach has been slow. Multi-level strategies and behaviour change are required to encourage and support the sustainable incorporation of shared decision making in practice.

Background

Maria has lateral epicondyle tendinopathy, and she does not know whether she should wait and see if it gets better on its

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own, undertake physical therapy sessions, or have a corticosteroid injection.

Sam is in the Emergency Department with immediate and severe neck pain, following a minor car accident. He was assessed by an advanced practice physical therapist who mentioned they used the Canadian C-spine rule and assured him he did not sustain any serious injury and could be safely discharged without cervical spine imaging. He was surprised by this and wondering what the pros and cons are of having imaging.

These examples are just two of the decision-making scenarios faced by patients and their physical therapists daily and ideal candidates for a process known as shared decision making. The aim of this article is to explain what shared decision making is, its importance and elements; to provide an overview of the studies that have examined physical therapy's attitude toward and uptake of this approach; and to present strategies to facilitate its implementation.

What is shared decision making?

Physical therapy prides itself on being an evidence-based profession. Shared decision making is a means of translating evidence into practice and facilitating patient-centred care by helping patients to become more active in the decision-making process. Shared decision making is a collaborative process that involves patients and clinicians making health-related decisions after discussing the available options; the benefits and harms of each option; and considering the patient's values, preferences, and personal circumstances.[1] It allows clinicians to apply evidence-based information while placing the patient (and family members when appropriate) at the centre of clinical decisions.[2, 3]

A collaborative decision therefore incorporates the best available research evidence, the clinician's knowledge, experience and expertise, and the patient's values and preferences.[4, 5] Shared decision making involves an open discussion between two experts - the clinician and the patient. The clinician provides evidence-based information about the options and balanced information about the benefits, harms, and uncertainties of each option (including watchful waiting where appropriate), and uses their communication skills to actively listen, engage, elicit patient preferences, advise the patient in accordance with their preferences and address their concerns.[1] The patient knows their condition and how it affects their daily life; their expectations and concerns; and their values and preferences for the options which may be influenced by their past experiences, that of their friends, or circumstances (such as cost and treatment burden).

Why is shared decision making important?

Both clinician and patient perspectives are important and when combined, can result in higher patient and clinician satisfaction with care.[6] The majority of patient healthcare complaints are due to ineffectual communication or receiving an inadequate amount of information to make an informed decision.[7] When a health decision is needed, shared decision making is a way of facilitating good patient-clinician communication and enabling patients to make an evidence-informed decision.[8]

Acknowledging that both clinicians and patients have relevant and valuable information to contribute to the decision-making process can help to equalise the unequal power relationship that exists in the traditional paternalistic approach. Shared decision making is an ethical imperative[9] and patients should be invited to participate in the decision-making about their healthcare and have the right to participate as much or as little as they desire.

Shared decision making can assist in managing the expectations and beliefs that many have about interventions and how they can help and by how much. In general, patients and clinicians overestimate the benefits of interventions and underestimate their harms.[10, 11] Additionally, many clinicians and patients have beliefs about intervention efficacy that is based on 'mechanistic thinking' (that is, *how* the intervention should work), rather than empirical thinking (that is, *does* the intervention work?). For example, many patient requests for imaging for back pain are based on the belief that the clinician needs to "see the problem" to know how to treat it, despite imaging not being routinely recommended for low back pain.[12, 13] Shared decision making helps to provide patients with more accurate expectations of the benefits and harms of the options.[14] As such, it has the potential to reduce low-value care (and thus is one of the strategies for reducing overtreatment) and increase the uptake of high-value care.[15, 16]

Additionally, patients who choose to be involved in the decision-making process feel more satisfied with their treatment decision, informed, and able to know what matters most to them.[14] This in return reduces decisional conflict that may arise from feeling uninformed about which options that align best with their own values and preferences or having inaccurate perceptions of their outcome probabilities.[14]

However, research about shared decision making and its effects is a relatively new and growing field. No trials to date have measured clinical outcomes following shared decision making. A systematic review of studies using shared decision making in people with musculoskeletal pain noted that none of the included studies measured patient-reported health outcomes.[17]

When is shared decision making appropriate?

