







2014

Commissioning guide:

Subacromial Shoulder Pain



Sponsoring Organisation: British Elbow & Shoulder Society (BESS), British Orthopaedic Association (BOA),

Royal College of Surgeons for England (RCSEng)

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Introduction

Subacromial shoulder pain is felt on the top and outer side of the shoulder. It is worsened by overhead activity and can cause night pain but patients usually have full passive range of movement of the glenohumeral joint.

The pain comes from the subacromial space of the shoulder, which contains the rotator cuff tendons and the subacromial bursa, and NOT from the glenohumeral joint.

It is usually caused by rotator cuff tendinopathy and is commonly called 'shoulder impingement'. Impingement occurs between the undersurface of the acromion and the rotator cuff tendons. These tendons can be either intact or torn. Tendons can tear acutely due to injury, or due to degeneration. A tear that does not extend all the way through the tendon is called a partial thickness tear¹.

The prevalence of shoulder complaints in the UK is around 14%, with 1–2% of adults consulting their general practitioner annually with new shoulder pain 2 . Shoulder problems account for 2.4% of all general practitioner consultations in the UK 3 .

Subacromial shoulder pain from rotator cuff pathology, including, tendinopathy, calcific tendinitis, and rotator cuff tears accounts for up to 70% of all new shoulder pain problems⁴.

Painful shoulders pose a substantial socioeconomic burden. This can impair capacity to work, causing time off, and affect performance of household tasks⁵⁻⁶.

The treatment aim for subacromial pain is to 'improve pain and function'. Success is defined individually with patients to include the degree of improvement needed, and the level of residual symptoms that might be acceptable. Outcome depends on starting level of symptoms, patient demographics and expectations, as well as personal circumstances.

The effectiveness of open or arthroscopic rotator cuff repair surgery⁷⁻¹⁰ is currently being assessed by members of the British Elbow and Shoulder Society through a NIHR funded national multicentre surgical trial (UKUFF¹¹) reporting in 2015.

This pathway is a guide which can be modified according to the needs of the local health economy.









1 High Value Care Pathway for Subacromial Shoulder Pain

1.1 Primary Care

Assessment:

- Diagnosis is based on History and Examination
- Correct early diagnosis helps streamline patient care, avoiding delays and incorrect treatment advice
- Primary Care and intermediate clinicians can work through the Algorithm (see Appendix 1), if they arrive at the section highlighted in yellow, then a diagnosis of rotator cuff tendinopathy/impingement is highly likely.
- Check for RED FLAGS
- Ultrasound and MRI are rarely needed to initially manage this disorder but radiographs are helpful in primary care

Emergency referral - same day:

- Acutely painful red warm joint—e.g. suspected infected joint
- Trauma leading to loss of rotation and abnormal shape unreduced shoulder dislocation

Urgent referral (<2/52) to secondary care:

- Shoulder mass or swelling suspected malignancy
- Sudden loss of ability to actively raise the arm (with or without trauma) acute cuff tear
- New symptoms of inflammation in several joints systemic inflammatory joint disease (rheumatology referral)

For management of rotator cuff tendinopathy/impingement¹² the following measures should be tried

- Education, rest, NSAIDs, simple analgesia
- Appropriate structured physiotherapy with goal setting for 6 weeks to include postural correction and motor control retraining, stretching, strengthening of the rotator cuff and scapula muscles and manual therapy¹³
- Do not consider further physiotherapy unless there is improvement during the first 6 weeks of treatment
- Injection of corticosteroid¹⁴⁻¹⁶ into the subacromial space. Normally, only one injection should be considered as repeated injections may cause tendon damage¹⁷









 A second injection is occasionally appropriate after 6 weeks, but should only be administered in patients who received good initial benefit from their first injection and who need further pain relief to facilitate their structured physiotherapy treatment

Referral to secondary care:

- Use shared decision making
- Persistent pain and disability not responding to at least 6 weeks of non-surgical treatment, unless red flag identified (see above and Appendix 1)
- Consider optimisation of modifiable systemic or local risk factors that may delay surgical treatment prior to referral (e.g. investigation and treatment of diabetes)

1.2 Intermediate Care¹

This may be provided by certified healthcare professionals in a number of different settings including Integrated Clinical Assessment and Treatment Services (ICATS) and can provide: assessment, non-surgical treatment programmes, referral to secondary care and postoperative care.

They should form part of an integrated care programme with close links to primary and secondary care using protocols agreed with the secondary care provider.

