Managing musculoskeletal pain in the community pharmacy

Report from an international insight board

2024

FIP Development Goals

ADVANCING PHARMACY WORLDWIDE

Colophon

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1 Introduction

Globally, musculoskeletal (MSK) conditions affect around 1.71 billion people and are ranked as the second most common cause of disability globally when measured by the years lived with disability (YLDs), accounting for 17% of all YLDs worldwide.[1, 2] Despite the prevalence of MSK conditions varying by age and diagnosis, a Global Burden of Disease study involving 204 countries revealed that, among MSK conditions, low back pain (LBP) was the main contributor to the burden of disability, largely driven by population growth and ageing.[3-5] The prevalence of disability in LBP ranks higher in females, with the largest increases in cases observed in low- and middle-income countries.[4] According to the World Health Organization (WHO), in 2020, approximately one in 13 people globally experienced LBP, equating to an estimated 619 million people, representing a 60% increase in cases since 1990,[4] and it is estimated that this number will rise to 843 million cases by 2050.[5] With significant limitations on mobility and dexterity, musculoskeletal conditions can lead to early retirement from work with a reduced quality of life.[1, 3]

MSK pain may result from sudden/short-lived conditions that limit functionality, like fractures, sprains and strains, or chronic conditions such as rheumatoid arthritis, osteoarthritis, pain from amputation and sarcopenia.[3] MSK pain includes but is not limited to lower back pain, neck pain, limb pain, joint pain, bone pain and widespread chronic pain.[6]

Managing chronic MSK pain is a challenging issue due to its multifactorial nature, and a collaborative care model of healthcare professions that includes pharmacists is essential for better health outcomes.[7] A multimodal approach is also recommended.[6] Community pharmacists being the most accessible and frequently visited healthcare professionals, can play a vital role in the assessment and management of MSK pain from a pharmacological and non-pharmacological point of view. They can do this by partnering with the patient in optimising the safe use of medicines for chronic pain and other comorbidities related to mood, sleep, substance use and use disorders.[7] Pharmacists can advocate for self-care through pain education and wellness to improve the quality of life and the stigma some patients may experience. This also includes supporting behavioural change, especially for modifiable risk factors like obesity and smoking, which have been identified to increase pain intensity.[7, 8] Most importantly, when dealing with chronic pain, pharmacists should provide resources that educate the patient and emphasise that MSK pain is not cured but is managed, while respecting patients' beliefs and preferences.[6, 7]

Pharmacists can guide on the use of non-prescription (over-the-counter) analgesics to manage acute muscle pain. This includes topical creams or gels with non-steroidal anti-inflammatory drugs (NSAIDs) or capsaicin, which can also be used in the management of chronic joint pain in cases where the patient cannot tolerate oral formulations.[9, 10] Therapeutic alternatives that can be considered for the management of chronic pain include acetaminophen, NSAIDs, opioids, gabapentinoids and muscle relaxants.[7]

In a US survey seeking to understand the barriers to multidisciplinary pain care, 24% of the patients living with chronic pain mentioned the desire to be empowered with self-management strategies as an area they wished their providers emphasised more.[11] In self-management, pharmacists encourage patients to adopt approaches that help them cope with their symptoms and the physical and psychological aspects of their pain. Physical therapy can be considered to manage both acute and chronic pain to reduce hypoalgesia. An exercise programme incorporating stretching, strengthening, isometric, aerobic and dynamic resistance can be considered earlier on to address the pain with massage therapy, reducing delayed onset muscle soreness and stiffness sometimes associated with MSK pain.[12, 13] Exercise training is beneficial for chronic neck disorders, osteoarthritis, fibromyalgia, myofascial pain, and chronic low back pain and is also highly recommended in cases where sedentary lifestyles can be a risk factor. By increasing overall physical activity, the descending pain pathway is enhanced, which reduces pain facilitation.[7, 12]

In cases where exercise-related muscle spasms are attributed as the main trigger of pain, to reduce spasmodic shortening of the muscle, which worsens pain, heat or cold therapy is recommended as gateway therapy.[14] Cold therapy is recommended for pain that is associated with swelling and inflammation. It is very useful for painful joints, including knees, shoulders and elbows. Common examples include topical gels/creams with compounds such as menthol, ice packs or wraps, cold or ice baths or showers, and cryotherapy. By reducing the temperature of the skin and muscle of the affected area, the subsequent reduction in blood flow and metabolic processes reduces inflammation and swelling, helping to reduce pain.[14]

Heat is one of the oldest methods known to relieve pain.[15] Heat therapy is mostly recommended for areas that are affected by stiffness and tension, mostly the neck, back and shoulders. By increasing the temperature of the skin around the muscle area, heat therapy also improves blood flow and elasticity of the connected tissue, helping the sore and

tightened muscles relax. This eventually reduces the pain and muscle spasms by eliminating the build-up of lactic acid that is responsible for delayed onset muscle soreness.[16] Common examples of heat therapy include powered heating pads, blankets or wraps, hot baths, showers, hot tubs and saunas, topical gels/creams with compounds such as capsaicin, and physical therapy-based heat such as ultrasound.[14, 17]