Despite shared decision-making being described as a possible 'Excalibur' to physical therapy,[15] it is important to know when it is appropriate and when it is not. For example, it is typically less appropriate and not needed in circumstances where there is one clearly superior treatment option (for example, a person with non-specific low back pain should be encouraged to remain active, rather than bed rest). It is most appropriate when there is more than one option and they are of similar effectiveness but have a different benefit-harm profile (e.g. costs, type of benefit, type of harm); thus involving 'value judgement'.[16] This is known as a preference-sensitive decision, which is the majority of intervention decisions in physical therapy.

Shared decision making is also appropriate to be incorporated into the management of long-term health conditions which require developing action plans and setting goals, and in people with multimorbidity.[18] Shared decision making is applicable to many types of healthcare decisions including

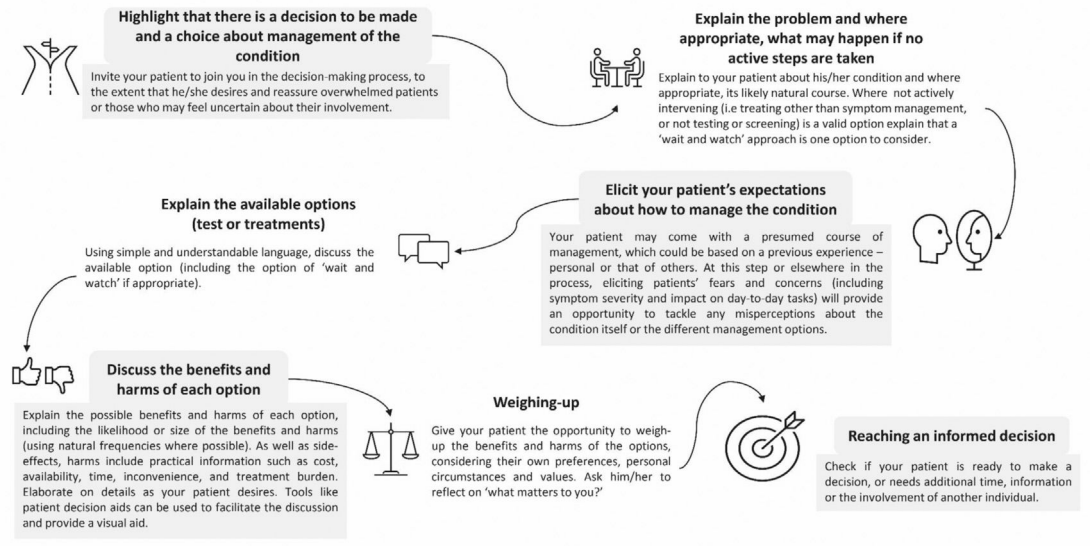

Fig. 1 Key elements in the shared decision making process.

screening, testing, prevention, and treatment[2] and is appropriate for use in all settings, such as emergency, outpatient and inpatient departments, community health, private practice, educational settings, and workplaces.[19, 20]

Key elements of the shared decision making process

The key elements in the shared decision making process are illustrated in **Fig. 1**, although it is often not a linear process as indicated in the figure and elements may be revisited during the interaction. For examples of specific physical therapy clinical examples, see the paper by Hoffmann and colleagues.[2]

One of the challenges of shared decision making is that for some decisions, the evidence for the benefits and harms for one or more options available may be limited. This challenge is not unique to shared decision making and can also occur when practicing evidence-based practice. While the evidence base for the physical therapy profession is constantly growing,[21, 22] many gaps remain and decisions should be informed based on the best available evidence at that point in time, and this uncertainty should be communicated to patients.

Physical therapists often work as part of an interprofessional team. There can be differences in how shared decision making occurs in this context and research into this is starting to emerge.[23] New barriers, such as trust in and communication with other disciplines, can occur in interprofessional shared decision making.[24]

Survey and observational studies evaluating physical therapists' use of, or attitude toward, shared decision making

Physical therapists have a rich and long history of working closely with their patients and are renowned for their ability to build rapport and trust, which appears to positively impact treatment outcomes.[25, 26] Integrating patients' values and preferences as well as research evidence into health decisions is something that many physical therapists see as an innate skill and something that "we already do." But do we?

There has only been a small number of surveys or observational studies of physical therapists and their attitudes towards and/or use of shared decision making. In an Australian survey of 372 physical therapists who were attending a national conference, participants had a good level of knowledge on most questions (correct responses ranging from 39.5% to 98.5% of participants).[27] There was a generally positive attitude towards shared decision making, with most participants believing it is useful to most practice areas and 79% indicating interest in learning more about it. Sixty percent indicated they make decisions with their patients and there was general agreement between how decisions should be made and how they are made. The shared decision making behaviour with the lowest reported occurrence was explaining the relevant research evidence about the benefits and harms of the options.

