



The 2026 British Society for Rheumatology guideline for pain management in people with inflammatory arthritis

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Abstract

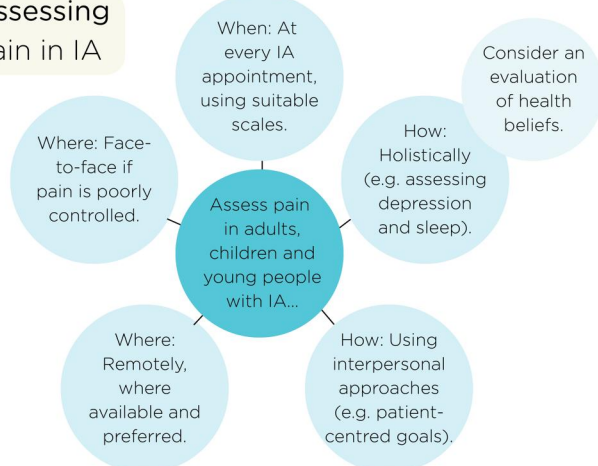
Pain is a frequent symptom in people with inflammatory arthritis (IA), which has substantial impact on their quality of life. Analyses of electronic health record data indicate that UK pain care in people with IA often involves prescribing long-term opioids and gabapentinoids, despite absent trial evidence for efficacy. Patient survey data suggest that non-pharmacological pain care with supportive trial evidence is underused. A UK-specific guideline on pain management for people with IA is required to address this. This comprehensive life-course guideline is the first British Society for Rheumatology Guideline to specifically address pain in people with IA. It provides evidence-based recommendations on how pain can be best managed in people with IA. It was developed using the methods outlined in the British Society for Rheumatology's 'Creating Clinical Guidelines' protocol by a multidisciplinary Guideline Working Group, comprising healthcare professionals with expertise in paediatric and adult rheumatology and people with lived experience. By undertaking and considering the evidence from several systematic literature and umbrella reviews, 23 recommendations were developed. These address how pain should be assessed in people with IA alongside the role of the following treatments in IA pain management: DMARDs, glucocorticoids, analgesics, neuromodulators, exercise and physical activity, psychological interventions, ergonomic and orthotic interventions (excluding orthoses for foot pain), education, weight management and diet, addressing sleep problems, fatigue management, digital technologies and medical devices, complementary therapies, and support from others. An audit tool is provided to support the Guideline's implementation, and key recommendations made for future research.

Graphical abstract

Pain Management in People with Inflammatory Arthritis (IA)



Assessing Pain in IA



Pharmacological Interventions

The following **are recommended** to treat pain:

- **DMARDs** (unless contraindicated) for active disease with pain.
- **Short-term glucocorticoids** (unless contraindicated) for active rheumatoid arthritis or IA affecting multiple peripheral joints, as bridging therapy.
- **Consider oral NSAIDs** at lowest dose and for shortest duration.
- **Consider non-NSAID analgesics** for short-term use only. Evaluate efficacy and potential harms.

The following is **NOT recommended** to treat pain:

- **Routine use of neuromodulators** - however gabapentinoids may be considered for neuropathic pain.
- In those receiving long-term analgesics/neuromodulators, evaluate efficacy and side-effects. Support tapering using shared decision-making principles.



Non-Pharmacological Interventions

The following are recommended to treat pain:



Fatigue management to treat fatigue. Effects on pain are uncertain.



Exercise/physical activity and support from a physiotherapist.



Education on pain in IA (e.g. causes, management).



Psychological interventions e.g. mindfulness, cognitive behavioural therapy. Manage depression and anxiety in line with national guidelines.



Ergonomic support, self-management advice and orthotic assessments provided by an occupational therapist.



Support to restore healthy sleep patterns.



Support from others (e.g. peers, charities) to guide self-management.



Weight management interventions and weight loss support for those who are overweight or living with obesity.

Keywords inflammatory arthritis, pain, guidelines, quality of healthcare

Scope and purpose

Inflammatory arthritis background

Inflammatory arthritis (IA) is a group of autoimmune conditions causing joint inflammation. Its main forms—rheumatoid arthritis (RA), psoriatic arthritis (PsA), axial spondyloarthritis (AxSpA) and juvenile idiopathic arthritis (JIA)—are currently diagnosed in >1% of adults [1] and ~10 000 children and young people in the UK [2]. As IA has substantial personal and societal impacts (including causing chronic pain, disability, work absences, high healthcare costs, and reduced quality of life) [3, 4], optimizing its management, particularly of pain, will improve the lives of hundreds of thousands of people across the UK.

Why this guideline is needed

Despite advances in disease-modifying anti-rheumatic drugs (DMARDs) and how they are applied (in early, intensive, treat-to-target strategies) improving numerous clinical outcomes, pain remains a significant problem for many people with IA [5], and is the area of health they most want to improve [6]. Recent UK-based studies using national electronic health record data have

shown that UK IA pain management focuses on prescribing analgesics and neuromodulators [7, 8], with one in four people with IA prescribed long-term opioids and one in ten prescribed gabapentinoids in 2020 [7], despite no evidence of efficacy, and known harms [9–11]. In contrast, a large UK-based survey enrolling nearly 3000 people with IA demonstrated that non-pharmacological pain care with supportive trial evidence (such as physical activity, exercise and weight management) is under-used [12]. As current UK-specific IA guidance largely focuses on reducing disease activity [13, 14], and the only previous guideline specifically addressing pain in people with IA (from the European Alliance of Associations for Rheumatology [EULAR] [15]) is based on a relatively historical umbrella review (considering studies until 2015 only), did not consider drug therapies, and combined recommendations for IA with osteoarthritis, an updated guideline that is based on contemporary data, considers all pain care aspects and is IA-specific is needed.

Guideline objectives

To provide patient-focused, evidence-based, expert recommendations for pain management in people with IA.

Target audience

Healthcare professionals managing people with IA, people with IA and their families and carers, NHS managers and healthcare commissioners, and other stakeholders (e.g. patient organizations).

Areas the guideline does not cover

These comprise: (1) acute pain due to non-rheumatological issues; (2) pain-management procedures (including intra-articular steroids); (3) public health pain interventions; (4) pain management in people with rheumatological conditions where IA can occur, but does not fall within the traditional umbrella-term of IA (e.g. crystal arthritis, connective tissue diseases – although the guideline may be relevant to people with these conditions); (5) foot pain (addressed in other BSR guidance [16]); and (6) non-pain aspects of IA care.

Stakeholder involvement

This guideline was co-produced by a multi-disciplinary Guideline Working Group (GWG) comprising adult, adolescent and paediatric consultant rheumatologists; resident doctors in rheumatology;

evidence synthesis researchers; general practitioners; adult and paediatric rheumatology nurse specialists; psychologists; a podiatrist; adult and paediatric occupational therapists; a pharmacist; physiotherapists; and experts by experience. The roles and contributions of all GWG members are provided in [Supplementary Table S1](#).

Rigour of development

Guideline scope

This guideline covers 17 questions relevant to the assessment and treatment of pain in people with IA ([Table 1](#)). Its scoping document has been published [17]. Where relevant, these questions were framed in the Population, Intervention, Comparator and Outcome format as follows: in people with IA (population), which pharmacological/non-pharmacological treatments (intervention) relative to placebo or other pharmacological/non-pharmacological treatments (comparator), improve pain (primary outcome).

