

RESEARCH ARTICLE

Shoulder osteoarthritis: A survey of current (2024) UK physiotherapy practice

Stacey Lalande¹  | Maria Moffatt² | Chris Littlewood³

¹Airedale NHS Foundation Trust, Airedale General Hospital, Keighley, UK

²School of Health Sciences, Institute of Population Health, University of Liverpool, Liverpool, UK

³Faculty of Health, Social Care and Medicine, Edge Hill University, Ormskirk, UK

Correspondence

Chris Littlewood.

Email: chris.littlewood@edgehill.ac.uk**Funding information**

National Institute for Health and Care Research

Abstract

Background: Shoulder osteoarthritis can cause significant pain and disability. It is thought that the wider principles of osteoarthritis management can be applied in the management of people with shoulder osteoarthritis, but most prior research has been conducted with people experiencing osteoarthritis of the hip and knee. There is a paucity of evidence to guide the non-surgical management of shoulder osteoarthritis and limited understanding of current physiotherapy practice.

Objective: We aimed to investigate the current treatment recommendations by physiotherapists in the UK for people with shoulder OA.

Methods: An online survey using a clinical vignette was designed and distributed to UK registered physiotherapists with experience of managing people with shoulder osteoarthritis, via social media and professional networks. Descriptive statistics were used to analyse demographic and multiple-choice questions, and free text responses were summarised narratively.

Results: 114 respondents accessed the survey with 110 valid responses; 105 (95%) respondents would offer face-to-face consultations, with 89 (81%) respondents expecting to offer 2–4 appointments. 108 (98%) respondents would offer advice/education; 79 (72%) would offer weight management; 82 (75%) prescribed exercises to improve movement; and 101 (92%) offered exercises to increase strength. If a person lived with obesity or had a treatment preference, the majority of respondents would change their recommendations.

Conclusion: This is the first survey of NHS physiotherapy practice for people with shoulder osteoarthritis. The responses largely align with NICE guidelines; despite this alignment, it is not known whether such guideline-based care is acceptable to people with shoulder osteoarthritis or clinically effective.

KEYWORDS

arthritis, glenohumeral, osteoarthritis, physiotherapy, shoulder

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1 | INTRODUCTION

Shoulder osteoarthritis is a common cause of shoulder pain, disability, and difficulty sleeping (Stanborough et al., 2022). Between 16.1% and 20.1% of adults aged 65 and over have evidence of shoulder osteoarthritis (OA) on X-Ray (Ansok & Muh, 2018).

Clinical guidelines recommend therapeutic exercise, weight management, advice and information about OA, pharmacological treatment (topical non-steroidal anti-inflammatory drugs (NSAID) progressing to oral NSAIDs and then intra-articular corticosteroid injections), and referral for consideration of joint replacement when other treatment options have been exhausted (NICE, 2022). However, the majority of research that informs this approach is conducted with people with hip and knee OA, and there are key differences between the hip, knee and shoulder which might question the application of these broad principles. Unlike the hip and knee, most functional activities performed using the shoulder are non-weight bearing. The British Elbow and Shoulder Society (BESS) and British Orthopaedic Association (BOA) have produced a patient care pathway for shoulder osteoarthritis which includes non-operative management options but recognise the lack of high-quality evidence to inform this (Thomas et al., 2016).

To inform the development of a programme of research to understand optimal non-surgical management for people with shoulder OA, this current survey of physiotherapy practice aims to investigate the current standard of care in the UK NHS.

2 | METHODS

This survey was reviewed and approved by the Airedale NHS Foundation Trust Research and Innovation team on 18th March 2024 and was categorised as research that does not require review and further approval from a Research Ethics Committee.

2.1 | Study design

An online survey was developed in line with previous surveys aiming to establish current practice within UK physiotherapy (Bury & Littlewood, 2018; Moffatt et al., 2024). A clinical vignette was developed by the authors, based on a typical, initial presentation of a patient with signs and symptoms of shoulder OA. The use of a clinical vignette has been reported to provide a basis upon which to evoke credible responses in the context of a survey (Peabody et al., 2004). Details of the clinical vignette are presented in Box 1. Specific clinical details were then altered, in subsequent questions of the survey, one at a time, to understand if this would change management approaches.