Assessment

- Assessment identical to that in primary care
- Ensure the correct diagnosis has been made
- Re-assess for urgent referral to secondary care

Management of rotator cuff tendinopathy/impingement

- Treatment should only be introduced if it did not take place in primary care and the likelihood of helping patients is high. If not refer to secondary care to avoid introducing delay in diagnosis and treatment
- If patients have improved with 6 weeks of physiotherapy in primary care, consider a second 6 weeks of evidence based physiotherapy to include postural correction and motor control retraining, stretching, strengthening of the rotator cuff and scapular muscles and manual therapy¹³
- Injection of corticosteroids into the subacromial space and/or the acromio-clavicular joint if indicated and ONLY if not already given in primary care

¹Those services that do not require the resources of a general hospital, but are beyond the scope of the traditional primary care team (René JFM, Marcel GMOR, Stuart GP, et al. What is intermediate care? BMJ 2004;329(7462):360-61)









Refer to secondary care provider

- Use shared decision making
- Persistent pain and functional impairment not responding to at least 6 weeks of evidence based nonsurgical treatments with goal setting; this timeline should include any treatment received in primary care
- Patients who are medically unfit for surgery or have decided not to have surgery should be offered an appropriate care package

1.3 Secondary Care

Assessment

- Reassess for Red Flags
- History location, radiation and onset of pain, duration of symptoms, history of trauma, exacerbating and relieving factors, involvement of other joints, systemic illness, co morbidities, occupation, hand dominance, level of activity/ sports, patient expectation
- Examination
- Radiographs (if not performed in primary care) and, if appropriate, US/ MRI to assess the integrity and state of rotator cuff muscles and tendons.

Surgery is indicated for persistent or significant pain and loss of function despite appropriate non-operative treatment.

A shared decision making model should be adopted, defining treatment goals and taking into account personal circumstances.

Patients should be informed that the decision to have surgery can be a dynamic process and a decision to not undergo surgery does not exclude them from having surgery at a future time point.

Ensure a multidisciplinary approach to care with availability of trained shoulder physiotherapists and shoulder surgeons.

Some patients who need surgery are unfit for anaesthesia or choose not to have surgery. A complex care package should be considered for these patients. This usually includes further non-operative measures such as subacromial injections, suprascapular nerve block and ablation, specialist physiotherapy, and pain clinic referral.









Acromioplasty

Arthroscopic subacromial decompression (acromioplasty) involves excision of the bony spur on the antero-inferior surface of the acromion, the bursal tissue on the under surface of the acromion and release of the coraco-acromial ligament. The procedure aims to increase the volume of the subacromial space thereby reducing the painful mechanical irritation of the rotator cuff tendons¹⁸⁻²¹. It should be considered for patients with:

- Impingement pain in the absence of a rotator cuff tear
- Impingement pain with an irreparable rotator cuff tear
- Impingement pain with a cuff tear that the patient chooses not to have repaired
- Failure of appropriate conservative management

It is mainly conducted as a day case procedure as long as more extensive surgery is not needed and there are no significant patient morbidities or social reasons to admit the patient overnight.

In some cases the acromio-clavicular joint (ACJ) contributes to subacromial pain and may need an additional procedure of excision arthroplasty of the ACJ (open or arthroscopic). This decision should be made by the surgeon based on the clinical findings and after correlation with imaging.

Rotator cuff repair

A rotator cuff repair operation aims to reattach the cuff tendons to bone. Two approaches are available for surgical repair²²⁻²⁴. Open surgery involves the rotator cuff being repaired under direct vision through an incision in the skin. Arthroscopic surgery involves the repair being performed through arthroscopic portals into the shoulder. If indicated a subacromial decompression may need to be performed in association with the tendon repair. Rotator cuff repair should be considered in patients with:

- Acute (traumatic or degenerative) rotator cuff tear
- Persistent subacromial shoulder pain and weakness with ultrasound or MRI findings indicating a full thickness rotator cuff tear after adequate and appropriate conservative treatment²⁵

The relative value of surgical repair compared to debridement surgery and conservative treatment for large and massive irreparable tears will be provided by studies such as UKUFF¹¹

Postoperative care²⁶:

- Up to 3 postoperative outpatient appointments, but more after a rotator cuff repair
- Up to 6 sessions of appropriate physiotherapy after acromioplasty with goal setting
- Up to 12 months of structured evidence based physiotherapy after rotator cuff repair overseen by MDT









1.4Secondary Care: Specialised surgery

- Some patient may have unusual or rare presentations or require revision surgery and are sometimes referred onto specialist centres for a tertiary opinion.
- Surgery may then take place in the specialist centre (and can include tendon transfers) or patients are referred back locally for any ongoing treatment or surgery.