Protocol

This guideline was developed in line with BSR's Guidelines Protocol (version 6.0, October 2025) using Grading of

Table 1 Key clinical questions addressed by the guideline in adults, children and young people with inflammatory arthritis.

Number	Question
Assessment	
Q1	How often should pain assessments take place and which outcome measures should be used?
Q2	Should pain assessments be in-person or remote?
Q3	Which pain factors (e.g. sensitization) and pain-related factors (e.g. mood) should be considered when assessing pain?
Q4	Which interpersonal consultation-based factors should be considered when assessing pain?
Pharmacological treatment	
Q5	Do immunosuppressants (systemic glucocorticoids, csDMARDs, bDMARDs and tsDMARDs) improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q6	Do analgesics (paracetamol, oral NSAIDs, topical NSAIDs, nefopam and opioids) improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q7	Do neuromodulators (anti-depressants, gabapentinoids, topical capsaicin and cannabinoids) improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Non-pharmacological treatment	
Q8	Do exercise and physical activity improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q9	Do psychological interventions improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q10	Do ergonomic or orthotic interventions (excluding orthoses for foot pain, which are considered in the BSR management of foot health in people with IA guideline) improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q11	Does education improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q12	Do weight management and diet improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q13	Does addressing sleep problems improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q14	Does fatigue management improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q15	Do digital technologies or medical devices improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q16	Do complementary therapies improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?
Q17	Does support from others improve pain, relative to placebo or other pharmacological/non-pharmacological treatments?

Recommendations, Assessment, Development and Evaluation (GRADE) and AGREE II methodology to determine the quality of evidence and strength of agreement (SoA), with oversight from the Guidelines Steering Group ([Supplementary Table S2](#)). Guideline development was underpinned by several PROSPERO-registered systematic and umbrella literature reviews (IDs: CRD420251033585 and CRD42024572369) and followed Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidance (PRISMA flow diagram provided in [Supplementary Fig. S1](#)) [18].

Literature searches

All reviews

An evidence synthesis specialist (T.M.S.) designed the systematic searches with input from the entire GWG, conducting searches across six bibliographic databases. Broad searches were completed using subject heading and text-word terms for IA, pain, and pain assessment/treatment ([Supplementary Tables S3 to S25](#)) without language restriction. Search results were downloaded into EndNote™ 21/Zotero to facilitate deduplication, and resulting unique records imported into Rayyan for title/abstract screening, followed by Covidence for full text screening.

Assessment reviews

Searches for the systematic and umbrella reviews underpinning assessment recommendations were conducted on 1 May 2025. Relevant systematic review, primary randomised and non-randomised study filters were applied. An additional search was conducted on 20 May 2025 to capture studies containing further JIA-related terms.

Treatment review

The search for the umbrella review underpinning treatment recommendations was conducted on 24 July 2024 (limited to systematic reviews published since 1 January 2014 to ensure deliverability). Additionally, websites for EULAR, the American College of Rheumatology (ACR) and National Institute for Health and Care Excellence (NICE) were searched for systematic reviews that underpinned clinical guidelines. Where systematic reviews of interventions were not identified, searches were conducted for relevant randomized controlled trials (RCTs). Due to a lack of recent trials of analgesics, the GWG brought their knowledge of historical systematic reviews to the discussions.

Selection criteria

Inclusion and exclusion criteria for all reviews are provided in [Supplementary Tables S26 to S28](#).

Screening

One reviewer screened titles and abstracts, excluding irrelevant studies. Full texts were screened against eligibility criteria by one reviewer, with 10% and 25% double-screened by a second reviewer at both title/abstract and full-text stages for the reviews of assessment and treatment, respectively.

Data extraction

Bespoke data extraction proformas, developed and pre-piloted, were used. Data extraction was undertaken by one reviewer (with most healthcare and research professional GWG members contributing) and checked for completeness and accuracy by a second reviewer (T.M.S., I.C.S.).

Data synthesis

Narrative syntheses were conducted. For ‘pain treatment’ questions, evidence was summarized and categorized for each umbrella/systematic review as:

- ‘Favours intervention’ – statistically significant pooled effect size in meta-analysis or narrative synthesis where most trials indicated/the authors concluded there was a favourable effect of the intervention.
- ‘No effect’ – no statistically significant pooled effect size in meta-analysis or narrative synthesis in which most trials indicated/the authors concluded there was no effect of the intervention.
- ‘Mixed effects’ – in narrative synthesis where the effects of the intervention varied across trials without a clear overall direction of effect.
- ‘Favours control’ – statistically significant pooled effect size in meta-analysis or narrative synthesis in which most trials indicated/the authors concluded there was a favourable effect of the control treatment(s).

Where no systematic/umbrella reviews were identified, individual RCTs for an intervention were summarized as: ‘favours intervention’, ‘no effect’ or ‘favours control’ based on statistical significance testing in each trial. For systematic reviews/trials comparing interventions (e.g. DMARDs) with each other or placebo, placebo comparisons were considered. Where multiple drug doses were evaluated, data related to standard licensed drug dosing were considered. To provide clinical context, where reported, effect size data were summarised as mean differences (MDs), converted to a 0–10 score for Pain Intensity Visual Analogue Scale (VAS)/Numeric Rating Scale (NRS).

Grading the evidence

For each question, evidence quality was appraised using GRADE methodology [19]. Using GRADE, evidence was downgraded where there were concerns related to study design, risk of bias, inconsistency, indirectness (applicability), imprecision or publication bias. Evidence quality was rated as high (A), moderate (B) or low/very low (C). Detail on how this was applied to appraise systematic reviews is provided in [Supplementary Table S29](#).

Strength of recommendations (SOR)

The GWG convened on five occasions to review the evidence and determine recommendations based on the amount and quality of evidence. Discussions leading to recommendations were also informed by other aspects of care including benefits vs harms; treatment access/resources; and patient/stakeholder preferences. A strong (designated ‘one’) recommendation was

made where there was certainty that benefits outweighed risks, or vice versa. A weak (designated 'two') recommendation was made when risks vs benefits were closely balanced and/or there was less certainty.

Strength of agreement score

Following relevant meetings, draft recommendations were circulated to the GWG for each question and voted on from a scale of one (no agreement) to 100 (complete agreement) using Microsoft Forms. Recommendation wording was revised until all voting members gave a score of $\geq 80/100$ (in line with the BSR's Guidelines Protocol), with the average calculated to generate an SoA score. One member of the evidence synthesis team expressed concern they did not have sufficient medical knowledge to score recommendations 8–13 and recommendation 16; therefore, whilst they fully agreed with these recommendations, they abstained from scoring them.

Guideline update

This guideline will be considered for full update after three years. In the interim, GWG members will review the literature regularly, to consider whether partial updates are warranted. If made, these will be detailed on the BSR Website.

Recommendations

Introduction

For each question, the recommendation statement is accompanied by the GRADE (combining the SOR with the level of evidence), SoA score and rationale. An overview of the recommendations is provided in [Tables 2](#) and [3](#).

