SHOULDER PAIN

Diagnosis, Treatment and Referral Guidelines for Primary, Community and Intermediate Care

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These care pathway guidelines for the shoulder have been written in collaboration with the NHS Evidence Based Interventions (EBI) programme. The EBI programme is a partnership between the Academy of Medical Royal Colleges, NHS Clinical Commissioners, the National Institute for Health and Care Excellence, as well as NHS England and Improvement

This is a summary document of the published BESS/BOA Patient Care Pathways series. These shoulder guidelines align with the new NHS England primary and community musculoskeletal adult services restoration principles and align with the new NHS England Evidence Based Interventions (EBI) Programme on shoulder imaging and injections. They also support the NICE 2017 Clinical Knowledge Summary for Shoulder Pain Management.

BESS/BOA Patient Care Pathways cover common shoulder conditions seen in primary, community and intermediate care (see Full BESS PCPs). They are evidence and consensus based best practice recommendations aimed at standardising treatment and referral pathways to ensure equal access for all and to drive quality improvement to achieve the best possible outcomes for UK patients.

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A commitment to shared decision making and an awareness of shoulder RED Flags for urgent referral are highly important messages common to all the BESS patient care pathways (PCPs).

Shared Decision Making

The General Medical Council's 'Good Medical Practice duties of a doctor' guide clearly states in the section on working in partnership with patients that doctors' should:

- Listen to patients and respond to their concerns and preferences.
- Give patients the information they want or need in a way they can understand.
- Respect patients' right to reach decisions with the doctor about their treatment and care.
- Support patients in caring for themselves to improve and maintain their health.

This can only be achieved by direct consultation between the patient and their treating clinician. Decisions about treatment taken without such direct consultation between patient and treating clinician are not appropriate, as they do not adhere to principles of good medical practice.

Urgent Red Flag referrals for the Shoulder

Acute severe shoulder pain needs proper and competent diagnosis. Any shoulder 'Red Flags' identified during primary, community and intermediate care assessment need urgent secondary care referral.

- A suspected infected joint needs same day emergency referral.
- An unreduced traumatic shoulder dislocation needs same day emergency referral.
- Suspected tumour and malignancy will need urgent referral following the local two-week cancer referral pathway.
- An acute cuff tear as a result of a traumatic event needs urgent referral and ideally should be seen in the next available outpatient clinic.

While acute calcific tendinopathy is not a red flag, it is severely painful, often mimicking malignant pain and usually necessitates an early secondary care referral for more interventional treatment. It should also be noted that patients with shoulder pain in which the symptoms and signs suggest a more systemic inflammatory joint disease or polymyalgia rheumatica, should be considered as a 'rheumatological red flag'. Any new inflammatory oligo or polyarthritis, with symptoms of inflammation in several joints, should be referred urgently (following local rheumatology referral pathways), as time is of the essence with these diseases and a prompt diagnosis with early commencement of disease modifying drugs where appropriate is essential.

Contents – Shoulder Conditions

Summary guidelines for each of these conditions is now presented with links to the full guidelines which include the entire patient pathway.

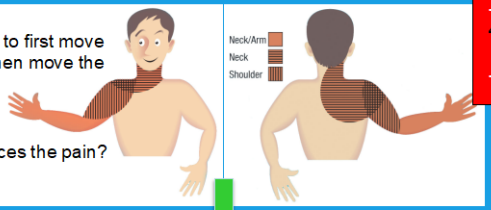
Diagnosis of Shoulder problems in Primary Care:

Guidelines on treatment and referral

Red Flags = Urgent Referral
1. Trauma, pain and weakness - ? Acute cuff tear
2. Any mass or swelling - ? Tumour
3. Red skin, fever or systemically unwell - ? Infection
4. Trauma / epileptic fit /electric shock leading to loss of rotation and abnormal shape
-? Unreduced dislocation

Is it Neck or Shoulder ?

- Ask the patient to first move the neck and then move the shoulder.
- Which reproduces the pain?