A copy of the survey tool is presented in Supplementary File 1.

The survey was piloted by three specialist shoulder physiotherapists and amendments to the wording of some questions were made based on their feedback.

BOX 1 Details of the clinical vignette provided in the survey

A patient of working age presents to you with a 6-month history of right shoulder pain and stiffness of gradual and insidious onset. An x-ray confirmed moderate glenohumeral joint osteoarthritis. They have had no formal treatment for this problem so far and they are otherwise in good general health; they have been taking paracetamol when required, which does help. They are overweight. They work in a supermarket, which involves some heavy lifting onto shelves, which they continue to do; however, this is becoming increasingly difficult due to the shoulder pain.

Clinical examination confirmed a diagnosis consistent with glenohumeral osteoarthritis. Objective findings are active forward flexion to 140°, abduction to 140° and external rotation is reduced compared to their left side. Their passive range of movement is equal to their active range of movement. Resisted movements at the shoulder are 4/5 as measured on the Oxford scale.

The patient is not expressing any strong preference for a specific treatment but welcomes your guidance and expertise.

2.2 | Sampling and recruitment

UK based physiotherapists, registered with the Health and Care Professions Council (HCPC) with experience of managing people with shoulder OA, were eligible for inclusion. The survey was shared via the social media platform X and via the authors' professional networks via email. On accessing the survey via Microsoft forms, participants were able to read a participant information sheet, which defined the purpose and anonymous nature of the survey. Participants were required to confirm that they had read and understood this information before being given access to the main body of the survey.

The size of the population of UK-based, HCPC-registered physiotherapists who have experience of treating people with shoulder OA is unknown. Hence, it was not possible to recruit a random sample from this unknown population to reassure regarding generalisability. Instead, we aimed for approximately 100 responses to enable us to address the aim of this survey.

The survey was open between 21 March and 16 May 2024 (8 weeks) and was closed shortly after the target of 100 responses was achieved.

2.3 | Statistical analysis

Responses to the survey were exported to Microsoft Excel for descriptive analysis. Responses to multi-item questions are

summarised as frequencies and percentages; any additional free-text comments provided by participants have been summarised and reported narratively.

3 | RESULTS

A total of 114 people accessed the online survey. Of these, 110 indicated they were HCPC registered physiotherapists and proceeded to complete the survey in full.

Of the 110 respondents, only one indicated that they did not work within the NHS. Figures 1 and 2 display the years of post-qualification experience of respondents and their primary role and practice setting, respectively.

3.1 | Which management strategies would you typically recommend for this patient?

The responses to this question are presented in Table 1. The most common treatments recommended were advice and/or education (108/110; 98%), exercises aimed at increasing strength (101/110;

92%) and exercises aimed at increasing range of movement (79/110; 72%).

47/110 (43%) respondents would consider a corticosteroid injection into the joint, with 3/110 (3%) considering further investigation and 19/110 (17%) referring for surgical opinion (Figure 3).

TABLE 1 Management strategies recommended by respondents.

Treatment options	Count	Percentage
No treatment needed	4	4%
Advice and/or education	108	98%
Weight management/Advice	79	72%
Exercises aimed at increasing range of movement	82	75%
Exercises aimed at increasing strength	101	92%
Paracetamol	70	64%
Oral NSAIDs	38	35%
Topical NSAIDs	29	26%
Acupuncture	3	3%
Manual therapy	13	12%
Electrotherapy	1	1%
Hydrotherapy	10	9%
Corticosteroid injection into the joint	47	43%
Hyaluronic acid injection into the joint	1	1%
Hydrodistension injection	3	3%
Nerve block	5	5%
Nerve ablation	2	2%
Referral for further investigation	3	3%
Referral for surgical opinion	19	17%
Other	11	10%