The GWG recognized the complexity of determining the cause of pain in people with IA, which is often multifactorial and influenced by a range of factors (e.g. disease activity, joint damage, osteoarthritis, health beliefs and the interaction of physiological systems with mental states). It also recognized that pain—defined by the International Association for the Study of Pain (IASP) as 'an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage'—has many different types (e.g. acute pain of short duration, chronic pain persisting beyond three months, nociceptive pain arising from tissue injury or inflammation, neuropathic pain resulting from nerve damage, and nociplastic pain reflecting altered pain processing) and dimensions (e.g. intensity, coping, functioning) [\[20\]](#). To deliver recommendations that were simple to use in clinical practice, the GWG chose the pragmatic approach to refer to 'pain' in its broadest sense, although healthcare teams should consider the context of the individual they are supporting. One example is avoiding DMARD escalation in people whose pain and disease activity scores are driven by high patient global scores and tender joint counts related to nociplastic mechanisms, without synovitis. Another is prescribing DMARDs (as opposed to analgesics) to reduce pain related to disease activity in someone with active synovitis. The GWG also considered it important to provide adults, children and young people with IA who have pain with a

multimodal pain management plan, that uses more than one of the recommendations in a way that is tailored to their needs. Finally, the GWG felt that pain management in people with IA should be delivered collaboratively, with primary and secondary care services working together to ensure that people with IA receive appropriate, evidence-based pain care.

Pain assessment frequency and outcome measures

Recommendation 1 Adults, children and young people with IA should have their pain assessed at every appointment related to their IA, or when they feel that their pain has worsened, using a pain intensity Visual Analogue Scale (VAS), Numerical Rating Scale (NRS) or Verbal Rating Scale (VRS) and a question to identify poorly controlled pain (GRADE 1C; SoA 96.8%).

Rationale

The GWG considered that pain should be assessed at all IA-related appointments. Whilst pain is complex and multidimensional, its intensity can be quickly and accurately measured using a VAS, NRS or VRS in people with IA, with one systematic review concluding these outcome measures provide sufficient clinimetric information and should be used to measure pain in clinical practice [\[21\]](#) ([Supplementary Table S30](#)). The GWG therefore recommended their use to assess pain but considered they needed supplementing with an 'acceptability' question (e.g. asking 'is your pain controlled for you?') to identify people requiring additional pain assessments and support.

In-person or remote pain assessment

Recommendation 2 Adults, children and young people with IA who have poorly controlled pain should be assessed face-to-face for IA disease activity and other causes by a healthcare professional with relevant expertise (GRADE 1C; SoA 98.6%).

Recommendation 3 Remote pain assessments [e.g. using electronic patient-reported outcome measures (ePROMs)] in adults, children and young people with IA can be offered if they have access to, confidence in using and a preference for this, leading to face-to-face pain assessments if poorly controlled pain is present to establish its cause(s) (GRADE 1C; SoA 95.7%).

Rationale

Pain in IA is often multifactorial, with contributions from disease activity, osteoarthritis and fibromyalgia, amongst other factors.

Table 2 Guideline recommendations for the assessment and pharmacological treatment of pain in adults, children and young people with inflammatory arthritis.

Number	Topic	Recommendation
Assessment		
1	<i>Frequency and outcome measures</i>	Adults, children and young people with IA should have their pain assessed at every appointment related to their IA, or when they feel that their pain has worsened, using a pain intensity Visual Analogue Scale (VAS), Numerical Rating Scale (NRS) or Verbal Rating Scale (VRS) and a question to identify poorly controlled pain (GRADE 1C; SoA 96.8%).
2	<i>In-person vs remote</i>	Adults, children and young people with IA who have poorly controlled pain should be assessed face-to-face for IA disease activity and other causes by a healthcare professional with relevant expertise (GRADE 1C; SoA 98.6%).
3	<i>In-person vs remote</i>	Remote pain assessments [e.g. using electronic patient-reported outcome measures (ePROMs)] in adults, children and young people with IA can be offered if they have access to, confidence in using and a preference for this, leading to face-to-face pain assessments if poorly controlled pain is present to establish its cause(s) (GRADE 1C; SoA 95.7%).
4	<i>Pain factors and pain-related factors</i>	Adults, children and young people with IA who have poorly controlled pain should have a holistic review that includes assessing for depression, anxiety, disturbed sleep and functional limitations by an appropriate healthcare professional (GRADE 1C; SoA 98.3%).
5	<i>Health beliefs</i>	Adults, children and young people with IA who have persistently poorly controlled pain can be considered for an evaluation of their health beliefs using a validated questionnaire by a healthcare professional with relevant expertise (GRADE 1C; SoA 93.4%).
6	<i>Interpersonal approaches</i>	Healthcare professionals should incorporate interpersonal approaches, including validation, empathy and understanding patient-centred goals, during pain assessments in adults, children and young people with IA (GRADE 1C; SoA 97.3%).
Pharmacological treatment		
7	<i>DMARDs</i>	Adults, children and young people with active IA should be offered DMARDs (unless contra-indicated) to reduce pain and disease activity (GRADE 1B; SoA 99.3%).
8	<i>Glucocorticoids</i>	Consider offering adults, children and young people with active RA or active IA affecting multiple peripheral joints short-term glucocorticoids (unless contra-indicated) as bridging therapy to reduce pain until changes in/initiation of DMARDs become efficacious (GRADE 2C; SoA: 97.5%).
9	<i>Analgesics</i>	Oral NSAIDs can be considered to treat pain in adults, children and young people with IA, aiming for the lowest dose and shortest duration possible, evaluating efficacy following initiation, and considering people's age, comorbidities and concurrent medications. Existing national recommendations on the choice of NSAID and gastro-protection co-prescribing should be followed (GRADE 2C; SoA 96.3%).
10	<i>Analgesics</i>	The short-term use (e.g. one to two weeks) of non-NSAID analgesics (including weak opioids) can be considered to manage pain in adults, children and young people with IA. People should be counselled about their potential harms, evidence of efficacy should be evaluated following initiation and long-term use should be avoided where possible (GRADE 2C; SoA 94.3%).
11	<i>Analgesics</i>	Adults, children and young people with IA who are receiving long-term analgesics should have their efficacy and side-effects evaluated, and people should be supported to taper them when they are inefficacious, causing unacceptable side-effects or no longer required. Tapering decisions should follow shared decision-making principles (GRADE 2C; SoA 97.5%).
12	<i>Neuromodulators</i>	The routine use of neuromodulators (anti-depressants, gabapentinoids, topical capsaicin and cannabinoids) is not recommended to specifically treat pain in adults, children and young people with IA (although gabapentinoids can be considered within their licensed indications to manage neuropathic pain). For co-existing nociplastic pain (e.g. from fibromyalgia), relevant national guidelines for the management of chronic primary pain can be followed (GRADE 2C; SoA 97.5%).
13	<i>Neuromodulators</i>	Adults, children and young people with IA who are receiving long-term neuromodulators to specifically treat pain should have their efficacy for pain and side-effects evaluated and people should be supported to taper them when they are inefficacious, causing unacceptable side-effects or no longer required. Tapering decisions should follow shared decision-making principles (GRADE 2C; SoA 97.1%).