2 Procedures Explorer for Subacromial Shoulder Pain

Procedure	OPCS4 codes
Subacromial Decompression for Impingement	Diagnosis Codes M75.1 M75.3 M75.4 M75.5
	Procedure Codes (OPCS 4.4) W08.2 (with Z68.2 –
	Acromion process of scapula) W84.4 (often used for
	Acromioclavicular joint decompression especially if used
	with Z81.2 – Acromioclavicular joint)
	Procedure Codes (OPCS 4.5) O29.1
	NB Y76.7 is added for arthroscopic approach to joint
Rotator Cuff Repair	Diagnosis Codes M75.1 M75.3 M75.4 M75.5
	Procedure codes (OPCS 4.4 and 4.5) T79.1 T79.3 T79.4
	T79.5 NB Y76.7 is added for arthroscopic approach to
	joint

3 Quality Dashboard for Subacromial Shoulder Pain

The quality dashboard provides an overview of activity commissioned by CCGs from the relevant pathways, and indicators of the quality of care provided by surgical units.

The quality dashboard is available via the Royal College of Surgeons website.

For the current dashboard indicators (see **Appendix 2**)

Measure	Definition	Data Source
Standardised activity rate	Activity rate standardised for age	HES/Quality Dashboard
	and sex	(Appendix 2)









Average length of stay	Total spell duration/total number of patients discharged	HES/Quality Dashboard (Appendix 2)
Day case rate	Number of patients admitted and discharged on the same day/total number of patients discharged	HES/Quality Dashboard (Appendix 2)
Short stay rate	Number of patients admitted and discharged within 48 hours/total number of patients discharged	HES/Quality Dashboard (Appendix 2)
7/30 day readmission rate	Number of patients readmitted as an emergency within 7/30 days of discharge/total number of patients discharged excludes cancer, dementia, mental health	HES/Quality Dashboard (Appendix 2)
Re-operations within 30 days/1 year	Number of patients re-operated during an emergency readmission within 30 days/ 1 year/total number of patients discharged	HES/Quality Dashboard (Appendix 2)
In hospital mortality rate	Number of patients who die while in hospital /total number of patients discharged	HES/Quality Dashboard (Appendix 2)

Areas for development of dashboard in future

Measure	Evidence Base	Data Source*
PROMs (Oxford Shoulder Score/ SPADI), pre-		
op and 12 months post surgery if national soft		
tissue registry is funded		

4 Levers for Implementation

4.1 Audit and Peer Review Measures

	Standard	Description	Data Specification (if required)
Initial care	Referral	Do not refer uncomplicated subacromial pain before a to conservative management	trial of









		Consider intermediate provider if no access to structured physiotherapy or subacromial injection
	Patient Information	Patients should be directed to appropriate information and support groups
Secondary Care		Publication of PROMs

4.2 Quality Specification/CQUIN (Commissioning for Quality and Innovation)

Measure	Description	Data specification (if required)
Length of Stay	Length of stay after acromioplasty/ rotator cuff repair	
Emergency readmission	Emergency readmission after acromioplasty/ rotator cuff repair (within 30 days)	
Revision surgery rate	Measures to be reported by each provider	

5 Directory

5.1 Patient Information for Subacromial Shoulder Pain

Name	Publisher	Link
Shoulder Pain	EMIS	www.patient.co.uk
Shoulder Pain	Arthritis Research UK	www.arthritisresearchuk.org

5.2 Clinician Information for Subacromial Shoulder Pain

Name	Publisher	Link
Shoulder Pain	Arthritis Research UK	www.arthritisresearchuk.org









BESS Patient Pathways for Subacromial Shoulder Pain	BESS	www.bess.org.uk
The UKUFF Rest then Exercise	NIHR/BESS	www.bess.org.uk
Programme		

6 Benefits and risks

The following table indicates the benefits and risks of implementing the guidance described in this document.