	Primary Care	Refer to Shoulder Clinic
Neck • Follow local spinal service guidelines		
Shoulder History of Instability? • Does the shoulder ever partly or completely come out of joint? • Is your patient worried that their shoulder may dislocate during sport or on certain activities? — **Yes**	**Instability** Common age 10 - 35 yrs • Physio if Atraumatic	**Refer** → **Instability** • Traumatic dislocation • Ongoing symptoms • Atraumatic with failed physio
No → • Is the pain localised to the AC joint and associated with tenderness? • Is there high arc pain. • Is there a positive cross arm test. — **Yes**	**Acromioclavicular Joint Disease** Common age >30 yrs • Rest/NSAIDS/analgesics • Steroid injection • Physio • X-ray if no improvement	**Refer** → **Acromioclavicular Joint Disease** • Refer if transient or no response to injection and physio.
No → • Is there reduced **passive** external rotation? — **Yes**	**Glenohumeral Joint** Frozen shoulder Common age 35-65 years Arthritis Common age >60 years • X-ray – to differentiate. • Rest • NSAIDS/analgesics. • Patient information • Cortisone injection	**Refer** → **Glenohumeral Joint** • If frozen shoulder with normal x-ray – refer if atypical and/or severe functional limitation. • Refer if arthritis on x-ray and poor response to analgesics and injection.
No → • Is there a painful arc of abduction? • Is there pain on abduction with the thumb down, worse against resistance? N.B. A history of trauma with loss of abduction in a younger patient = Red Flag 1 — **Yes**	**Rotator Cuff Tendinopathy** Common age 35-75 years • Rest / NSAIDS / analgesics • Subacromial injection • Physiotherapy N.B. Although an ultrasound or MRI scan can be of value, some people over 65 years have asymptomatic cuff tears.	**Refer** → **Rotator Cuff Tendinopathy** • Transient or no response to injection and physiotherapy N.B. Massive cuff tears in patients > 75 years are generally not repairable.
No → Other cause of Neck or Arm pain		

The British Elbow and Shoulder Society supports
Patient Care Pathways for the Shoulder

Subacromial Shoulder Pain

(Link to Full Guidelines)

Definition

Subacromial shoulder pain originates from the subacromial space of the shoulder and is mainly caused by rotator cuff tendinopathy. There are a number terms that describe the same condition (supraspinatus tendinopathy, tendinitis, bursitis, impingement).

Primary Care/Community Triage and Intermediate Services.

Diagnosis

- Diagnosis is based on History and Examination
- Making the correct diagnosis will ensure an efficient and optimum treatment experience for the patient. Primary, community and intermediate care clinicians can work through the Shoulder Diagnosis Poster (click to download diagnosis poster)
- The poster emphasises the importance of passive external rotation in differentiating between subacromial pain and other causes of shoulder pain when making a diagnosis.
- Features of importance include patient expectation, hand dominance, occupation and level of activity or sports, location, radiation and onset of pain, duration of symptoms, exacerbating and relieving factors, history of trauma, involvement of other joints, systemic illnesses and comorbidities and any Red Flags.
- Shoulder X-rays with two views (true anteroposterior view and axillary view) in primary and intermediate care can be useful in patients not improving with conservative treatment and are recommended.
- Imaging with Ultrasound or MRI is rarely indicated in primary, community and intermediate care. The NHS England EBI programme now **recommends against** shoulder ultrasound or MRI unless an agreed specific treatment pathway exists with the local specialist shoulder service.

Treatment in Primary Care/Community Triage and Intermediate Services

- The NHS England EBI programme recommends treatment to follow the BESS/BOA patient care pathway on subacromial pain.
- Conservative treatment should, in general, include rest, exercise, physiotherapy, analgesics.
- Physiotherapy rehabilitation is usually for 6 weeks initially unless physiotherapists identify a reason for earlier referral to secondary care. If there is patient improvement in the first 6 weeks of physiotherapy, then at least another 6 weeks therapy is justified.
- Online patient information and shoulder rehabilitation videos are available from the BESS website (Patient rehab videos).
- No more than 2 subacromial corticosteroid injections should be given (evidence suggests repeated frequent corticosteroid injections may cause tendon damage).
- Image guided subacromial injections should **NOT** be used. Trial evidence has now demonstrated that image guided injections offer no added benefit. The NHS England EBI Programme now **recommends against** image guided subacromial injection.