In a survey of 357 German physical therapists, attitude towards shared decision making was mostly positive, with half of all participants expressing a preference for this approach. However, knowledge about how to practice shared decision making was limited and about two-thirds reporting using a paternalistic approach.[28] In low and middle-income countries, awareness of shared decision making is low and there are multiple cultural and operational barriers to shared decision making occurring.[29]

However, just being aware of shared decision making and having a positive attitude towards it, does not mean it is practiced in clinical encounters. Evaluating the extent to which shared decision making happens in practice is best done through observation and the objective assessment of this interaction. The Observing Patient Involvement in Decision Making (OPTION) tool is one of the most frequently used, validated instruments, for measuring the extent to which shared decision making occurs.[30]

In an observational study of 13 physical therapists in Belgium, 237 consultations were analysed using the OPTION scale, and patients' preferred level of involvement in decision-making was ascertained, along with the therapists' perception of patients' desired involvement.[31] The mean OPTION score was 5.2 (SD 6.8) — the maximal score possible is 100 — indicating that shared decision making was not occurring and that therapists tended to use a paternalistic approach. Before the consultation, 36% of patients indicated that they wanted to share in the decision and another 36% wanted to express their opinion before delegating the decision to the therapist. In two-thirds of consultations, the patient wanted to be more actively involved in the decision-making process than the therapist perceived they wanted to be.

In an observational study of 12 physical therapists in England, 80 outpatient consultations for back pain were recorded and analysed, with a mean OPTION score of 24%.[32] The option to defer treatment or not actively treat was only presented in 1% of consultations, and information about the benefits and harms of the treatment options was only provided in 15% of consultations. Patients' expectations or views about the problem and how it could be managed were not elicited in 41% of consultations.

Do patients want to make decisions with their physical therapists?

There have been just a few studies that have explored patient preferences for participation in clinical decision making. A qualitative study in Sweden with 20 patients seeking physical therapy for musculoskeletal disorders found that all participants wanted to be involved in the decision-making process, but the extent of desired involvement varied amongst participants.[33] Participants described trust and confidence in the physical therapists' skills and a preference for active engagement in therapy. Eighteen of the participants were re-interviewed following their physical therapy care and reported that their preferences had mostly been accommodated in the decision-making process and those treatment decisions had mostly been made jointly between themselves and the physical therapist.[34] The findings highlighted the importance of two-way communication, of discussing treatment options and eliciting preferences and that for some, preferences had changed throughout the process.

Training and resources that can facilitate shared decision making

Shared decision making is a skill that can, and should, be taught to health professionals. Ideally, it would be taught in all professional entry-level physical therapy programs. It is unknown in what proportion of physical therapy curricula worldwide shared decision making is currently taught and if so, whether it is merely mentioned or whether students practice the skills required, and what content is covered. There is no consensus on the core knowledge and skills that are essential to cover in shared decision making training[35]; to some extent, this is influenced by the context and target audience (for example, entry-level students or experienced clinicians with a specific caseload). Box 1 lists some of the topics that can be covered as part of shared decision making training.

Box 1 Shared decision making training topics and sources of patient decision aids[36]

Example of topics that can be covered in shared decision making training

- Introduction to and principles of shared decision making
  - What shared decision making is, its relationship with evidence-based practice and patient-centred care
  - The importance of shared decision making, its benefits, and when it is appropriate to undertake shared decision making
  - Shared decision making process and its elements
  - Inviting patients to participate in the decision-making process
- Discussing the options and reaching a decision
  - Describing the options, and the benefits and harms for each
  - Presenting the evidence, the role of decision support tools such as patient decision aids, and where to find them
  - Principles of risk communication (including probability and chance, framing, visualisation, presenting numbers, and communicating uncertainty)
  - Putting options into context and considering patients' values and preferences
  - Reaching the decision and discussing next steps
- Other considerations
  - Shared decision making and health literacy; communication skills and tools to help patients of all health literacy levels engage in decision-making
  - Addressing some of the myths about shared decision making
  - Relationship of shared decision making with informed consent
  - Putting shared decision making into practice