Consideration	Benefit	Risk
Patient outcome	Ensure access to effective conservative, non- surgical and surgical therapy	Prolonged treatment, poorer outcome with patients disabled and dependent, who are unable to work if of working age
Patient safety	Reduce chance of missing serious shoulder pathology Reduce delay in referral of appropriate patients	Missed acute tendon tears, malignancy, infection, dislocation
Patient experience	Improve access to patient information	Patients not taking charge of their care, dependence on primary and secondary care
Equity of access	Improve access to effective procedures	Withholding of access for financial reasons alone, irreversible changes in the muscle and joint leading to prolonged or permanent disability
Resource impact	Reduce unnecessary referral, investigation and intervention	Resource required to establish community specialist provider

7 Further information

7.1 Research Recommendations

- Impact of self-management and prevention strategies
- Health economic evaluation EQ 5D
- Clinical and cost effectiveness of corticosteroid injections for subacromial shoulder pain.









- Assess effectiveness of translation of results of UKUFF and CSAW trials
- Establish effectiveness of different Physiotherapy programs
- Await the research priorities outcome of the new 'James Lind Alliance Priority Setting Partnership for Surgery for Shoulder Problems' which will run in 2014/2015

7.2 Other Recommendations

 National Shoulder Registry (NSR) – consider supporting the British Elbow and Shoulder Society in developing a 'National Soft Tissue Shoulder Registry'

7.3 Evidence base

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7.4 Guide development group

A BOA commissioning guidance development group was established in 2012 to review and advise on the content of the commissioning guide. This group met three times, with additional interaction taking place via email and telephone conferences.

Name	Job Title/Role	Affiliation
Ro Kulkarni (Chair)	President of BESS Consultant Shoulder and Elbow Surgeon	BESS
Joe Dias	Chair, Musculoskeletal Commissioning Guidance Development Project; Consultant Orthopaedic Surgeon	ВОА
Jonathan Rees	Chair of BESS Research Committee Consultant Shoulder and Elbow Surgeon	BESS
Andrew Carr	Ex-President of BESS and Nuffield Professor of Orthopaedic Surgery	BESS









Chris Deighton	President BSR Consultant Rheumatologist	BSR
Vipul Patel	Consultant Shoulder and Elbow Surgeon	BODS
Federico Moscogiuri	Director	Arthritis and Musculoskeletal Alliance
Jo Gibson	Specialist Shoulder Physiotherapist	Physiotherapy
Tim Holt	General Practitioner Warwick	GP
Chris Newsome	Patient Representative	
Mark Worthing	Patient Representative	

The guideline group included a commissioner during the development of the document who was unable to continue in this role. Two further commissioners were involved in the final stages of the document and gave signoff on the final version. They were Richard Metcalfe from NHS Doncaster CCG and Tom Holme from NHS Milton Keynes CCG.

Information specialist support provided by Bazian, 10 Fitzroy Square, London, W1T 5HP

The BOA Guidance Development Group would also like to thank and acknowledge the preparatory work of the BESS Patient Pathways Working Group for Subacromial Shoulder Pain: Julie McBirnie, Peter Brownson, Cormac Kelly, Amar Rangan, Mike Thomas and Graham Tytherleigh-Strong.

7.5 Funding statement

The development of this commissioning guidance has been funded by the following sources:

- DH-RightCare funded the costs of the Guideline Development Group, the literature searches and provided staff support;
- The Royal College of Surgeons of England (RCSEng) and the British Orthopaedic Association (BOA) provided staff to support the guideline development and performed the quality assurance

7.6 Methods statement

The development of this guidance has followed a defined, NICE Accredited process. This included a systematic literature review, public consultation and the development of a Guidance Development Group which included those involved in commissioning, delivering, supporting and receiving surgical care as well as those who had









undergone treatment. An essential component of the process was to ensure that the guidance was subject to peer review by senior clinicians, commissioners and patient representatives. Details are available at this site: www.rcseng.ac.uk/providers-commissioners/docs/rcseng-ssa-commissioning-guidance-process-manual/at download/file

7.7 Conflicts of Interest Statement

Individuals involved in the development and formal peer review of commissioning guides are asked to complete a conflict of interest declaration. It is noted that declaring a conflict of interest does not imply that the individual has been influenced by his or her secondary interest, but this is intended to make interests (financial or otherwise) more transparent and to allow others to have knowledge of the interest. Mr Tim Wilton (Chair, BOA Professional Practice Committee; Consultant Orthopaedic Surgeon) has seen and approved these. All records are kept on file, and are available on request.