Referral to Secondary Care

- Failure of these primary care and community treatments will prompt secondary care hospital referral for specialist imaging, assessment and treatment.

References

1. *NICE Clinical Knowledge Summary - NICE CKS Rotator Cuff Disorders*
2. *BESS/BOA Patient Care Pathway - Subacromial Pain PCP*
3. *NHS England EBI Programme*
4. *NHS England primary and community musculoskeletal adult services restoration principles*

Frozen Shoulder

(Link to Full Guidelines)

Definition

Frozen shoulder is an extremely painful and debilitating condition leading to stiffness and disability. It typically occurs in the fifth and sixth decades of life affecting individuals of working age. The disability resulting from this condition has considerable economic impact on affected individuals and society.

Primary Care/Community Triage and Intermediate Services.

Diagnosis

- Diagnosis is based on History and Examination
- Making the correct diagnosis will ensure an efficient and optimum treatment experience for the patient. Primary, community and intermediate care clinicians can work through the Shoulder Diagnosis Poster (click to download diagnosis poster).
- The poster emphasises the importance of assessing passive external rotation in making a diagnosis of Frozen Shoulder.
- Features of importance include associated conditions like diabetes and cardiovascular disease, patient expectation, hand dominance, occupation, level of activity or sports, location, radiation and onset of pain, duration of symptoms, exacerbating and relieving factors, history of trauma, involvement of other joints, systemic illnesses, and any Red Flags.
- Normal X-rays (true anteroposterior view and axillary view are recommended) to rule out bony mechanical causes such as arthritis, avascular necrosis or dislocation, is critical in confirming a correct diagnosis of Frozen shoulder.
- Imaging with Ultrasound or MRI is not indicated in primary, community and intermediate care. The NHS England EBI programme now **recommends against** shoulder ultrasound or MRI unless an agreed specific treatment pathway exists with the local specialist shoulder service.

Treatment in Primary Care/Community Triage and Intermediate Services

- Treatment depends on the phase of the disease, severity of symptoms and degree of restriction of work, domestic and leisure activities. The aims of treatment are pain relief, improving range of motion, reducing duration of symptoms, return to normal activities
- This is a painful and debilitating condition, where the pain is often severe, mimicking malignant disease (e.g. night pain) **so beware of red flags**. Treatment should be tailored to individual patient needs depending on response and severity of symptoms.
- The following interventions are suitable for primary, community and intermediate care: analgesics/nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroid injection (intra-articular), domestic exercise programme, supervised physiotherapy/manual therapy.
- The NHS England EBI programme recommends image guided injections only be used if part of an agreed specific treatment pathway with the local specialist shoulder service.
- A proportion of patients with frozen shoulder will respond to conservative treatment.
- Physiotherapy rehabilitation is usually for 6 weeks unless patients are unable to tolerate, or physiotherapists identify a reason for earlier referral to secondary care. If there is patient improvement in the first 6 weeks of physiotherapy, then a further 6 weeks of therapy is justified.

Referral to Secondary Care

- Refer if symptoms of up to 3 months with failure of conservative treatment measures.
- Refer if severe symptoms necessitate; it is not appropriate to persist with ineffective treatments and delay referral of patients who experience severe pain and restriction.

References

1. *NICE Clinical Knowledge Summary - Frozen Shoulder CKS*
2. *BESS/BOA Patient Care Pathway - Frozen Shoulder PCP*
3. *NHS England EBI Programme*
4. *NHS England primary and community musculoskeletal adult services restoration principles*

Glenohumeral (Shoulder) Arthritis

(Link to Full Guidelines)

Definition

Degenerative shoulder (glenohumeral) osteoarthritis is characterized by degeneration of articular cartilage and subchondral bone with narrowing of the glenohumeral joint. It causes significant pain, functional limitation and disability with an estimated prevalence of between 4% and 26%.