Databases and websites that contain collections of patient decision aids

- A to Z inventory of the Ottawa Patient Decision Aids Research Group at the Ottawa Health Research Institute (https://decisionaid.ohri.ca/AZinvent.php). The inventory contains decision aids that meet a minimal set of criteria.
- Med-Decs — a European-based database that aims to provide support in medical choices (https://www.med-decs.org/en).
- Various websites which contain collections of decision aids, such as: Harding Centre for Risk Literacy; UK National Institute for Health and Care Excellence; UK Patient.info; University of Laval decision boxes; Option Grids (subscription through EBSCO Health)

Shared decision making requires clinicians to have good communication skills and be knowledgeable in evidence-

based practice.[8] Shared decision making is the final step of evidence-based practice and recognition of this has increased recently. It is now included as one of the core competencies in evidence-based practice,[37] and because of the interdependence of shared decision making and evidence-based practice, teaching shared decision making as part of evidence-based practice is a logical way to facilitate that link.[8] Shared decision making can be, and sometimes is, taught as part of communication skills. If it is, it is essential that all elements of shared decision making are taught and content relating to how to communicate evidence to patients (often referred to as 'risk communication' skills) is not omitted.

Embedding shared decision making in the entry-level physical therapy curriculum can positively impact students' knowledge, skills, and attitudes towards shared decision making, although most studies have been conducted in medical students.[38, 39] A randomised controlled trial of university students that included physical therapists found that a brief shared decision making training intervention, taught as part of an evidence-based practice course, increased students' skills, attitude towards, and confidence in shared decision making facilitation shortly after the intervention, although long-term effects were not evaluated.[40]

In surveys, many physical therapists have indicated they would like the opportunity to receive training in shared decision making.[27] Although in the last decade there has been an increase in the shared decision making training programs that exist,[41] opportunities to access them are typically limited as most are face-to-face. An advantage of online courses is that they can be undertaken at a time and location convenient to clinicians or integrated into the curriculum for health students at institutions where there may not be the resources or skills to teach the topic. We are not aware of any online shared decision making courses that are tailored to physical therapy. We have developed and evaluated,[36] a free online course that takes about two hours to complete.[42, 43] Although the scenarios throughout this course are medical ones, the knowledge and skills are relevant to all health professionals.

Specific training to facilitate interprofessional shared decision making has been the focus of some recent research.[44, 45] Completion of a training program may not be sufficient for clinicians to routinely integrate shared decision making into clinical practice, particularly into established workflows and habits.[46] Careful attention to the barriers to shared decision making implementation, particularly organisational and system ones, is needed to maximise the effects of training.

Other than training, one of the most widely used resources to facilitate shared decision making are patient decision aids. Patient decision aids are educational tools that can be used to assist patients to acquire knowledge and evaluate its importance when making health decisions. They contain information about the options, the benefits and harms of the options, other relevant information (such as practical information about availability and cost), and sometimes also questions to help patients consider and clarify what is important to them so that they can make decisions consistent with their values.[14] Shared decision making can certainly occur without decision aids and conversely, the use of one does not guarantee that shared decision making occurs. A clinician's skills and attitude towards shared decision making are more important in facilitating shared decision making. There will never be a high-quality decision aid available for all conditions and decisions. However, when they do exist, they can help to provide structure to the decision-making process, are a visual aid, can help elicit a patient's preferences, and can be shown and discussed with family.[1] Most of the existing decision aids that are relevant to physical therapy are for musculoskeletal conditions. One of the current challenges with patient decision aids is finding them. There is no central, comprehensive repository, and they are scattered across various websites and publications. Some of the more comprehensive sources are listed in **Box 1**.

Studies aimed at increasing shared decision making in physical therapy

To date, the majority of studies that have aimed at increasing the uptake of shared decision making in physical therapy have been conducted with therapists who work with patients with musculoskeletal conditions.