The Clinical Guidelines by the American College of Physicians recommend using superficial heat in patients with acute or sub-acute low back pain.[18] An international multidisciplinary survey by experts on heat therapy in Delhi also reached a consensus on the effectiveness of superficial heat therapy in the management of MSK pain where secondary causes have been ruled out. They recommended its inclusion as part of the multimodal approach to the management of MSK pain as it is safe and well tolerated by most patients.[19] Consequently, the results of a systematic review demonstrated that the application of heat treatment within 1 h after exercise could effectively reduce the pain level of patients and had obvious effects on the pain degree both within 24 h and over 24 hours post-exercise.[16] A study comparing the effectiveness of a chemical heat wrap to oral placebos, ibuprofen or acetaminophen in patients with acute to sub-acute low back pain reported that a heat wrap produced superior pain relief than ibuprofen and acetaminophen by providing up to eight hours of 40°C heat produced by a chemical oxidation reaction.[20]

Since pain is not only a physical experience but has psychological and psychosocial aspects, patient education addressing these aspects helps resolve the pain and improve the recovery process. Cognitive Behavioural Therapy (CBT), multidisciplinary rehabilitation, counselling and reassurance, mindfulness-based stress reduction, and sleep improvement strategies are beneficial.[8, 21 18]

The rehabilitation of soft tissue injuries can be complex, and rather than just focusing on acute management, current research emphasises considering the subacute and chronic stages of tissue healing. This includes a continuum from immediate care (PEACE) to subsequent management (LOVE). In their paper, Dubois and Esculier state that: “Immediately after injury, do no harm and let PEACE guide your approach”. The acronym emphasises **P**rotecting the tissue by restricting movement for up to three days, **E**levating the limb to improve interstitial flow and compressions to reduce swelling, **A**voiding anti-inflammatory drugs because inflammation in itself helps repair the damaged tissues, **C**ompression by external mechanical pressure to limit intra-articular oedema and ultimately **E**ducating the patient on setting realistic expectations on their recovery. They further assert that: “After the first days have passed, soft tissues need LOVE.” This highlights the importance of **L**oading the tissue with optimal mechanical stress to build tolerance and the role of **O**ptimism for better outcomes and prognosis. Additionally, **V**ascularisation through aerobic exercises and **E**xercising of the muscles in patients experiencing MSK pain promotes favourable long-term outcomes.[21]

To enhance the role of pharmacists towards the provision of self-care, there are still some barriers that affect the effective provision of this service.[22] Structural barriers such as practice time constraints and a reduced pharmacy workforce impact the ability of a pharmacist to counsel patients.[23] Lack of supportive policies and regulatory barriers restrict a pharmacist’s scope of practice in some countries,[24] with lack of appropriate remuneration models limiting pharmacists from delving into other clinical roles beyond dispensing.[25] A pharmacist’s perception about their own abilities and lack of confidence in their skillset spurs reluctance to drop the traditional approaches to dispensing.[22] Continuous education and workforce development is also an existing barrier, because to effectively provide a needs based self-care service, pharmacists need to keep abreast with self-care updates, continuous professional development and develop their soft skills to adapt a social behavioural approach in providing patient centred care.[25] Possible solutions to overcome this include championing the role of pharmacists in self-care, equipping them to understand and guide self-care, helping them to manage their workload, and advocating for policy and regulation change in pharmacy practice.[25]

To this effect, FIP convened an international advisory insight board in November 2023 with front-line community pharmacists, policy experts and researchers to develop a comprehensive understanding and share insights on the role of pharmacists globally in managing musculoskeletal pain in the community pharmacy. The board discussed and shared perspectives on both pharmacological and non-pharmacological approaches with a focus on heat therapy and how pharmacists can effectively engage a patient on this. It also looked into the existing barriers and enablers to the pharmacists' role in providing self-care for managing MSK pain and discussed the possible solutions to overcome them from an international best practice standpoint.

The insights gathered from the board will be used to inform strategic work by FIP, its members and other stakeholders on the role of a pharmacist in this area. FIP wishes to use the expertise shared at the insight board meeting to inform further actions to support pharmacists while assessing the need for further activities in this area to help guide future plans.

This report provides a summary of the insight board discussion as well as some specific key insights that were shared. It should be noted that the views shared during the insight board are those of the individuals who expressed them based on their expertise and experience. They do not represent FIP's policy or positions, although they may build on existing positions and statements. FIP will use these insights to consider what further support will be required by colleagues in the community setting to support decision-making and appropriate person-centred care.

2 Insight board participants

Moderator	
Jaime Acosta	FIP Community Pharmacy Section's executive committee secretary

Note takers and researchers	
Dr Inês Nunes da Cunha	FIP practice development and transformation projects manager
Maryanne Favour Ong'udi	FIP intern

Insight board participants		
Gonzalo Adsuar Meseguer	Community Pharmacist, Farmacia Quesada Centro; Spanish Society of Clinical Familiar and Community and Pharmacy - SEFAC; Early Career Pharmaceutical Group (ECPG) secretary	Spain
Joel Alves Sánchez	Pharmacist in the Pharmaceutical Care Department of General Pharmaceutical Council of Spain	Spain
Evrim Çakıl	Pharmacist, BSc. Clinical Pharmacy, Pharmacy Evrim	Türkiye
Leticia Caligaris	Community pharmacist in Uruguay; FIP Community Pharmacy Section's executive committee member	Uruguay
Simoné Eksteen	Primary Care (Prescribing) Pharmacist & Manager, Eksteen Pharmacy	South Africa
Labony Knight	Community pharmacist, Farmacia Nuestra Señora	Costa Rica
Hilary McKee	Consultant Pharmacist, Northern Health and Social Care Trust	United Kingdom
Samuel Oluwaoromipin Adekola	Association of Community Pharmacists of Nigeria - Transgenerational Pharmacies Development Foundation (Acpn -Tgpdf)	Nigeria
Ashok Soni	President of the National Association of Primary Care	United Kingdom
Wirat Tongrod	Lecturer, Faculty of Pharmaceutical Sciences, Huachiew Chalermprakiet University	Thailand
Ana Zovko	Pharmacy institution Afarm; FIP Community Pharmacy Section's executive committee member	Bosnia and Herzegovina