Primary Care/Community Triage and Intermediate Services.

Diagnosis

- Diagnosis is based on History and Examination.
- Making the correct diagnosis will ensure an efficient and optimum treatment experience for the patient. Primary, community and intermediate care clinicians can work through the Shoulder Diagnosis Poster (click to download diagnosis poster).
- This is a painful and debilitating condition, where the pain is often severe. The onset of stiffness is usually progressive over many years and will cause significant functional deficit, typically presenting in patients over 60 years of age.
- Features of importance are hand dominance, occupation, level of activity, location and onset of pain, duration of symptoms, global reduction in range of motion (especially marked loss of passive external rotation), and history of multiple joint involvement or systemic manifestations.
- Plain radiographs (x-rays) of the shoulder are essential for confirming the diagnosis especially with a history of previous trauma. True anteroposterior view (in scapular plane) and axillary view are recommended.
- Imaging with Ultrasound or MRI is not indicated in primary, community and intermediate care. The NHS England EBI programme now **recommends against** shoulder ultrasound or MRI unless an agreed specific treatment pathway exists with the local specialist shoulder service.

Treatment in Primary Care/Community Triage and Intermediate Services

- Treatment depends on the severity of symptoms, degree of restriction of work, domestic and leisure activities. The aims of treatment is pain relief, improving range of motion and return to normal activities
- Treatment should be tailored to individual patients' needs depending on response and severity of symptoms.
- The following interventions are suitable for primary, community and intermediate care: analgesics/non-steroidal anti-inflammatory drugs (NSAIDs), intra-articular injection, acupuncture, physical therapy.
- The NHS England EBI programme recommends image guided injections only be used if part of an agreed specific treatment pathway with the local specialist shoulder service.
- Most patients with established osteoarthritis will respond poorly to conservative treatment. The most frequent indications for invasive treatments are pain and persistent and severe functional restrictions that are resistant to conservative measures.

Referral to Secondary Care

- Refer if there is doubt about the diagnosis.
- Refer if there is a failure of conservative treatment and patient wishes to consider shoulder replacement surgery. There are limited other surgical options.

References

1. *NICE Clinical Knowledge Summary - NICE CKS Glenohumeral arthritis*
2. *BESS/BOA Patient Care Pathway - Glenohumeral OA PCP*
3. *NHS England EBI Programme*
4. *NHS England primary and community musculoskeletal adult services restoration principles*

Traumatic Anterior Instability

(Link to Full Guideline)

Definition

Anterior traumatic shoulder instability can be defined as excessive anterior translation of the humeral head on the glenoid fossa caused primarily by a traumatic event. This results in symptoms including pain, discomfort, subluxation or dislocation.

Risk of recurrence

The risk of recurrent dislocation with this type of instability is inversely proportional to the age of the patient at the time of first dislocation. Therefore, the younger the patient, the more likely the risk of recurrence. Almost 90% of recurrent dislocations occur within 2 years of primary dislocation. Males under the age of 20 years have approximately 72% chance of recurrent instability.

Primary Care/Community Triage and Intermediate Services.

Diagnosis

- Diagnosis is based on History and Examination.
- Making the correct diagnosis will ensure an efficient and optimum treatment experience for the patient. Primary, community and intermediate care clinicians can work through the Shoulder Diagnosis Poster (click to download diagnosis poster).
- Features of importance are, patient expectation, hand dominance, occupation and level of activity or sports, age at primary dislocation, sex of patient, symptoms of on-going instability, number of dislocations, systemic illnesses and comorbidities.
- While in younger patients there tends to be a glenoid labral injury, older patients can suffer an acute rotator cuff tear and an awareness of this is very important and should not be missed.
- Although shoulder X-rays (true anteroposterior view and axillary view are recommended) in primary care can be useful in patients not improving with conservative treatment, imaging with Ultrasound or MRI is not indicated in primary, community and intermediate care. The NHS England EBI programme now **recommends against** shoulder ultrasound or MRI unless an agreed specific treatment pathway exists with the local specialist shoulder service.