Option grids are a type of decision aid. The impact of an Option Grid for knee osteoarthritis was evaluated in a UK clinic by 6 physical therapists who received 30 min training in the tool's use.[47] For each physical therapist, consultations with 6 patients were assessed before instruction in using the tool and 6 after, giving a total of 72 patients, and of these, 36 consultations involved the Option Grid. Shared decision making increased when physical therapists used the Option Grid (8.4 increase in Observer OPTION score [0—100] in the intervention group; mean gain in knowledge 0.9 points [range 0—5]). There was no increase in encounter duration. Patients who participated in semi—structured interviews[48] and those whose therapist had used the tool described more detailed discussion about the benefits and harms of a wider range of treatment options and greater understanding of a structured progression of the options as their condition advanced. The physical therapists were also interviewed before and after using the tool.[49] In the 'before' interviews, therapists had concerns that the tool would lead to an increase in encounter duration, that there would be patient resistance regarding involvement in decision-making, and for potential information overload. In the 'after' interviews, therapists reported that the tool had changed their usual way of communicating and that it was generally acceptable and helpful to integrate this tool into practice.

In a pilot cluster randomised trial of a patient decision support package (patient booklet and 2-hour training for intervention group therapists) for low back pain with 19 physical therapists and 148 participants, patient satisfaction was higher in the control group (67%) than in the intervention group (53%).[50] Unfortunately a process evaluation which may have helped to explain this finding was not conducted as part of this pilot. It was hypothesised that the decision-support package created uncertainty about the effectiveness of the treatment options available to patients and reduced their expectation of benefit.

Some elements of shared decision making have also been incorporated into approaches to patient-centred goal setting

Table 1 Examples of some of the barriers, facilitators, and strategies, at the level of the individual, organisation, and system, to implementing shared decision making in practice.[1, 27, 54, 57-60]

Level		Myths about shared decision making and other barriers to its implementation	Facilitators and strategies to assist with implementation
INDIVIDUAL	Patient	• Feeling unable or unwilling to share in decision-making responsibilities • No prior experience with, or invitation to, collaborate in decision-making with clinician • Power-imbalance between clinician and patient based on historical normative role of patients as passive participants in their care, perceived unacceptable to ask questions • Unaware that there is a decision to be made • Expectation that there is a "right" and "wrong" decision	• Providing education from clinicians, and patient and public education campaigns to increase awareness of shared decision making and resources to support the process (such as Ask Share Know – 3 Questions,[61] Choosing Wisely) • Inviting patients to participate in the decision-making process; explaining that there is a decision to be made; encouraging patients to recognise the importance of their own preferences • Encouraging question: asking and reassuring patients that there is no "right" and "wrong" decision and that decisions should be based on their values and preferences • Recognising the role and important perspective that patients bring to clinical decision-making
	Clinician	• Time constraints (real and perceived that "it takes too long") • Perception that "We already do it" • Perceived lack of applicability due to patient characteristics or clinical situation • Paternalistic attitude and practice • Concern (of some private practice clinicians) that patients will require fewer physical therapy sessions • Insufficient knowledge about what shared decision making is • Lack of skills/training needed for shared decision making	• Using clinical champions who practice and advocate for shared decision making (within discipline and where relevant, by other members of the interdisciplinary team) • Explicitly encouraging clinicians to be involved in shared decision making and providing education about the positive impact it can have • Providing practical, interactive skills training and workshops (at entry-level education and in continuing professional development) can help to: ○ dispel myths about shared decision making (e.g. it doesn't increase consultation length; median increase is 2.6 min[14]) ○ improve clinicians' knowledge of shared decision making ○ improve communication skills, risk communication skills, and other shared decision making skills ○ identify differences between shared decision making and current practice ○ promote discussion and positive attitudes towards it (e.g. "we could do this better")
INTERACTION BETWEEN CLINICIAN AND PATIENT		• Limited time allocated for consultation might be insufficient for shared decision making to occur • Poor continuity of care (e.g. suboptimal patient handovers between team members) • Environment not conducive to shared decision making (e.g. noisy) • Patient characteristics that can hamper communication, such as older age, low health literacy, ethnicity/language differences	• Involving the multidisciplinary team in decision-making (e.g. doctor may not have time to explain options in detail, but physical therapy consultations are typically longer and provide more opportunity) • Having available decision aids that are based on high quality evidence presented in a balanced manner (although this does not guarantee shared decision making will occur). Clinicians' skills and attitude towards shared decision making are more important and aids can be used to supplement this conversation when required and appropriate. • Clinicians adapting communication style to meet the needs of the patient • Presence of an advocate to support decision-making
ORGANISATIONAL	Can include professional bodies and organisations, hospital and healthcare administrators, departmental management	• Insufficient resources (e.g. time, resources, training) devoted to fostering shared decision making implementation	• Redesigning clinical workflows to support the adoption of shared decision making, including how information systems can support shared decision making • Developing local policy and procedures on how to implement shared decision making (including plans and networks for training)