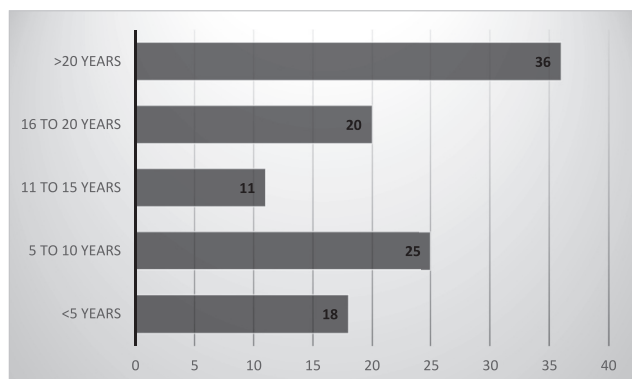


FIGURE 1 Years of post-qualification experience held by respondents.

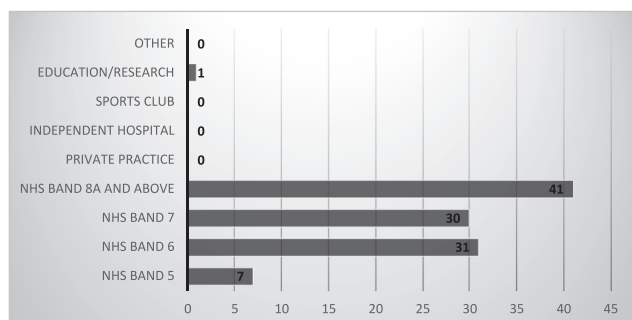


FIGURE 2 Primary role and practice setting of respondents.

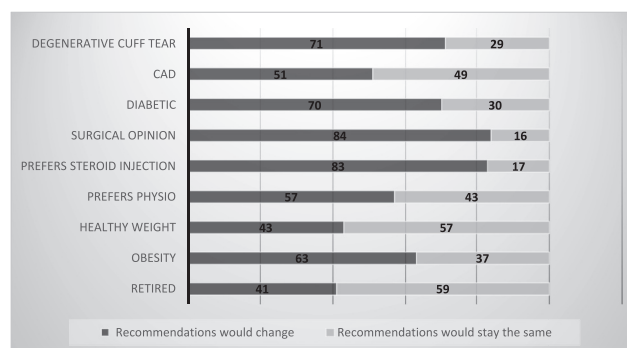


FIGURE 3 Percentage of respondents who would and would not change their original recommendations.

3.2 | What advice and education would you typically offer this patient?

Table 2 reports the type of advice and education that would be recommended. Most respondents would offer education about OA (108/110; 98%), oral advice on self-management (93/110; 85%), advice about relative rest and/or pacing (91/110; 83%), advice around activity modification (102/110; 93%), advice around pain relief (91/110; 85%), advice about work (95/110; 86%) and advice around home exercise (105/110; 95%).

Of the respondents who selected "other" (7/110; 6%), responses indicated that they would provide advice around future treatment options if the initial advice/treatment offered not provide satisfactory relief.

3.3 | What mode of initial assessment would you typically undertake for this patient?

105/110 (95%) respondents stated that they would offer an in-person assessment. One respondent (1%) would offer a Virtual (online) assessment, 2 (2%) would offer a telephone assessment, with two out of 110 respondents (2%) answering "other". Reasons provided for this were related to delivering the assessment according to the patient's preference.

3.4 | How many times would you typically expect to see this patient?

14 (13%) respondents stated that they would expect to see the patient once, 37 (34%) anticipated seeing them twice, 52 (47%) respondents answered between 3 and 4 times, and 7 out of the 110 (6%) respondents would anticipate seeing this patient between 5 and 6 times. No respondents anticipated needing to see the patient more than 6 times.

TABLE 2 Advice and education offered by respondents.