Table 3 Guideline recommendations for the non-pharmacological treatment of pain in adults, children and young people with inflammatory arthritis.

Number	Topic	Recommendation
Non-pharmacological treatment		
14	<i>Exercise and physical activity</i>	Adults, children and young people with IA should be encouraged to undertake physical activity and exercise to improve their pain. They should have access to a physiotherapist with rheumatology expertise who can offer appropriate support to help them stay physically active, which may include education about safe and beneficial exercises, individual or group-based activity programmes, or other suitable approaches that promote movement and support pain management (GRADE 1C; SoA 97.7%).
15	<i>Psychological</i>	Psychological interventions [e.g. mindfulness, cognitive behavioural therapy (CBT)] should be considered to treat pain in adults, children and young people with IA, and co-occurring depression and anxiety should be managed in line with relevant national guidelines when present (GRADE 2C; SoA 96.5%).
16	<i>Ergonomic or orthotic</i>	Adults, children and young people with IA who experience pain during daily activities, education or work should have access to an occupational therapist with rheumatology expertise for ergonomic support, self-management advice and orthotic assessment (GRADE 1C; SoA 97.8%).
17	<i>Education</i>	Adults, children and young people with IA should receive education about pain in inflammatory arthritis (discussing its causes and management approaches, including self-management options) (GRADE 1B/C; SoA 98.5%).
18	<i>Weight management</i>	Adults, children and young people with IA and pain who are overweight or living with obesity should be offered support to lose weight and be provided with access to appropriate weight management interventions (GRADE 1C; SoA 96.7%).
19	<i>Sleep</i>	Adults, children and young people with IA, pain and disturbed sleep should receive support (using relevant local and national resources) to restore healthy sleep patterns to improve their pain (GRADE 2C; SoA 97.5%).
20	<i>Fatigue</i>	Fatigue management should be offered to treat fatigue in adults, children and young people with IA who have pain, but there is insufficient current evidence to know if it improves their pain (GRADE 2C; SoA 95.7%).
21	<i>Digital technologies and medical devices</i>	Specific digital technologies or medical devices are not currently recommended to manage pain in adults, children and young people with IA, due to insufficient evidence to determine their efficacy (GRADE 2C; SoA 96.9%).
22	<i>Complementary therapies</i>	Specific complementary therapies are not currently recommended to manage pain in adults, children and young people with IA, due to insufficient evidence to determine their efficacy (GRADE 2C; SoA 96.4%).
23	<i>Support from others</i>	Adults, children and young people with IA should be signposted to support from others (such as peers, national patient organizations and charities) to help them self-manage symptoms related to their IA, including pain (GRADE 1C; SoA 98.3%).

Two systematic reviews were identified examining the prevalence of non-nociceptive pain ([Supplementary Table S31](#)); these estimated that ~40% and 13–21% of people with IA have neuropathic-like pain and fibromyalgia, respectively [22, 23]. Whilst no reviews were identified examining the relationship between pain and disease activity, the GWG were aware of a secondary analysis of six studies in people with RA, demonstrating a strong correlation between DAS28-ESR and pain intensity scores (the former explained 53% of the variation in the latter) [24]. They were also aware of recommendations from other groups that disease activity should be evaluated in face-to-face consultations [25]. Consequently, the GWG considered it would be challenging to establish the cause(s) of poorly controlled pain by remote

reviews and considered that in-person assessments were required. However, they recognized the benefits of telemedicine for people with IA, with many studies demonstrating that assessments using ePROMs/web-based methods are broadly feasible and acceptable ([Supplementary Tables S32 and S33](#)). They therefore recommend offering remote assessments to people who have access to relevant systems, confidence in using them and a preference for a remote assessment, which should lead to a face-to-face review in those with poorly controlled pain to establish its cause(s) (accepting that the precise cause of pain may not be possible to establish). Services should be configured to ensure that face-to-face reviews in people with poorly controlled pain can be provided on a prompt basis.

Pain factors and pain-related factors requiring assessment

Recommendation 4 Adults, children and young people with IA who have poorly controlled pain should have a holistic review that includes assessing for depression, anxiety, disturbed sleep and functional limitations by an appropriate healthcare professional (GRADE 1C; SoA 98.3%).

Rationale

Of four identified systematic reviews [26–29], all reported a relationship between pain and depression/affective distress in people with IA, although their findings were synthesized narratively, and the relationship was not seen in all studies included in the reviews (Supplementary Table S34). The GWG were, however, aware of another systematic review (published since the search was conducted) reporting a modest bidirectional association between pain and depression in IA within a meta-analysis [30]. One identified systematic review also indicated a positive correlation between pain and anxiety [29] (which often co-exists with depression). Of five identified systematic reviews [27, 29, 31–33], all reported evidence of a relationship between sleep (e.g. insomnia, disturbed sleep) and worse pain in some form. Of two identified systematic reviews [27, 34], both reported that worse pain was associated with greater disability.

Health beliefs

Recommendation 5 Adults, children and young people with IA who have persistently poorly controlled pain can be considered for an evaluation of their health beliefs using a validated questionnaire by a healthcare professional with relevant expertise (GRADE 1C; SoA 93.4%).

Rationale

During the literature search, a systematic review with meta-analysis examining the relationship between health beliefs (e.g. self-efficacy, catastrophizing, helplessness) and pain in people with RA was identified [35]. This reported moderate correlations between pain beliefs and pain severity (pooled $r = -0.367$; $P < 0.001$), which was a finding considered clinically important by the GWG, who felt that people with IA and persistent poorly controlled pain are likely to benefit from a health belief assessment by a healthcare professional with relevant expertise (e.g. a psychologist, or chronic pain service clinician). Two examples of relevant questionnaires that are recommended by the Faculty of Pain Medicine and British Pain Society for use within chronic pain services to assess health beliefs are the Pain Self-Efficacy Questionnaire (assessing the confidence of a person in their ability to function despite experiencing chronic pain) and the Pain

Catastrophising Scale (evaluating the extent that a person experiences negative, exaggerated or unhelpful thoughts related to their pain) [36].

Using interpersonal approaches in pain assessments

Recommendation 6 Healthcare professionals should incorporate interpersonal approaches, including validation, empathy and understanding patient-centred goals, during pain assessments in adults, children and young people with IA (GRADE 1C; SoA 97.3%).

Rationale

Five studies were identified (Supplementary Table S35) that examined the relationship between pain and interpersonal consultation-based factors comprising active patient involvement in establishing treatment goals, motivational interviewing, improved clinical communication (e.g. showing empathy) and behaviour change techniques (e.g. motivational interviewing). Four were randomized controlled trials, two of which favoured the intervention [37, 38], one reported no effect [39] and one favoured the control treatment [40]. One was a mixed methods observational study, which reported no association between pain and the attainment of goals (set during goal setting) [41]. Although this evidence was inconsistent, the GWG considered that using interpersonal approaches to deliver person-centred care that is empathic, respectful of and responsive to their needs and values was important to building trust and increasing acceptance (people adapting behaviours to engage in activities despite pain, rather than avoiding activities or focusing on trying to have no pain), which were outcomes not measured in these studies.