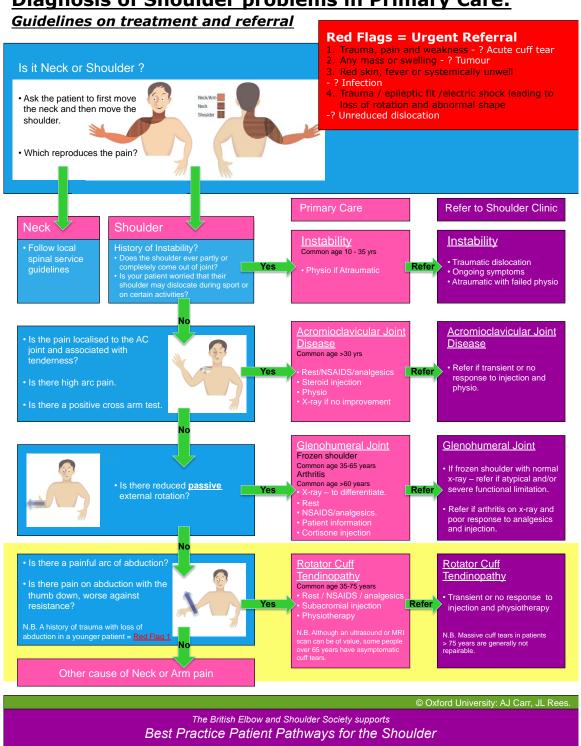






Appendix 1: Clinical diagnosis of Shoulder problems

Diagnosis of Shoulder problems in Primary Care:



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Appendix 2: Quality Observatory dashboard for commissioners

To support the commissioning guides the Quality Dashboards show information derived from Hospital Episode Statistics (HES) data. These dashboards show indicators for activity commissioned by CCGs across the relevant surgical pathways and provide an indication of the quality of care provided to patients.

The dashboards are supported by a metadata document to show how each indicator was derived.

http://rcs.methods.co.uk/dashboards.html













Rightcare Surgical Commissioning Dashboard: Orthopaedics

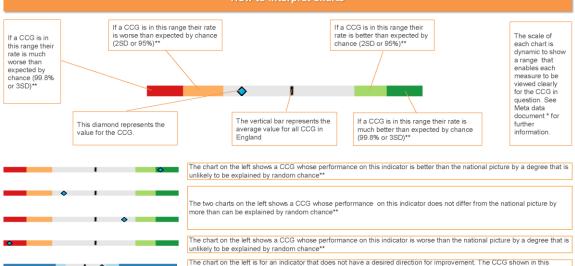
The Right Care Dashboard provides rates of Activity for CCGs for interventions identified as a priority by the surgical specialist association

These rates are directly standardised against the national population for Age and Sex

This dashboard supports the Painful Osteoarthritis of the Hip commissioning guidance document developed by the BOA working group with the RCSE.

SPC Chart displaying variance for each indicator** The mean value for all CCGs in England Period for which data Actual value for is displayed. In this report quarterly rolling Trend Intervention Name ictivity rate per 100,000 population (DSR) Y Q3 12 iverage Length of Stay (Days) Day Re-admission rate (%) RY Q3 12 Indicator name⁴ Re-operations within 30 Days (%) 0.40% Day case rate (%) RY Q3 12 In Hospital Mortality Rate (per 1,000 provider spe

available indicators will have a 'sparkline' showing the previous 8 data points. These are data points. These ar a condensed way to show variation and trend. The volume of change is not represented on this dashboard and the sparkline should be used to interpret directional change



* For a full description of each metric and metadata, please see technical guidance.

** These charts are constructed using statistical process control (SPC) principles and use control limits to indicate variation from the national mean. The display shows both two standard deviation (95%) control limits and three standard deviation (99.8%) control limits. Values within these limits (the light grey section) are said to display 'normal cause variation' in that variation from the mean can be considered to be random. Values outside these limits (in the light green or orange sections) are said to display 'special cause variation' at a two standard deviation level, and a cause other than random chance should be considered. Values outside these sections (in the dark green or red sections) also display 'special cause variation' but against a more stringent test.

example is within the expected range based on the national picture.

Variation at the two standard deviation level can be considered to raise an alert, and variation at the three standard deviation level to raise an alarm.