Table 1 (*Continued*)

Level		Myths about shared decision making and other barriers to its implementation	Facilitators and strategies to assist with implementation
			• Including shared decision making and patient-centred care in mission statements, policy, standards, and guidelines • Training of entire team and referral network could encourage communication, coordination, and cooperation • Having a senior leader with responsibility and accountability for leading efforts to implement shared decision making • Having organisational shared decision making champions (senior health professionals who also collaborate closely with 'service users') • Measuring shared decision making, routine or periodic, in typical practice, may foster monitoring, evaluation, and accountability • Capturing the impact of shared decision making on patients and clinical practice to promote sustained motivation and its use. Routine collection can include proximal outcomes (direct result of shared decision making - such as patients' knowledge and care satisfaction); distal outcomes (what happens after the consultation - such as alignment between patient preference and treatment); and distant outcomes (longer term - such as utilisation of health care/resources or health outcomes)
HEALTHCARE SYSTEM	Can include policy, task forces, and government agencies	• Insufficient or absence of appropriate resources, policies, standards, or systematic system-wide implementation strategies	• Allocating appropriate resources (including staff with dedicated shared decision making leadership and training responsibilities, policies, information systems, and clinical workflow processes) • Developing public campaigns and those aimed at users of the health service • Having a systematic implementation strategy at a national, regional, and/or organisational level. Ministerial interest and leadership have had substantial impact in countries including Germany, Netherlands, and Taiwan.[62] Patient experience and shared decision making has been embedded in the UK's National Health Service care pathways, and Scotland's Realistic Medicine strategy. • Reinforcing importance of shared decision making through accreditation standards - e.g. Australian Commission of Safety and Quality in Healthcare has incorporated shared decision making into its National Safety and Quality Health Standards. In November 2020, the UK's General Medical Council Issued a guidance document that contains seven principles on decision-making and consent.

in physical therapy.[51] Shared decision making is also sometimes one of the goals of multi-component interventions. For example,[52] the Joint Health Program is a physical therapy-led non-surgical care program for individuals with hip and knee osteoarthritis and focuses on enhancing patient engagement, shared decision making, and self-management.

Implementation of shared decision making

To date, shared decision making has been slow to enter mainstream practice and overall, has not been widely adopted. While the focus of it is on the interaction between the patient and clinician, for shared decision making to become part of routine practice it needs to be embedded within an organisation and system where it is encouraged and supported through leadership and appropriate resources.[4] **Table 1** lists some of the myths about it and barriers to implementing shared decision making, along with facilitators.

For shared decision making to become truly embedded in routine clinical practice there needs to be a seismic culture shift. This requires multi-level behaviour change to occur and the constructive engagement of all relevant stakeholders in defining the problem, generating solutions, and implementing them.[53] While shared decision making is beginning to feature in some policy documents and guidelines, in most countries there is no systematic promotion or implementation strategy at a national, regional, or organisational level.[54] In many physical therapy codes of practice, shared decision making is either explicitly mentioned or elements of it are described in one or more practice standards and

ubiquitous with the provision of "good" care.[55, 56] However, the definition of shared decision making is not consistent and is mentioned superficially without providing direction or detailing the process of how physical therapists may implement the process. While good practice is described as including elements such as involving practicing patient/client-centred care or partnership, effective communication and providing of treatment options, this is not synonymous with the process of practicing shared decision making as described in this paper. The way in which shared decision making is represented in guiding documents may be a factor that contributes to clinicians misinterpreting their usual practice as "doing shared decision making."

Fostering culture change at the individual clinician and patient level requires improvements in the activation and preparation of clinicians, patients, and the public for collaborative decision-making. Campaigns targeting patients, clinicians, and the public are identified as a key component of many implementation strategies and may encourage recognition of the expertise that both patient and clinician bring to the consultation.[4, 54] Information targeted at patients and the public may focus on ways in which they can be empowered to be more involved in their own healthcare. Solutions need not be complex and time intensive.

Shared decision making is a critical but underutilised bridge between the generation of research evidence and its application to individual patients. Physical therapists are ideally positioned to incorporate shared decision making into routine clinical practice, and commitment from all levels is needed to ensure its sustainable integration into practice.

Conflicts of interest

The authors declare no conflicts of interest.

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