DMARDs

Recommendation 7 Adults, children and young people with active IA should be offered DMARDs (unless contra-indicated) to reduce pain and disease activity (GRADE 1B; SoA 99.3%).

Rationale

The largest body of evidence regarding DMARDs was in people with RA (Supplementary Table S36). In this population: (1) three systematic reviews considered conventional synthetic (cs) DMARD efficacy vs placebo (two very low- and one moderate-quality evidence), all (100%) favoured csDMARDs with effect sizes ranging from MDs of -2.0 to -0.9 for pain VAS [14, 42, 43]; (2) three systematic reviews considered biologic (b)DMARD efficacy vs placebo (one high-, one moderate- and one low-quality evidence), all (100%) favoured bDMARDs with effect sizes ranging from MDs of -3.1 to -2.1 for pain VAS [44–46]; and (3) three systematic reviews considered targeted synthetic (ts)DMARD

efficacy vs placebo (one high-, one moderate- and one low-quality evidence), all (100%) favoured tsDMARDs with effect sizes ranging from MDs of -1.5 to -1.3 for pain VAS [47–49]. An additional systematic review considering ‘treat-to-target’ vs usual care also reported favourable effects of intensive treatment (very low-quality evidence) with a MD of -1.8 for pain VAS [14]. Several systematic reviews compared different DMARD types/administration routes to one another, indicating favourable effects for subcutaneous vs oral methotrexate (moderate-quality evidence [50]) and a range of bDMARDs vs anakinra (low-/moderate-quality evidence [51, 52]), but similar efficacy for triple csDMARDs vs TNF-inhibitors with methotrexate (very low-quality evidence [53]). In AxSpA (Supplementary Table S37) and PsA (Supplementary Table S38) all five (100%) systematic reviews evaluating b/tsDMARDs against placebo reported favourable effects for pain (evidence ranging from very low- to high-quality [54–58]), although findings were mixed for csDMARDs: one review reported no efficacy for sulphasalazine vs placebo for spinal pain in AxSpA (moderate-quality evidence [59]) and two (low/very low-quality evidence) reported conflicting findings for methotrexate vs placebo in PsA [60, 61]. In JIA (Supplementary Table S38), one systematic review (low-quality evidence) reported a beneficial effect for tocilizumab but not abatacept (in single trials) vs placebo [62]. Taken together, these findings provide substantial evidence supporting prescribing DMARDs to reduce pain in people with active IA, with the caveats that most evidence is in people with RA, and that evidence in people with AxSpA is limited to b/tsDMARDs. In line with existing guidelines on treat-to-target approaches, the DMARD regimen used should be optimized to minimize disease activity to an appropriate level.

Glucocorticoids

Recommendation 8 Consider offering adults, children and young people with active RA or active IA affecting multiple peripheral joints short-term glucocorticoids (unless contra-indicated) as bridging therapy to reduce pain until changes in/initiation of DMARDs become efficacious (GRADE 2C; SoA: 97.5%).

Rationale

Five systematic reviews were identified (Supplementary Table S39). Three were in people with RA and two in people with AxSpA. The most comprehensive of these was in people with RA (including 15 studies; very low-quality evidence) [63]. This reported an overall standardized mean difference (SMD) for systemic glucocorticoids vs inactive treatment of -0.65 (95% CI -0.82 , -0.49). In studies using a pain VAS, time-related decreases after initiating glucocorticoids were seen, with effects largest in the first 3 months (MD of -1.5). The second largest review considered low-dose glucocorticoids vs placebo in people with RA, reporting no effect (moderate-quality evidence) [64]. The other reviews identified single or no trials [54, 65, 66]. The

GWG considered that the evidence supports the use of short-term systemic glucocorticoids to reduce pain in people with active RA (but not in AxSpA), pending initiation of, or changes in, DMARDs becoming efficacious. Whilst there was no evidence evaluating their use in other peripheral IA types, the experience of the GWG is that they are often beneficial in people with an RA-type pattern of polyarticular joint involvement.

Analgesics

Recommendation 9 Oral NSAIDs can be considered to treat pain in adults, children and young people with IA, aiming for the lowest dose and shortest duration possible, evaluating efficacy following initiation, and considering people’s age, comorbidities and concurrent medications. Existing national recommendations on the choice of NSAID and gastro-protection co-prescribing should be followed (GRADE 2C; SoA 96.3%).

Recommendation 10 The short-term use (e.g. one to two weeks) of non-NSAID analgesics (including weak opioids) can be considered to manage pain in adults, children and young people with IA. People should be counselled about their potential harms, evidence of efficacy should be evaluated following initiation and long-term use should be avoided where possible (GRADE 2C; SoA 94.3%).

Recommendation 11 Adults, children and young people with IA who are receiving long-term analgesics should have their efficacy and side-effects evaluated, and people should be supported to taper them when they are ineffective, causing unacceptable side-effects, or no longer required. Tapering decisions should follow shared decision-making principles (GRADE 2C; SoA 97.5%).

Rationale

In keeping with their known efficacy profile, there was consistent evidence that oral NSAIDs improve pain in people with AxSpA, relative to placebo (Supplementary Table S40), with all five systematic reviews (100%) examining this reporting favourable effects (MDs ranging from -3.2 to -1.3 ; two reviews provided high/moderate-quality evidence; two low-quality evidence; one very low-quality evidence) [13, 54, 67–69]. All four (100%) umbrella/systematic reviews in people with RA examining oral NSAIDs vs placebo reported favourable effects in some form, although effect sizes were small (MD of -1.1 for celecoxib, -1.0 for naproxen, and -0.9 for NSAIDs vs placebo) and evidence quality was very low to moderate [70–73]. The GWG considered that the evidence supports the use of oral NSAIDs to

reduce pain in people with AxSpA and provides some support for their use to reduce pain in people with RA (albeit with modest effects). However, their use requires carefully balancing against the numerous known potential harms of oral NSAIDs [74] and tailoring according to peoples' risk profiles for such harms. Existing national guidelines on the choice of NSAID and the co-prescribing of gastroprotection should be followed (such as those provided by NICE) [75].

Only one review was identified (in people with RA; low-quality evidence) that considered non-NSAID analgesics vs placebo for the outcome of pain [72]; this included a single one-week duration trial of paracetamol with tramadol vs placebo, reporting a mean daily pain VAS over one week of 4.7 vs 5.4 ($P=0.018$; very low-quality evidence) [76]. The GWG were aware of a recent narrative review that used a systematic approach to identify systematic reviews of analgesics for pain in people with RA [9], identifying two relevant systematic reviews (published pre-2014). The first evaluated paracetamol efficacy, including three trials with a placebo comparator. Whilst small, statistically significant improvements in 'pain relief' were seen, all trials were of a short 6-h duration, conducted in the 1970s, used atypical dosing and were at high-risk of bias [77]. The second evaluated opioid efficacy, with all included studies of short duration, and only one considering a strong opioid [78]. In meta-analyses of opioid trials: (1) no differences in withdrawals due to inadequate analgesic were seen (four trials); (2) a statistically significant benefit in the number of people having an improvement in the patient-reported global impression of clinical change of 'good/very good' (four trials) was seen, estimated as 18 more people out of 100 reporting a good/very good symptom improvement with active vs control treatment; and (3) a statistically significant increased risk of experiencing at least one adverse event (three trials) was seen, estimated as 30 more people out of 100 experiencing these with active vs control treatment. Quality of evidence was low for all outcomes. The GWG recognized that there was, therefore, limited and short-term evidence to support the use of paracetamol or weak opioids, which also have potential harms [10, 79], but none to support their long-term use or the use of strong opioids. Whilst there was some difference of opinion across the GWG, many felt that non-NSAID analgesics had a role to play, and the perspective of people with lived experience was that people with IA should have access to as many pain management options as possible, including non-NSAID analgesics. Consequently, it was recommended that their short-term use can be considered, but their long-term use should be avoided, particularly in people reporting no meaningful benefit, and the routine use of strong opioids is not recommended.