Offline inputs received		
Sangeetha Ramdave	Embedded Health Solutions	Australia

3 Common presentations of musculoskeletal pain and associations with specific conditions or population groups

The insight board participants highlighted that musculoskeletal (MSK) pain is a very common condition for community pharmacy consultations. It is commonly associated with bone pain, muscle pain, joint pain, and tendon or ligament pain. This pain may be localised in a specific area, such as the back, neck, shoulders, knees or hips. As the most accessible front-line healthcare professionals, community pharmacists meet patients with MSK pain at the point of consultation for their pain, obtaining non-prescription medicines (over-the-counter) or seeking advice from the community pharmacy on how to manage their pain.

The feedback from insight board participants reflected the role of community pharmacists and pharmacies under the following themes:

- Identification of MSK pain.
- The most common types of MSK pain encountered.
- Specific conditions/populations affected.

Identification of MSK pain

Individuals with MSK pain have been identified as they presented to the community pharmacy seeking relief for themselves or on behalf of someone else. In Spain, patients presenting at the pharmacy asking for oral paracetamol or ibuprofen have provided the pharmacist with an opportunity to ask for the purpose of the medication and who it is for. With most pharmacists in Nigeria having access to patients at the community level, they get a chance to examine the patient. Additionally, a participant from Thailand highlighted that in most cases, they have identified MSK pain while conducting patient history interviews. A participant from Uruguay expressed the challenge of sometimes not being able to identify the person taking the medicine, as in Uruguay women often buy medicines for the whole family to keep at home when needed. This participant also stated:

"We need to know how to ask the patient how the pain feels in order to advise them effectively. Often, the person visiting the pharmacy is not the one experiencing the pain, so it's complex to interpret someone else's discomfort, as pain is a very personal experience."— Leticia Caligaris, Uruguay

Further, all the participants agreed that a pharmacist needs to ask appropriate questions to identify the type of pain, or condition associated with the pain, and the person who needs the medicine.

Most common types of MSK pain encountered

Participants agreed that musculoskeletal pain presents as acute or chronic. Different participants highlighted the main causes based on their population. For acute MSK pain, it was interesting to note that:

"In the United Kingdom, people with acute pain are always coming in for urgent treatment due to a trip, fall or sports injury." — Ashok Soni, United Kingdom

"In my community pharmacy, I mainly encounter patients with an injury from the workplace or due to sports and those recovering from surgery, older patients with arthritis and patients with associated co-morbidities (e.g., obesity)." — Sangeetha Ramdave, Australia

"In general, patients seek a solution to a sudden onset of musculoskeletal pain, usually due to poor posture, a blow or excessive physical activity. Acute pain generally occurs in all population groups, although the risk of musculoskeletal pain due to falls or poor posture increases with age." — Joel Alves SánchezSánchez, Spain

"As most pharmacies are located close to the road, a high percentage of acute pain is related to accident injuries." — Samuel Oluwaoromipin Adekola, Nigeria.

Low back pain was the most common type of MSK pain seen in community pharmacies and was referred to by all participants. Participants also reported other common types of MSK pain they encountered in their daily practice, including the attributed causes or conditions and the specific population affected. This information is summarised in Table 1.

Table 1. Most common types of MSK pain encountered and the special conditions/population groups involved.

Country	Common types of MSK	Attributed causes/conditions	Specific population group affected
Australia	Acute pain	Workplace or sports injury	Working population and athletes
		Patients recovering from surgery	Surgical patients
	Chronic pain	Arthritis	Older population
		Associated co-morbidities like obesity	
Bosnia & Herzegovina	Low back pain	Long sitting hours at computers	Working population. Age group: 30-65 years
		Long sitting hours	Retirees
	Acute pain	Sprains and sports injuries	Younger population
	Knee pain and diabetic neuropathic pain	Osteoarthritis and diabetes	Older population
Costa Rica	Muscle and joint problems	Intense exercise and physical overexertion	Athletes
	Muscle discomfort and joint pain	Bad posture and long working hours	Younger population
	Chronic pain	Fibromyalgia, osteoarthritis, and sedentary lifestyles	Older population
Nigeria	Low back pain	Prolonged sitting in long lecture periods/reading hours	University students
	Neck pain, upper back pain and knee pain	Diverse	General population
Spain	Acute pain (low back pain)	Bad posture and excessive exercise	All population groups
	Chronic pain (e.g., knee pain)	Arthritis (osteoarthritis, gout), arthrosis and fibromyalgia	Older population
Thailand	Pain focused on back, neck, shoulders, knees, hips/joints	Accidents	Working age population
		Overuse of muscles in occupations that involve repetitive motions, heavy lifting and prolonged sitting	
	Chronic pain	Osteoarthritis and gouty arthritis	Older population
United Kingdom	Acute pain (e.g., low back pain)	Trip/fall or sports injury; bad posture	General population
	Chronic pain (generalised pain)	Fibromyalgia, Osteoarthritic pain	Older population

The participant from Bosnia and Herzegovina noted that individuals in the working population who consult pharmacists for acute pain usually do not have time and are frequently in a hurry, which makes it difficult for them to accept non-

pharmacological options. It is also worth noting that in Nigeria, men have more cases of MSK pain than women, which is related to the fact that men are more physically active than women.