Advice and education offered	Count	Percentage
Education about OA	108	98%
Oral advice on self-management	93	85%
Written advice on self-management	64	58%
Advice about relative rest and/or pacing	91	83%
Advice around activity modification	102	93%
Advice around pain relief	94	85%
Advice about work	95	86%
Advice around home exercise	105	95%
Other	7	6%

3.5 | Would any of your prior recommendations change if the patient were retired/not working?

65 (59%) respondents stated that their recommendations would not change if the patient was retired or not working. 45/110 (41%) respondents stated that their recommendations would change and all highlighted that they would no longer include advice around work and workplace adaptations/modifications. 5/110 (5%) respondents stated that they may be more inclined to consider an onward referral for joint replacement surgery if the patient was not working.

3.6 | Would any of your prior recommendations change if the patient were obese?

41/110 (37%) respondents would not change their recommendations if the patient was obese. 55/110 (50%) said they would discuss weight and provide advice about weight reduction; 10/110 (9%) would discuss the effect of being overweight on systemic inflammation. 13/110 (12%) would encourage increased general exercise for overall health and fitness, with 1/110 (1%) stating they would be less likely to recommend surgical intervention.

3.7 | Would any of your prior recommendations change if the patient were not overweight/obese?

63/110 (57%) respondents stated that their recommendations would not change. 50/110 (45%) respondents stated that they would no longer discuss weight management, with 17/110 (15%) respondents stating that they would discuss the importance of maintaining a healthy weight on overall health.

3.8 | Would any of your prior recommendations change if the patient had a treatment preference for physiotherapy?

47/110 (43%) respondents stated that a preference for physiotherapy would not change their prior recommendations. 63/110 (57%) respondents would change their recommendations, with 57/110 (52%) indicating they would undertake a shared decision-making process with the patient, 4/110 (4%) would now refer for physiotherapy, 1/110 (1%) would no longer refer for surgery and 1/110 (1%) would no longer consider an injection.

3.9 | Would any of your prior recommendations change if the patient had a treatment preference for corticosteroid injection?

19/110 (17%) respondents indicated that preference for a steroid injection would not change their prior recommendations. 57/110

(52%) respondents stated that they would discuss a steroid injection and 25/110 (23%) respondents indicated that they would discuss a steroid injection as part of a shared decision-making conversation. 3/110 (3%) respondents would now refer on for a steroid injection and 6/110 (5%) would not recommend a steroid injection for this patient at this time.

3.10 | Would any of your prior recommendations change if the patient had a treatment preference for surgical opinion?

18/110 (16%) respondents stated that preference for a surgical opinion would not change their recommendations. 20/110 (18%) respondents indicated that they would refer this patient to orthopaedic services to discuss surgery; however, 22/110 (20%) respondents stated that they would discuss why surgery was not indicated now. 50/110 (45%) respondents indicated that they would discuss surgery as part of a shared decision-making process and would be guided by the outcome.

3.11 | Would any of your prior recommendations change if the patient were diabetic?

33/110 (30%) respondents indicated that they would not change their recommendations if the patient was diabetic. The remaining 77/110 (70%) respondents indicated that they would have discussions around diabetic control, leading a healthy lifestyle and the increased risk of complications if considering steroid injections and/or surgery. 12/110 (11%) respondents also mentioned that they would want to rule out a frozen shoulder, although they did not mention how they would do this.

3.12 | Would any of your prior recommendations change if the patient had coronary artery disease?

55/110 (50%) respondents said that this would not change their prior recommendations. 22/110 (20%) respondents said they would be less likely to refer on for a surgical opinion and would discuss the increased risk of anaesthesia and surgical procedures. 30/110 (27%) respondents said they would include more general lifestyle advice within their consultation, including exercises, weight management and potential signposting to appropriate services; 3/110 (3%) responded "Yes" but did not provide more detail.

3.13 | Would any of your prior recommendations change if the patient had a degenerative cuff tear?

32/110 (29%) respondents indicated that the presence of a degenerative cuff tear would not change their prior recommendations.