Neuromodulators

Recommendation 12 The routine use of neuromodulators (anti-depressants, gabapentinoids, topical capsaicin and cannabinoids) is not recommended to specifically treat pain in adults, children and young people with IA (although gabapentinoids can be

(continued)

considered within their licensed indications to manage neuropathic pain). For co-existing nociplastic pain (e.g. from fibromyalgia), relevant national guidelines for the management of chronic primary pain can be followed (GRADE 2C; SoA 97.5%).

Recommendation 13 Adults, children and young people with IA who are receiving long-term neuromodulators to specifically treat pain should have their efficacy for pain and side-effects evaluated and people should be supported to taper them when they are inefficacious, causing unacceptable side-effects or no longer required. Tapering decisions should follow shared decision-making principles (GRADE 2C; SoA 97.1%).

Rationale

Three umbrella/systematic reviews evaluated anti-depressants vs placebo (in people with RA/AxSpA, all low/very low-quality evidence; [Supplementary Table S40](#)). Two (67%) reported no efficacy [71, 80] and one (33%) did not identify any trials reporting pain as an outcome [72]. One systematic review evaluated gabapentinoids (in people with RA) identifying no relevant trials [72]. One umbrella review evaluated topical capsaicin, reporting low-quality evidence for a favourable effect vs placebo for pain intensity, without providing effect size data [71]. Several reviews evaluated cannabinoids in RA; all identified the same single trial [81], which demonstrated some statistically significant benefits in reducing morning pain on movement and at rest, but not total pain intensity (very low-quality). Based on this evidence (alongside increasing concerns about potential harms from gabapentinoids [11]) the GWG did not recommend the routine use of neuromodulators to manage pain in people with IA. However, in people with IA who have pain that is primarily nociplastic and related to fibromyalgia, clinicians should refer to national guidelines on managing chronic primary pain such as those from NICE, which recommend that certain anti-depressants (as an off-label use of these medicines) can be considered after a full discussion of the benefits and harms [82].

Exercise and physical activity

Recommendation 14 Adults, children and young people with IA should be encouraged to undertake physical activity and exercise to improve their pain. They should have access to a physiotherapist with rheumatology expertise who can offer appropriate support to help them stay physically active, which may include education about safe and beneficial exercises, individual or group-based activity programmes or other

(continued)

suitable approaches that promote movement and support pain management (GRADE 1C; SoA 97.7%).

Rationale

In people with RA, 18 umbrella/systematic reviews evaluated exercise (including joint protection; yoga; general exercise; hand exercise; and Tai Chi) or physical activity against control treatments (mainly usual care) (Supplementary Table S41). Of these, 12 (67%) reported favourable effects for exercise/physical activity (effect sizes ranging from MDs of -2.8 to -1.2 ; one review moderate-quality evidence and the others low/very low-quality evidence) [83–94]; four (22%) reported mixed effects (narrative syntheses reporting efficacy in some but not all studies) [95–98]; and only two (11%) reported no effect [99, 100]. In people with AxSpA, eight systematic reviews evaluated exercise (of multiple types) against usual care [54, 101–107]. Of these, seven (88%) reported favourable effects for exercise (effect sizes ranging from MDs of -2.3 to -2.1); only one (12.5%) review reported no effect. Eleven systematic reviews evaluated exercise in other/mixed IA types (peripheral SpA; JIA; RA and AxSpA pooled [13, 108–117]) and ten (91%) reported favourable or mixed effects. When considered against the numerous other health benefits of exercise and physical activity, the GWG considered the evidence indicates that people with IA should be encouraged to undertake exercise/physical activity to improve their pain, with services configured to support them to achieve this.

Psychological interventions

Recommendation 15 Psychological interventions [e.g. mindfulness, cognitive behavioural therapy (CBT)] should be considered to treat pain in adults, children and young people with IA, and co-occurring depression and anxiety should be managed in line with relevant national guidelines when present (GRADE 2C; SoA 96.5%).

Rationale

Ten systematic/umbrella reviews evaluated psychological interventions (e.g. mindfulness, CBT, self-regulation, counselling; Supplementary Table S42). Four reviews (40%) reported favourable effects. Of these, two umbrella reviews [98, 118] described results from the same single systematic literature review by Knittle *et al.* [119], which reported a statistically significant but small effect of psychological interventions (including CBT, mindfulness and counselling) on pain immediately post-intervention in a meta-analysis of 13 trials ($P=0.006$; Hedge's $g=0.18$) but not at final follow-up; one umbrella review reported 'effective short and long-term improvements with small positive effects' in five RCTs evaluating CBT [117]; and one systematic review with a meta-analysis reported statistically significant improvements in pain VAS in four trials evaluating mindfulness (weighted MD= -0.65 ; $P=0.006$) [120]. Two reviews (20%) reported mixed effects. Of these, one umbrella review identified three systematic

reviews quantifying the effects of psychological therapies on pain using meta-analysis (two reported statistically significant effects post-intervention but not at follow-up, and one reported no effect) with the review authors concluding 'psychological interventions result in small post intervention improvements in pain not maintained at follow-up' [121]; the other review summarised findings narratively in people with JIA, reporting positive effects for pain in numerous studies evaluating biofeedback with physical therapy and online self-management/education, but not CBT [113]. Four reviews (40%) reported no effect. Of these, one systematic review reported no effect of mindfulness-based interventions on pain VAS in a meta-analysis (although individual trials did report positive effects for some pain outcomes) [122]; one systematic review reported no effect of internet-based CBT on pain severity or self-efficacy (albeit in two trials only) [123]; one systematic review reported no effect of remotely delivered psychological therapies in a single trial of people with RA (although in the larger review considering people with chronic pain more broadly, small benefits were observed) [124]; and one systematic review reported an effect approaching statistical significance for CBT (SMD= -0.21 ; $P=0.05$) [125]. Taken together, the GWG considered these findings were generally supportive of using psychological therapies for pain management in people with IA (particularly when considered with the fact they confer other benefits for pain, such as coping, which are not necessarily captured in pain intensity PROMs). The GWG also recognized the importance of treating co-occurring depression and anxiety when present, with a recent systematic review reporting low-quality evidence that treating depression reduces pain intensity in people with IA [30]. As rheumatology teams will often lack direct access to psychological services, the GWG felt it was important that local pathways are developed with primary and secondary care services and community and third sector organizations working together to ensure those in need can access the psychological support they require.