MSK pain has a significant impact on the working population, which should not be overlooked. As mentioned by a participant from Bosnia and Herzegovina:

"Severe pain leads to long-term disability, sickness absence, increased healthcare costs and reduced income for these individuals." — Ana Zovko, Bosnia and Herzegovina

4 Solutions offered by pharmacists for symptom relief

All participants emphasised the importance of understanding and classifying the type of pain to manage it effectively. Pharmacological and non-pharmacological options can be considered in the management of MSK pain, and in cases where the pain is not adequately managed, referral to other specialists is considered.

"In this first phase, the necessary information is gathered in order to provide the correct service. Thus, it is determined whether it can be managed by the community pharmacist or if a referral to a doctor or another health professional is needed. If the Minor Ailment Service is provided, the pharmacist can take different actions, including recommending a pharmacological treatment that does not require a prescription or recommending a non-pharmacological treatment, referring to another healthcare professional, or recommending hygienic dietary measures."— Joel Alves Sánchez, Spain

"I evaluate each patient on an individual basis, taking a carefully considered history and counselling them appropriately." — Sangeetha Ramdave, Australia

Based on the responses, the management of MSK pain was discussed under the following themes:

- Pharmacological approaches
- Non-pharmacological approaches

Pharmacological approaches

The consensus among participants was that oral analgesics and NSAIDs are the most common first-line medicines recommended by community pharmacists for the management of MSK pain to relieve pain and reduce inflammation. The most common NSAIDs include ibuprofen, naproxen and diclofenac. In cases where paracetamol (acetaminophen) did not provide effective relief, participants emphasised that a combination with an NSAID was given. The participant from the United Kingdom (UK) added that oral diclofenac is not used in the UK because of its association with possible cardiac events, while in Bosnia and Herzegovina, doctors prescribe oral diclofenac with low doses of benzodiazepines for the management of MSK pain.

When using NSAIDs, participants from South Africa and Thailand reiterated the need to always ask about possible contraindications such as asthma, diabetes, kidney problems, cardiovascular diseases and gastrointestinal ulcers. Participants also agreed on the important role a pharmacist should play in educating and raising awareness of patients on the side effects of NSAIDs. The participants from Bosnia and Herzegovina, and Australia noted the following:

"Although we make patients aware of the possible interactions and side effects of NSAIDs, in practice we often see people taking antihypertensives as part of their regular treatment also buying non-prescription analgesics, most commonly ibuprofen." —Ana Zovko, Bosnia and Herzegovina

"For patients with contraindications to anti-inflammatories, I suggest the use of slow-release paracetamol." — Sangeetha Ramdave, Australia

In some countries, such as Nigeria, South Africa and Thailand, muscle relaxants such as orphenadrine are commonly used for muscle spasms and tension-related pain. Transdermal patches are also considered in the management of MSK pain. For instance:

"In Uruguay, the transdermal patches of apitoxin and ketoprofen are considered for local pain (back or neck pain)." — Leticia Caligaris, Uruguay

"In the UK, if NSAIDs are contraindicated, we use paracetamol or codeine. We still have access to codeine at this stage, although it's likely to change in the UK fairly soon." — Ashok Soni, United Kingdom

All participants also noted that topical gels and creams, mostly containing NSAIDs, capsaicin or menthol, are also commonly used for MSK pain, alone or in combination with oral analgesics/NSAIDs.

Participants from Costa Rica and Thailand reported that joint supplements containing glucosamine and chondroitin were mainly indicated for long-term use in people with osteoarthritis.

Non-pharmacological approaches

Participants agreed that it is critical for pharmacists to review the patient's medical history, current medications, and any contraindications before recommending pharmacological options. The cornerstone of non-pharmacological approaches to MSK pain includes educating the patient about modalities such as lifestyle modification and knowing when to refer the patient for appropriate specialist support.

"It is important to provide information about the condition, including its management and prognosis, which can empower patients and improve adherence to treatment plans."— Wirat Tongrod, Thailand.

The need to advise patients on weight management to avoid additional mechanical stress on weight-bearing joints was emphasised by all participants.

"It is important for a lot of patients with knee pain to realise how much pressure they are putting on their knees because of their lifestyle and weight. When someone is one pound overweight, there's an extra five pounds of pressure on your knees." — Hilary McKee, United Kingdom

"Maintaining a healthy weight can alleviate stress on joints, particularly in conditions like osteoarthritis." — Wirat Tongrod, Thailand

In addition, participants suggested that people with MSK pain need postural education to learn how to maintain good posture at all times to reduce the likelihood of back pain. They also stressed the need to do appropriate stretching exercises to relieve and strengthen the muscles, and to give the affected muscles enough rest. To emphasise this, participants said:

"Advise patients to do yoga, pilates and walking in nature to relieve neck pain and change the perception of pain."— Leticia Caligaris, Uruguay

"Encourage posture education or basic movement to relieve spasms/stiffness in the neck and knee joints." — Simoné Eksteen, South Africa.