26/110 (24%) respondents indicated that they would include exercises aimed at anterior deltoid function in their recommendations. 24/110 (22%) respondents indicated that they would either discuss a referral to an orthopaedic surgeon with the patient or would refer at this point. The final 28/110 (25%) respondents indicated that they would want more information either in the form of imaging or patient history to inform the possibility of surgical management.

4 | DISCUSSION

The aim of this survey was to investigate the current treatment recommendations by physiotherapists in the UK for people with shoulder OA.

This survey identified that most participants (95%) would expect to assess patients with shoulder OA in a face-to-face setting and that 81% of respondents would expect to see the patient between 2 and 4 times. The majority of respondents offered advice and education (98%), weight management (72%) exercises to increase range of movement (75%) and strength (92%) along with paracetamol (64%) to the patient described in the clinical vignette.

The majority of respondents would change their recommendations if the patient were obese (63%), had a treatment preference for physiotherapy (57%), had a treatment preference for an injection (83%), had a treatment preference for surgery (84%), were diabetic (70%), or had a degenerative rotator cuff tear (71%). However, the majority of respondents would not change their prior recommendations if the patient were retired or not working (59%) and were not obese (57%). In the presence of coronary artery disease, half of the respondents (50%) would change their prior recommendations.

Our findings align with the NICE guidelines for the management of OA, which recommend exercise and education as the core interventions, along with weight management where relevant (NICE, 2022). Our findings do however demonstrate some discordance with the NICE guidelines as paracetamol should not be routinely offered to patients; despite this, 64% of respondents would recommend paracetamol. Intra-articular corticosteroid injections are also recommended for short term relief when other pharmacological treatments are ineffective or unsuitable, or to support therapeutic exercises; despite this, 43% of respondents would still consider this intervention at an initial consultation.

The responses to this survey demonstrate a varying response to medical complexity, with 70% of respondents prepared to discuss the importance of diabetic control and increased risk of complications, but only 50% reporting their initial advice would change if the patient had coronary artery disease.

Most respondents (71%) would change their initial recommendations if the patient described, were known to have a degenerative rotator cuff tear. 24% reported that they would include some form of deltoid strengthening programme. A proposed rationale for this could be to promote compensation by the deltoid to prevent superior humeral head migration by compressing it against the glenoid (Levy, 2018). 22% of respondents would discuss surgery with this patient, but the reasons behind this were not explored. 25% of

respondents reported that they would require more information about the rotator cuff tear to inform their management.

5 | LIMITATIONS

The sample size for this study is comparable to other similar surveys aiming to investigate physiotherapy practice related to specific shoulder conditions. However, the population of HCPC registered physiotherapists who manage people with shoulder OA is not known. The survey was shared via social media and the author's professional networks. This method of sampling will have excluded eligible physiotherapists who do not have access to either of these means. 65% of respondents were working in the NHS at band 7 or higher and over half (51%) had 16 years post qualification experience or more. All these factors may impact on the generalisability of these findings.

6 | CONCLUSION

This survey suggests that current treatment recommendations by a physiotherapist are largely in line with guideline-based care, and respondents report that they recognise the potential effect of some co-morbidities. Whether this guideline-based care is acceptable to patients with shoulder OA or whether it is optimal in terms of clinical effectiveness remains unknown due to the paucity of research. This survey will help to guide future research planned within this field.

AUTHOR CONTRIBUTIONS

Stacey Lalande, with Maria Moffatt and Chris Littlewood, developed and constructed the survey tool. All authors facilitated the distribution of the survey via their clinical academic networks. Stacey Lalande undertook the data analysis and drafted the manuscript. All authors reviewed and approved the final version.

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CONFLICT OF INTEREST STATEMENT

We declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Requests for access to the anonymous data set can be sent via email to the corresponding author.

ETHICS STATEMENT

This survey was reviewed and approved by the Airedale NHS Foundation trust Research and Innovation team on 18th March 2024 and was not deemed to need formal ethical approval.

ORCID

Stacey Lalande  <https://orcid.org/0000-0002-1414-0907>

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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