Treatment in Primary Care/Community Triage and Intermediate Services

- While most patients will be managed following an acute traumatic anterior dislocation through the accident services and fracture clinic in secondary care, this is not always the case. Consider referral to the fracture clinic if problems exist after a recent acute traumatic injury especially if any red flags present.
- Otherwise adopt shared decision-making and define treatment goals, taking into account personal circumstances.
- Conservative treatment following dislocation should focus on early mobilization. The risk of recurrence is not reduced with prolonged immobilization of greater than 1 week.
- Physiotherapy rehabilitation is usually for 4 weeks to 12 weeks depending on patient response unless patients are unable to tolerate the exercises, or physiotherapists identify a reason for earlier referral to secondary care.

Referral to Secondary Care

- Refer to secondary care if conservative treatments fail to improve instability or dislocation symptoms.
- Refer to secondary care if acute rotator cuff tear (Red Flag) suspected
- Refer to secondary care if patient remains symptomatic and is requesting surgery

References

1. *NICE Clinical Knowledge Summary - NICE CKS Instability Disorders*
2. *BESS/BOA Patient Care Pathway - Traumatic Instability PCP*
3. *NHS England EBI Programme*
4. *NHS England primary and community musculoskeletal adult services restoration principles*

Instability without trauma (Atraumatic Instability)

(Link to Full Guideline)

Definition

Atraumatic shoulder instability is best defined as abnormal motion or position of the shoulder that leads to pain, subluxations, dislocations and functional impairment, but importantly it happens without any history of a significant preceding injury

Background

There are multiple causes of atraumatic shoulder instability. The majority of patients will have a combination of underlying laxity with an associated loss of muscle control. There is, however, a wide spectrum of patients with this problem and while successful outcomes can be achieved following non-operative treatment in 50–80% of cases, some patients often require a more multidisciplinary team approach with consideration of psychosocial factors and other barriers to recovery if they are to be treated successfully.

Primary Care/Community Triage and Intermediate Services.

Diagnosis

- Diagnosis is based on History and Examination.
- Making the correct diagnosis will ensure an efficient and optimum treatment experience for the patient. Primary, community and intermediate care clinicians can work through the Shoulder Diagnosis Poster (click to download diagnosis poster).
- Atraumatic shoulder instability predominantly affects young patients under the age of 25.
- This group more commonly experience subluxations of the shoulder rather than dislocations
- Some will initially voluntarily displace their shoulder, often termed a 'party trick', however this can develop into an uncontrolled event
- Some will have significant functional disruption with associated pain and muscle spasms that may make relocation difficult, leading to frequent attendances to the A&E.
- MRI or other specialist imaging is only appropriate in the secondary care setting after specialist assessment. The NHS England EBI programme now **recommends against** shoulder ultrasound or MRI unless an agreed specific treatment pathway exists with the local specialist shoulder service.

Treatment in Primary Care/Community Triage and Intermediate Services

- Patients presenting with symptoms of instability as described above with no history of trauma should initially be referred in primary care for physiotherapy.
- It is important to reassure such patients early on that the vast majority of patients will respond to treatment but that symptoms may take up to six months to resolve.
- Corticosteroid injections should not be used for pain relief.
- Physiotherapy should include education, reassurance and appropriate exercise prescription.

Referral to Secondary Care

- Refer to secondary care if community physiotherapy fails to improve instability or dislocation symptoms.
- A subgroup of patients are best served by early referral to a tertiary shoulder unit with experience in managing these complex patients. Look out for frequent attendance at A&E for relocation, persistent displacement or shoulder dislocation/ subluxation. If under 18 years of age, absence from school (>20%) or work (>3 months).

References

1. *NICE Clinical Knowledge Summary - NICE CKS Instability Disorders*
2. *BESS/BOA Patient Care Pathway - Atraumatic Instability PCP*
3. *NHS England EBI Programme*
4. *NHS England primary and community musculoskeletal adult services restoration principles*

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