"Depending on whether it is a sprain/strain, offer the affected muscle support to be able to continue with normal activity, but remember to take the support off when taking a rest." — Ashok Soni, United Kingdom

The participant from Australia suggested the use of supplements:

"I motivate patients, with chronic muscoskeletal pain, to use clinically evidence-based supplements containing curcumin, krill oil, omega-3, flaxseed oil and magnesium." — Sangeetha Ramdave, Australia

The use of heat and cold therapy is also recommended in the management of MSK pain.

"Heat and cold therapy can be considered after the use of simple analgesia. Heat therapy is suitable for chronic pain, while cold therapy is good for acute injuries." — Hilary McKee, United Kingdom

"Heat therapy has also been recognised as an effective strategy for relieving musculoskeletal pain, as it can enhance blood circulation, reduce stiffness, and promote muscle relaxation." — Labony Knight, Costa Rica

"Heat can help relax muscles, while cold can reduce inflammation. Patients can alternate between the two based on their symptoms." — Wirat Tongrod, Thailand

"Thermal therapy with gel heat/cold packs is recommended." — Sangeetha Ramdave, Australia

Table 2 provides a summary and overview of the specific pharmacological and non-pharmacological options reported by insight board participants as being in use in their respective countries.

Table 2. Pharmacological and non-pharmacological management of MSK pain

Country	Management of MSK pain
Australia	**Pharmacological** • Initially, paracetamol is recommended. • Followed by an NSAID (e.g., diclofenac 50 mg up to four times daily or naproxen 660 mg daily, in the severe cases). **Non-pharmacological** • Counsel patients to adopt the RICE (Rest, Ice, Compression, Elevation) technique. • Compression bandages. • Appropriate taping. • Thermal therapy with gel heat/cold packs. • Evidence-based supplements containing curcumin, krill oil, omega-3, flaxseed oil and magnesium.
Bosnia and Herzegovina	**Pharmacological** • For the younger population, who usually say they "don't have time" and want a quick fix, it is difficult to accept non-pharmacological options. In this case, the most common recommendations are non-prescription medicines such as oral NSAIDs (e.g., ibuprofen, naproxen, dexketoprofen, ketoprofen). • Vitamin B complex (e.g., B1, B6, B12). • For the elderly, topical medicines and paracetamol are often recommended. • Doctors most commonly prescribe oral diclofenac in combination with low doses of benzodiazepines.
Costa Rica	**Pharmacological** • Over-the-counter pain relievers such as paracetamol, ibuprofen or naproxen serve as initial options to alleviate discomfort. • Additionally, topical analgesics containing menthol or NSAIDs provide targeted relief to the affected area. • Vitamin B complex (e.g., B1, B6, B12). • Joint supplements (e.g., glucosamine and chondroitin). **Non-pharmacological** • Heat to relax the muscles. • Cold therapy with packs to reduce inflammation. • Promoting musculoskeletal health involves encouraging appropriate exercises, stretching routines, and lifestyle modifications.
Nigeria	**Pharmacological** • Oral NSAIDs (e.g., ibuprofen, diclofenac, celecoxib). • Topical sprays and rubs (e.g., capsaicin, NSAIDs). • Injectable NSAIDs (e.g., diclofenac).
South Africa	**Pharmacological** • Oral NSAIDs (e.g., ibuprofen). • Muscle relaxant (e.g., orphenadrine). • Topical NSAIDs (e.g., flurbiprofen, indomethacin, ibuprofen, diclofenac). • Patches with NSAIDs.

	Non-pharmacological • Basic postural education. • Pulsing short wave therapy device (ActiPatch device) – worn up to 24 hours over the area with the pain, used for example in osteoarthritic pain, neck pain, low back pain. Not indicated for cancer pain.
Spain	**Pharmacological** • Oral NSAIDs (e.g., ibuprofen, dexketoprofen, piketoprofen). • Paracetamol, acetylsalicylic acid and combinations of various active ingredients such as ibuprofen/paracetamol. • Topical preparations in the form of gel, creams or sprays (e.g., piroxicam, trolamine salicylate, diclofenac, capsaicin and etofenamate). • Phytotherapy (e.g., preparation of devil's claw root). • Use of B-complex vitamin supplements. **Non-pharmacological** • Recommendation of hygienic-dietary measures, such as: avoiding weight bearing and sudden movements; maintaining good posture; resting; performing musculoskeletal health exercises; avoiding stressful situations. • Application of heat or cold according to the patient's needs. • Treatment by a physiotherapist. • Psychotherapy and/or cognitive behavioural sessions. Note: In Spain, a technological platform created by the General Pharmaceutical Council of Spain is available to help community pharmacists to develop the Pharmaceutical Minor Ailments Service, following the whole procedure to find out all the information that pharmacists need to know about the patient, other health problems and treatments he/she uses, as well as the duration of the pain and whether he/she has used any medicines before. The platform also helps with the selection of pharmacological treatment recommendations for specific patients depending on their characteristics, as well as criteria for referral to a doctor agreed with a medical scientific society. It also includes infographics to help patients understand the hygienic-dietary measures recommended.
Thailand	**Pharmacological** • Paracetamol can relieve pain but has no anti-inflammatory effect. Patients usually use it before asking the pharmacist for help. If it does not work, they go to the pharmacy. • Oral NSAIDs (e.g., ibuprofen, naproxen, celecoxib, etoricoxib). These can reduce pain and inflammation associated with musculoskeletal conditions. Caution is advised, especially for those with a history of gastrointestinal issues or cardiovascular problems. • Muscle relaxants (e.g., orphenadrine, tolperisone). These may be dispensed alone or with NSAIDs for muscle spasms and muscle pain caused by tension. They can cause drowsiness, so caution is needed, especially if the patient is operating machinery or driving. • Topical creams (e.g., NSAIDs, capsaicin). • Joint supplements (e.g., glucosamine). **Non-pharmacological** • Heat can help relax muscles, while cold can reduce inflammation. Patients can alternate between the two based on their symptoms. • Supports to provide stability and reduce pain. • Resting the affected area and elevating it can help reduce swelling and promote healing. • Maintaining a healthy weight can alleviate stress on joints, particularly in conditions like osteoarthritis.