Ergonomic or orthotic interventions

Recommendation 16 Adults, children and young people with IA who experience pain during daily activities, education or work should have access to an occupational therapist with rheumatology expertise for ergonomic support, self-management advice and orthotic assessment (GRADE 1C; SoA 97.8%).

Rationale

Six systematic/umbrella reviews evaluated orthotic interventions (spanning wrist splints; therapy gloves; occupational therapy; 'care for work' programme; general orthotics/prosthetics; Supplementary Table S43). Five were in people with RA and one in people with RA or JIA. Four (67%) reported favourable effects [98, 126–128], one (17%) reported 'inconclusive' effects [129] and one (17%) reported no effect [130]. All involved narrative syntheses and did not provide clear details on effect sizes, although one review comparing occupational therapy to usual care (in a single trial) reported a MD in pain VAS with the intervention of -2.5 [128]. The GWG are aware of several relevant UK-based trials published since these systematic reviews were

conducted, which have further clarified the evidence on orthotic and ergonomic interventions. These include the multicentre A-GLOVES trial, which reported no clinically important differences in hand pain between people receiving correctly-fitted Isotoner compression gloves vs loose placebo gloves (indicating against their routine use for pain management in people with IA) [131], and the WORK-IA feasibility RCT, which found that brief, individualized, job-retention support delivered by occupational therapists was acceptable and associated with improvements in pain as well as presenteeism and perceived health [132]. The generally positive effects reported in the systematic/umbrella reviews—albeit based on very low/low quality evidence—when considered against the low risks of intervention harms, other potential benefits (such as supporting people to continue to work) and strong patient preference for supportive occupational therapy input, mean the GWG advocate access to occupational therapy for work assessment, joint-protection education and selective orthotic provision for pain management in people with IA.

Education

Recommendation 17 Adults, children and young people with IA should receive education about pain in inflammatory arthritis (discussing its causes and management approaches, including self-management options) (GRADE 1B/C; SoA 98.5%).

Rationale

Four systematic reviews evaluated educational interventions on a range of topics (e.g. pain management, coping strategies, self-management; [Supplementary Table S44](#)). Three were in people with RA and one in people with AxSpA. Three (75%) reported favourable effects, although these were not necessarily for pain intensity, with different reviews including a range of outcomes such as ‘arthritis self-efficacy for pain’ and ‘coping efficiency’ [117, 133, 134]. No reviews reported effect sizes as MDs, making interpretation of the interventions’ clinical relevance challenging. One review (in people with AxSpA) reported a favourable effect of the control treatment (of ‘no formal self-management education’) over self-management education for reducing pain, although the effect size was small (MD 0.21) and substantial heterogeneity was reported across included studies ($I^2=91\%$) [54]. Overall, the GWG considered that the generally positive effects reported in these reviews support the use of education to manage pain in people with IA.

Weight management and diet

Recommendation 18 Adults, children and young people with IA and pain who are overweight or living with obesity should be offered support to lose weight and be provided with access to appropriate weight management interventions (GRADE 1C; SoA 96.7%).

Rationale

A total of 32 umbrella/systematic reviews considered a broad range of dietary interventions (e.g. probiotics, Curcumin, Mediterranean diet, vitamin D) in people with RA ([Supplementary Table S45](#)). Of these, 12 (38%) reported favourable effects [135–145], 13 (41%) reported no effect [146–158], six reported (19%) mixed/uncertain effects [159–164] and in one (3%) it was unclear if the intervention was effective from reported data [165]. In the six umbrella/systematic reviews in other/mixed IA types, three (50%) reported favourable effects [166–168], two (33%) reported no effect [162, 169] and in one (17%) it was unclear if the intervention was effective from reported data [170]. Most evidence was low/very low quality. Consequently, the GWG did not recommend any specific diets for managing pain in people with IA, although the general benefits of a healthy diet were recognized.

No systematic reviews were identified examining the efficacy of weight management at improving pain in people with IA who are overweight or living with obesity. However, four relevant small RCTs were identified (in people with RA; [Supplementary Table S46](#)) [171–174]. In three trials, pain was a secondary outcome; in one trial it was a co-primary outcome. The interventions comprised remotely delivered supervised weight loss and exercise training, intermittent fasting, a hypocaloric diet with dietician counselling and enhanced lifestyle behavioural weight management. In three trials, they led to statistically significant reductions in weight compared with the control arm (in one trial a statistically significant reduction in weight was seen in the intervention but not the control arm, with no between-arm comparison made). For pain outcomes, in all four (100%) trials statistically significant reductions were seen in the intervention arms, but not the control arms, with statistically significant differences between the two arms seen in two (50%) RCTs. When considered against the other benefits of weight loss in people with IA who are overweight or living with obesity, the GWG recommended that people should be offered support to lose weight for their pain in this context, whilst recognizing that larger definitive RCTs are required to better clarify weight management effectiveness for pain (with the advent of Glucagon-like peptide-1 agonists, which are efficacious for weight loss [175], making larger trials a feasible prospect). Existing national guidance on weight management should be referred to for details on specific treatments [176].

Improving sleep

Recommendation 19 Adults, children and young people with IA, pain and disturbed sleep should receive support (using relevant local and national resources) to restore healthy sleep patterns to improve their pain (GRADE 2C; SoA 97.5%).

Rationale

Three small RCTs (and no umbrella/systematic reviews) evaluating the impact of sleep interventions on pain in people with IA were identified ([Supplementary Table S47](#)). One examined the efficacy of group-based CBT for chronic insomnia in people with

Table 4 Key recommendations for future research.

Number	Research question	Rationale for recommendation
Q1	In adults, children and young people with IA, can disease-specific tools be developed and validated that distinguish different drivers of pain (e.g. synovitis, sensitization, mechanical factors)?	Understanding the drivers of pain in individual people with IA underpins their pain management. Developing tools that enable this to be undertaken in a routine care setting is vital to enabling this.
Q2	In adults with IA and chronic pain, what is the clinical and cost-effectiveness of opioids and gabapentinoids compared with placebo for pain?	Opioids and gabapentinoids are widely prescribed to people with IA despite limited or no evidence for efficacy and known harms. High-quality evidence is needed to definitively understand if they do or do not help pain in people with IA.
Q3	In adults, children and young people with IA receiving long-term opioids and neuromodulators for pain, what is the best way to taper and stop them, and what is the effect of doing this on pain?	Long-term opioids and gabapentinoids are widely prescribed to people with IA despite no evidence for efficacy with long-term use and known harms. High-quality evidence is needed to understand how to best taper them and whether this effects pain in people with IA.
Q4	In adults with IA and chronic pain who are living with obesity, what is the clinical and cost-effectiveness of weight management (combining pharmacological e.g. GLP1 agonists, and non-pharmacological approaches e.g. increased physical activity) compared with usual care for pain?	Obesity is common in people with IA and associates with their pain. Preliminary evidence suggests weight management may improve pain in people with IA. Definitive evidence evaluating the impact of effective weight management approaches is required.
Q5	What is the best way to implement the Pain Management in People with Inflammatory Arthritis Guideline recommendations?	For guidelines to effect meaningful change in clinical care, they require supporting by an implementation strategy based on barriers and enablers to their implementation.