Example CCG

Subacromial Decompression for Impingement (Arthroscopic)

Metric	Period	Value	Mean	Chart	Trend
In Hospital Mortality Rate (per 1,000 discharges)	RY Q2 1314	0.00	0.00	♦	•••••
Age/Sex Standardised Activity per 100,000 population)	RY Q2 1314	35.13	35.99	9	\$101810-0-0-0
Average Length of Stay (Days)	RY Q2 1314	0.40	0.35	Þ	0-0-0r&r@r.0.0.0
7 Day Readmission Rate (%)	RY Q2 1314	0.00	0.40	\$	0-0-0-0-0-0
30 Day Readmission Rate (%)	RY Q2 1314	0.00	0.80	φI	0-0-0-0-0-0-0
30 Day Reoperation Rate (%)	RY Q2 1314	0.00	0.44	A	0-0-0-0-0-0
Daycase Rate (%)	RY Q2 1314	72.60	71.93	Þ	97.9.10.10.10.10.10.10.10.10.10.10.10.10.10.

Subacromial Decompression for Impingement (Open)

Metric	Period	Value	Mean	Chart	Trend
Age/Sex Standardised Activity (per 100,000 population)	RY Q2 1314	1.02	14.68	♦ 1	0-0-0-0-0-0
Average Length of Stay (Days)	RY Q2 1314	0.50	0.64	♦	••••••
7 Day Readmission Rate (%)	RY Q2 1314	0.00	0.12	♦	000000
30 Day Readmission Rate (%)	RY Q2 1314	0.00	0.54	♦	0-0-0-0-0
30 Day Reoperation Rate (%)	RY Q2 1314	0.00	0.46	♦	000000
Daycase Rate (%)	RY Q2 1314	50.00	54.38	♦	0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-
In Hospital Mortality Rate (per 1,000 discharges)	RY Q2 1314	0.00	0.00	>	•••••









Rotator Cuff Repair (Arthroscopic)

Rotator Cuff Repair	(Altillos)	opic			
Metric	Period	Value	Mean	Chart	Trend
Age/Sex Standardised Activity (per 100,000 population)	RY Q2 1314	49.74	11.99	 	0-0-0-0-0-0-0
Average Length of Stay (Days)	RY Q2 1314	0.46	0.53	♦	0-0-0-0-0-0-0
7 Day Readmission Rate (%)	RY Q2 1314	1.02	0.36	♦	0-0-0-0-0-0-0
30 Day Readmission Rate (%)	RY Q2 1314	1.02	0.69	∤	Q::0-0-0-0-0-0
30 Day Reoperation Rate (%)	RY Q2 1314	1.02	0.41	♦	0-0-0-0-0-0-0
Daycase Rate (%)	RY Q2 1314	65.31	60.36	1 ♦	0-0-0-0-0-0-0-0
In Hospital Mortality Rate (per 1,000 discharges)	RY Q2 1314	0.00	0.00	>	•••••

Rotator Cuff Repair (Open)

Kotator Cult Kepair	(Open)				
Metric	Period	Value	Mean	Chart	Trend
Age/Sex Standardised Activity (per 100,000 population)	RY Q2 1314	1.87	5.95	♦	0-0-0-0-0-0-0
Average Length of Stay (Days)	RY Q2 1314	0.00	0.87	• 1	0-0-0-0-0-8-0
7 Day Readmission Rate (%)	RY Q2 1314	0.00	0.16	♦	•••••
30 Day Readmission Rate (%)	RY Q2 1314	0.00	0.95	♦	•••••
30 Day Reoperation Rate (%)	RY Q2 1314	0.00	0.63	♦	•••••
Daycase Rate (%)	RY Q2 1314	100.00	36.05	I	0-0-0-0
In Hospital Mortality Rate (per 1,000 discharges)	RY Q2 1314	0.00	0.00	♦	•••••

Revision Rotator Cuff Repair (Arthroscopic)

<u>Revision Rotator Cu</u>	ff Kepair	(Arthro	scopic)		
Metric	Period	Value	Mean	Chart	Trend
7 Day Readmission Rate (%)	RY Q2 1314	0.00	0.00	♦	•••••
30 Day Readmission Rate (%)	RY Q2 1314	0.00	0.00	♦	•••••
30 Day Reoperation Rate (%)	RY Q2 1314	0.00	0.00	♦	•••••
Daycase Rate (%)	RY Q2 1314	100.00	59.02	I	0-0-0-0-0-0
In Hospital Mortality Rate (per 1,000 discharges)	RY Q2 1314	0.00	0.00	>	•••••
Age/Sex Standardised Activity (per 100,000 population)	RY Q2 1314	2.24	0.82	 	0-0-0-0-0-0-0-0
Average Length of Stay (Days)	RY Q2 1314	0.00	0.66	♦ 1	0.0.0.0.0.0.0.0.0