	• Providing information about the condition, including its management and prognosis, can empower patients and improve adherence to treatment plans.
Türkiye	**Pharmacological** • Topical analgesics. **Non-pharmacological** • Aromatherapy. • Lifestyle changes, such as weight management.
United Kingdom	**Pharmacological** • Paracetamol • Oral NSAIDs (e.g., ibuprofen, naproxen). **Non-pharmacological** • RICE technique, i.e., Rest, Ice, Compression and Elevation. • Supports to provide stability and reduce pain. • Heat therapy or cold therapy, to be used according to the need. • Patellar taping. • Referral to physiotherapist.
Uruguay	**Pharmacological** • Transdermal patches (e.g., apitoxin, ketoprofen). • Low dose of melatonin to get enough rest. **Non-pharmacological** • Yoga, pilates and walking in nature to change the pain perception.

5 Awareness and recommendation of heat therapy to relieve musculoskeletal pain

Heat therapy is widely recognised for its effectiveness in relieving musculoskeletal pain, a fact that was acknowledged by all participants. However, participants emphasised the importance of receiving proper training in different forms of heat therapy to improve their ability to effectively educate patients. When it came to recommending it to patients, participants had a variety of views, which are aptly highlighted in Table 3.

Table 3. The role of heat therapy and recommendations for patients

Country	
Australia	**Role of heat therapy** • Commonly used for MSK pain in daily practice to hasten healing and reduce pain via stimulating vasodilation. **Recommendation** • Heat therapy is withheld in acute severe inflammation and swelling, and cold pack therapy initiated before the patients are advised to commence the heat therapy. • When recommending heat therapy, patients are advised on temperature and the risk of burns.
Bosnia and Herzegovina	**Role of heat therapy** • Commonly used for chronic pain. **Recommendation** • Not recommended often as patients want more effective and quicker solutions. • Occasionally recommend heat therapy (warm compresses) for acute menstrual back pain.
Costa Rica	**Role of heat therapy** • Heat therapy is well known for relieving musculoskeletal pain, but it is not often suggested as a first-line treatment, as most patients prefer remedies that can be ingested or applied for a quicker recovery. **Recommendation** • Heat therapy with packs.
Nigeria	**Role of heat therapy** • Generally aware of heat therapy for management of MSK pain but it is not widely used in Nigeria. **Recommendation** Not recommended in Nigeria because of: • Limited information and availability are a challenge. • The cost of heat therapy compared to the other interventions is slightly more expensive, which limits its access.
South Africa	**Role of heat therapy** • More typical for low back pain or neck and shoulder pain. **Recommendation**

	• It is generally recommended in combination with pharmacological and other non-pharmacological measures.
Spain	**Role of heat therapy** • Heat therapy is useful in MSK conditions that are not of inflammatory origin, e.g., low-back pain or muscular contractures. Usually indicated for MSK pain such as chronic back pain, where 20-minute sessions significantly reduce pain accompanied by a massage. **Recommendation** • Heat therapy (e.g., heat therapy patches) is given as an adjunct to other pharmacological or non-pharmacological therapy. • Electric pillows are also available, especially for people who take a lot of medication. This is done by applying heat therapy for 10 to 15 minutes.
Thailand	**Role of heat therapy** • Heat therapy is a well-established and commonly recommended approach for relieving musculoskeletal pain. • Heat therapy may not be appropriate for acute injuries or inflammations where there is active swelling. In such cases, cold therapy (ice) may be more appropriate initially to reduce inflammation. **Recommendation** Commonly applied as hot packs to: • Increase blood flow to deliver more oxygen and nutrients to the tissues, promoting healing and reducing muscle stiffness. • Enhance muscle relaxation, which is highly beneficial for conditions involving muscle spasms or tension. • Achieve pain relief: heat can alter the perception of pain signals and reduce the transmission of pain signals to the brain. • Improve joint flexibility and make movement more comfortable.
Türkiye	**Role of heat therapy** • There is a gap that needs to be filled in the implementation of heat therapy recommendations in practice. **Recommendation** • Would not recommend heat therapy because: • Climate in the country and city is very hot for more than 200 days a year. • Patients can get the support they need from a physiotherapist.
United Kingdom	**Role of heat therapy** • In general, heat therapy is used for chronic pain as an adjunct to medication. **Recommendation** • Heat therapy alone, especially when the patient cannot tolerate any other available therapy. • Generally recommended in conjunction with oral medication therapy.
Uruguay	**Recommendation** • The participant felt unsure about recommending heat therapy for MSK pain. • The participant suggested that pharmacists need more training and experience on when to use heat therapy for MSK pain.