Recommendations are not in prioritized order.

RA, reporting no effect on the primary outcome of sleep efficiency, but a statistically significant improvement in a range of secondary sleep outcomes (e.g. insomnia severity) and pain [177]. One examined the efficacy of melatonin tablets, reporting statistically significant improvements in sleep quality and pain [178]. Finally, one examined the efficacy of a healthy sleep duration (vs a restricted sleep duration) in people with JIA and pain, reporting a statistically significant reduction in the odds of reporting higher pain scores for those with a healthy sleep duration [179]. Despite this limited evidence base, the GWG considered that restoring normal sleep patterns was a sensible and low-risk management strategy, that is likely to improve pain and overall wellbeing.

Fatigue management

Recommendation 20 Fatigue management should be offered to treat fatigue in adults, children and young people with IA who have pain, but there is insufficient current evidence to know if it improves their pain (GRADE 2C; SoA 95.7%).

Rationale

No reviews were identified that examined the efficacy of interventions to address fatigue on improving pain in people with IA. Only

one RCT was identified evaluating the impact of CBT to address fatigue-related behaviours in people with RA and fatigue (Supplementary Table S47) [180]. This reported a statistically significant effect on fatigue (as the primary outcome) but not pain (as a secondary outcome) The GWG were also aware of the LIFT RCT, evaluating the role of remotely delivered CBT and personalized exercise interventions for fatigue in people with IRDs (not included in this guideline’s underpinning review as it was not IA-specific) [181]. This demonstrated a statistically significant reduction in fatigue severity but not pain (as a secondary outcome). Consequently, the GWG considered that this single trial in IA did not represent sufficient evidence to determine whether fatigue management was efficacious at improving pain in people with IA, whilst recognizing that people with IA and fatigue should receive relevant treatment for this independently of pain (as demonstrated in other guideline evidence reviews [182]).

Digital technologies and medical devices

Recommendation 21 Specific digital technologies or medical devices are not currently recommended to manage pain in adults, children and young people with IA, due to insufficient evidence to determine their efficacy (GRADE 2C; SoA 96.9%).

Rationale

Six umbrella/systematic reviews evaluated the efficacy of a range of digital technologies (e.g. mobile applications, wearable activity trackers, web-based rehabilitation; [Supplementary Table S48](#)) [183–188]. None reported any effect of the interventions on pain in people with RA and JIA. Two systematic reviews evaluated the efficacy of medical devices: one reported no effect for phototherapy via a light-emitting diode [189] and the other reported a beneficial effect of laser therapy immediately post-procedure, but not at 3 months [190]. As the quality of evidence was very low for all interventions, the GWG considered there was insufficient evidence to determine the efficacy of any specific digital technology or medical device for IA pain management, whilst recognizing this is a rapidly evolving field, with trials in broader chronic pain populations showing promise for digital technologies such as virtual reality [191].

Complementary therapies

Recommendation 22 Specific complementary therapies are not currently recommended to manage pain in adults, children and young people with IA, due to insufficient evidence to determine their efficacy (GRADE 2C; SoA 96.4%).

Rationale

The most evaluated complementary therapy ([Supplementary Table S49](#)) was Traditional Chinese Medicine (e.g. Duhuo Jisheng Decoction, Total Glucosides of Paeony, GuiZhi-ShaoYao-ZhiMu decoction), examined in 25 reviews (in people with RA, AxSpA and JIA). Of these, 16 (64%) reported favourable effects [192–207], 1 (4%) mixed results [208], 7 (28%) no effects [209–215] and 1 (4%) favoured control treatment [216] for pain outcomes. For acupuncture, whilst six (75%) of the eight systematic reviews (in people with RA and peripheral SpA) reported favourable effects [217–222] [with two (25%) reporting no effects [13, 223]], when considering the four reviews that specifically examined trials using sham acupuncture as a control arm, only one reported a favourable effect (in a single trial randomizing 34 people with RA to acupuncture and 33 to sham acupuncture [217]) and the remainder reported no effect [in two trials involving 64 people with RA (MD 0.55; 95% CI –0.74, 1.84 [223]), in five trials of people with RA (MD –0.94; 95% CI –2.55, 0.67 [221]) and in one trial of 10 people with peripheral SpA [13]]. For reviews of other complementary therapies (e.g. massage, balneotherapy) no consistent evidence for efficacy at improving pain was observed [13, 98, 202, 204, 206, 224–232]. Overall, the low quality of the evidence, alongside its general inconsistency in its results for efficacy, meant the GWG considered there was insufficient current evidence to determine the efficacy of any specific complementary therapies for IA pain management.

Support from others

Recommendation 23 Adults, children and young people with IA should be signposted to support from others (such as peers, national patient organizations and charities) to help them self-manage symptoms related to their IA, including pain (GRADE 1C; SoA 98.3%).

Rationale

No umbrella/systematic reviews were identified examining the efficacy of support from others for pain management in people with IA. However, four relevant RCTs were identified (in people with RA, AS and JIA; [Supplementary Table S50](#)). These evaluated social networking [233], peer-led education [234], trained peer mentorship [235] and web-based self-management guided by peer trainers [236]. All evaluated pain as a secondary outcome, with no statistically significant effects of the interventions observed. However, within the two trials including a qualitative component, these highlighted that people with JIA receiving video-calling delivered support from trained peer mentors ‘valued the positive and supportive interactions with mentors living with the same condition’ [235], and people with JIA receiving a web-based self-management intervention guided by peer-trainers considered it to be a valuable aid to influence an active coping style by sharing experiences, enhancing social support and increasing autonomy and goal-setting behaviour [236]. Quality of evidence was low/very low. Despite this limited evidence-base, the experience of the GWG is that support from others (e.g. national patient organizations) has an important role to play in helping people with IA self-manage their pain and overall condition.

Applicability and utility

This guideline is applicable to supporting pain management in people with IA in any healthcare setting. As with all guidelines, a range of factors (such as comorbidities and health beliefs) will influence decision making during clinical interactions, and healthcare professionals should work with people with IA to make shared decisions about their pain management. Failure to adhere to this guideline should not necessarily be considered negligent, nor should adherence to these recommendations constitute a defence against a claim of negligence.

Limited access to specialist services may hinder implementation of this guideline. Despite its multidisciplinary recommendations, access to physiotherapists and occupational therapists with rheumatology expertise is inconsistent across the NHS, and the provision of psychological pain support, weight management and non-pharmacological sleep interventions often restricted. To support the implementation of this guideline, use of the audit tool ([Supplementary Table S51](#)) is recommended.

Research recommendations

This guideline’s recommendations are largely based on low-quality evidence. Consequently, definitive, high-quality RCTs are

needed to determine the clinical and cost-effectiveness of many pain management interventions in adults, children and young people with IA. The top five recommendations for future research, proposed by the GWG, are presented in [Table 4](#).

Supplementary material

[Supplementary material](#) is available at *Rheumatology* online.

Data availability

Data included in this guideline are available in the cited published articles and online [supplementary materials](#).

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