6 Barriers and enablers to the role of pharmacists in the management of musculoskeletal pain

Participants agreed that the greatest barrier was the lack of appropriate education and support materials for the pharmacist to provide well-informed and timely interventions in the management of MSK pain. The greatest enabler is that the pharmacist is the most accessible health professional able to provide comprehensive care for MSK pain. Table 4 provides an overview of country perspectives on the main barriers and enablers.

Table 4. Barriers and enablers to the role of pharmacists in managing MSK pain

Country	Barriers and enablers to managing MSK pain
Australia	**Brief background of community pharmacies in Australia** • To remain commercially viable and competitive, each community pharmacy belongs to one of two categories: high volume and throughput discount drug stores; or, specialists in professional services. **Barriers** • Mostly centred around the individual pharmacist, the dispensary workflow and the remuneration provided to pharmacists in pain management (e.g., a patient may gain a more in-depth consultation for a private price when compared to a discount pharmacy where the pharmacists provide rapid consults, and supply medications and companion items). **Enablers** • Provision of a standardised pain consultation (government reimbursed) service that: I. Enables pharmacists with a digital platform to initiate in-depth history-taking and provide advice and holistic treatment to the patient. II. Allows the patient (through the reimbursement) to receive a similar level of care and treatment options from any pharmacy, hasten healing, prevent incidences of reoccurrence, and establish community pharmacy as a hub for acute pain management. • The release of more anti-inflammatories to be provided over-the-counter. • Advancing the scope of practice via CPD modules.
Bosnia and Herzegovina	**Enablers** • More education and communication skills to know what questions to ask to obtain helpful feedback. • Proper referral pathways, to know when to refer patients. • How to treat population groups that need a special approach (e.g., pregnant individuals).
Costa Rica	**Barriers** • Time constraints due to a heavy workload. • Limited privacy in the pharmacy environment. • Lack of specialised training in MSK pain management.

	Enablers • Adequate training and education on MSK pain management would empower pharmacists to provide well-informed advice and interventions. • Establishing collaborative relationships with other healthcare professionals, such as physicians and physiotherapists to facilitate a more comprehensive approach to patient care. • Access to up-to-date resources, including clinical guidelines and patient education materials, to offer evidence-based recommendations.
Nigeria	**Barriers** • Existing knowledge gap among pharmacists in the management of MSK pain. **Enablers** • Broadening the knowledge base of pharmacists through continuous professional development in key therapeutic areas of MSK pain. • Short training that incorporates assessments and modern technology.
South Africa	**Barriers** • Lack of specific education on MSK pain. **Enablers** • The development of toolkits for education on MSK, questions and how to ask the questions could help the pharmacist's role in this area. • When to refer patients and to whom. • Being aware of other professionals dealing with MSK in the neighbourhood for successful interprofessional collaboration (e.g., chiropractors). • Patient education toolkits, audiovisuals, e.g., pictures to assist in cases of language barriers. • Taking a holistic approach and using each professional's expertise will improve downstream costs, patient outcomes and quality of life.
Spain	**Barriers** • Self-medication is common among patients who have not visited a pharmacy or doctor. • Lack of interprofessional collaboration and lack of a protocol for referring patients to other healthcare professionals to improve efficiency. • Insufficient clinical information about the patient by the pharmacist due to lack of access to the patient's pharmacotherapy history database (e.g., underlying conditions, allergies, etc.). **Enablers** • Existence of a large number of active ingredients (non-prescription medicines) that can be indicated in community pharmacies. • The Minor Ailment Service is very useful for the resolution of problems related to musculoskeletal pain by training pharmacists. • Programmes and resources are provided to help pharmacists. Initiatives by General Pharmaceutical Council and the Spanish Society of Clinical Pharmacists.
Thailand	**Enablers**

	• Thailand's government allows community pharmacists to take care of people with minor illnesses such as musculoskeletal pain. This provides an opportunity for the community pharmacist to interview, diagnose, dispense medicines and suggest self-care options to patients.
United Kingdom	**Barriers** • All pharmacists coming from universities will be prescriber-ready in 2026 and a proper understanding of MSK pain is required. **Enablers** • Pharmacists need support and training to increase their understanding of this therapeutic area. • To support this role, pharmacists need access to patient information. • Ability to refer to physiotherapy or the most appropriate group of practitioners who have different skill sets to pharmacists. • Proper referral pathway to secondary care for more acute treatments. How to manage the patient's continuation of therapy once initiated in secondary care.
Uruguay	**Barriers** • Pain bias, especially in men's health-seeking behaviour. • Lack of training. **Enablers** • More interprofessional collaboration with the multi-disciplinary team who are aware of heat and cold therapy for chronic pain.

7 Training and support materials needed

The need for pharmacists to be properly trained to identify, assess and manage MSK pain cannot be overemphasised. The insight board participants also strongly emphasised the need for a clinical guideline on the management of MSK and for collaboration between pharmacists and other relevant healthcare professionals (e.g., physicians, orthopaedic surgeons, physiotherapists, chiropractors, etc.) to improve secondary referral of patients for appropriate management of MSK. Appropriate referral pathways also need to be in place so that pharmacists know what is within their remit and when to refer. Table 5 below summarises the participants' responses.

Table 5. Training and support needs highlighted by the insight board participants

Country	Training and support needs
Australia	• Patient information guides. • Apps to aid monitoring the pain, advising on healing, and evaluating pain. • Additional training modules on MSK pain.
Bosnia and Herzegovina	• Equipping pharmacists with knowledge of interactions and contraindications on various therapies available. • Tables or flowcharts with clear instructions on when to use oral medications, creams and heat therapy. • More education on communication skills: what to ask about pain management, such as example short questions; and, how to recognise "red flag symptoms". • Provision of guidelines on managing pain in the pregnant and nursing population.
Costa Rica	• Incorporating continuing education courses. • Ensuring access to the latest clinical guidelines. • Providing patient education materials.
Nigeria	• Development of comprehensive training modules that can be used in continuous medical education in identifying and managing MSK pain. • Keeping pharmacists up to date with newer techniques in managing MSK pain. • Provision of audio-visual materials to effectively learn how to identify and manage MSK pain.
South Africa	• Training to teach people about basic posture and proper stretching.
Spain	• Support to tackle MSK properly beforehand to be able to perform better pharmaceutical interventions in MSK pain. • Updating pharmacists with new therapeutic innovations in the management of MSK. • The General Pharmaceutical Council of Spain offers courses on pharmacotherapy and has produced specific videos and materials such as: back pain pharmacy guidelines; self-care and the community pharmacist: back pain; infographics for patients on back pain; infographics on low back pain for patients with information on hygienic dietary measures.
Thailand	• Continuous education on MSK pain.

	• Provision of clinical guidelines for the management of MSK pain. • Communication skills training to be able to ask the patient appropriate questions. • Patient counselling resources or toolkits to explain to patients how the therapy works. • Case studies and practical scenarios for simulation to give a better hands-on approach to managing MSK pain.
Türkiye	• Training pharmacists in communication and counselling skills. • Training on motivational interviewing to support the patient to make lifestyle changes.
United Kingdom	• Equip community pharmacists to be able to identify and manage MSK pain. • Sufficient information and training is needed to identify what pharmacists can and cannot deal with, and what and when to refer.
Uruguay	• More training to know exactly when and where to use heat therapy, what type of heat is beneficial for the patient, and to advise the patient accordingly.

8 Conclusion

Musculoskeletal pain is a very common reason for consultation in community pharmacy, and the accessibility of community pharmacists puts them in a critical position to address this challenge and provide comprehensive care. Pharmacists can provide information about MSK pain, including its management and prognosis, and ultimately empower patients to make appropriate lifestyle changes and improve adherence to existing treatment plans.

Low back pain stands out as the most common form of musculoskeletal discomfort, affecting all age groups, from the young and working population, to the elderly. This prevalence is often attributed to prolonged sitting, whether at a computer, during reading sessions or while attending lectures.

Musculoskeletal pain includes both acute and chronic conditions. Acute pain is often associated with events such as falls, sprains and sports injuries caused by overexertion. Chronic pain tends to be more prevalent in the elderly and is often associated with specific conditions such as osteoarthritis, gouty arthritis, fibromyalgia and diabetic neuropathic pain. Recognising the importance of a sedentary lifestyle as a primary modifiable risk factor in this population, pharmacists have an important role to play in providing valuable education to these patients. Patient education can include promoting proper weight management to reduce stress on weight-bearing joints and teaching effective postural techniques to improve overall musculoskeletal well-being.

Musculoskeletal pain can be managed using both pharmacological and non-pharmacological approaches. Analgesics, oral NSAIDs, muscle relaxants, NSAID patches and topical NSAIDs are the most commonly used options. In addition to newer technologies such as pulsed short duration therapy devices, heat and cold therapy continue to be used extensively for the relief of pain in MSK. Heat therapy improves blood flow and the elasticity of associated tissues, helping to relax sore and tight muscles and improving conditions of tension and muscle spasm. This includes, but is not limited to, heat pads and electric pillows.

Despite the proven benefits of heat therapy in the management of MSK pain, the lack of appropriate education and support in this area is a key challenge that limits the ability of community pharmacists to recommend heat therapy to their patients. The existing knowledge gap in the use of heat for the management of MSK pain can be addressed to enable pharmacists to offer heat therapy as an adjunct to other therapies and to increase their confidence in recommending it.

Existing barriers to the role of pharmacists in the management of MSK pain include lack of specialised training in MSK pain management, lack of appropriate referral pathways and lack of interprofessional collaboration to promote holistic MSK pain management. The provision of continuing professional development and access to up-to-date resources, including clinical guidelines and patient education materials, are key factors in ensuring that pharmacists offer up-to-date, evidence-based therapies.

Several initiatives are needed to further support pharmacists in their role in the management of MSK pain. These include the development of comprehensive training modules that incorporate audio-visual aids to enhance proper patient education, the provision of clinical guidelines for the management of MSK pain, communication skills training to enable pharmacists to ask patients appropriate assessment questions, the provision of patient counselling resources or toolkits to explain to patients how different therapies work, and a compilation of case studies and practical scenarios for simulation to provide a better hands-on approach to the management of MSK pain.

Continuous learning and staying informed about advancements in musculoskeletal pain management are essential for pharmacists to provide high-quality care. Additionally, a supportive environment that encourages collaboration and knowledge sharing can contribute to a pharmacist's effectiveness in the management of musculoskeletal pain.

FIP will draw on the views, findings and conclusions of this international insight board to evaluate the next steps in terms of further meetings and the development of policy or practice support resources for pharmacists in the management of musculoskeletal pain in the community pharmacy.

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