Greater Manchester Shared Services

Greater Manchester EUR Policy Statement on:

Knee arthroscopy, lavage and debridement

GM Ref: GM034
Version: 1.2 (6 June 2018)

Greater Manchester Shared Services
Hosted by NHS Oldham CCG
on behalf of the Greater Manchester CCGs

Commissioning Statement

<table>
<tr><th colspan="2">Knee arthroscopy, lavage and debridement</th></tr>
<tr><td>Policy Exclusions</td><td>Knee arthroscopy, as a means of accessing the knee joint in order to treat an injury (e.g. torn cruciate ligaments), and not for degenerative disease, is excluded from this policy.

Treatment/procedures undertaken as part of an externally funded trial or as a part of locally agreed contracts / or pathways of care are excluded from this policy, i.e. locally agreed pathways take precedent over this policy (the EUR Team should be informed of any local pathway for this exclusion to take effect).</td></tr>
<tr><td>Policy Inclusion Criteria</td><td>Commissioned

Knee arthroscopy, lavage and debridement is <u>ONLY</u> commissioned for patients with a clear history of mechanical symptoms e.g.:
• Locking that has not responded to at least 3 months of non-surgical treatment
• A specific surgical target such as loose bodies
<u>OR</u>
• In cases where a detailed understanding of the degree of compartment damage within the knee is required, above that demonstrated by imaging, when considering patients for certain surgical interventions (e.g. high tibial osteotomy).

NOTE:
• A locked knee that is “fixed” should be referred urgently.
• If any of the above mandatory criteria are also present in a degenerative knee, a referral should be made.

Funding Mechanism
<u>Locking that has not responded to at least 3 months of non-surgical treatment:</u> Monitored Approval: Referrals may be made in line with the criteria without seeking funding. NOTE: May be the subject of contract challenges and/or audit of cases against commissioned criteria.

<u>A specific surgical target such as loose bodies:</u> Individual prior approval provided the patient meets the above criteria. Requests should be submitted with all relevant supporting evidence, which <u>must</u> be provided with the request.

<u>All other cases:</u> Individual funding request (exceptional case) approval: Requests should be submitted with all relevant supporting evidence, which <u>must</u> be provided with the request.

Not Commissioned

For the management of uncomplicated degenerative disease <u>OR</u> for non-specific knee pain.

Funding Mechanism
Clinicians can submit an individual funding request outside of this guidance if they feel there is a good case for clinical exceptionality. Requests on the grounds of exceptionality should be submitted with all relevant supporting evidence, which <u>must</u> be provided with the request.</td></tr>
</table>

Clinical Exceptionality	Clinicians can submit an Individual Funding Request (IFR) outside of this guidance if they feel there is a good case for exceptionality. Exceptionality means 'a person to which the general rule is not applicable'. Greater Manchester sets out the following guidance in terms of determining exceptionality; however the over-riding question which the IFR process must answer is whether each patient applying for exceptional funding has demonstrated that his/her circumstances are exceptional. A patient may be able to demonstrate exceptionality by showing that s/he is: • Significantly different to the general population of patients with the condition in question. ***and as a result of that difference*** • They are likely to gain significantly more benefit from the intervention than might be expected from the average patient with the condition.

Contents

Policy Statement

Greater Manchester Shared Services (GMSS) Effective Use of Resources (EUR) Policy Team in conjunction with GM EUR Steering Group have developed this policy on behalf of Clinical Commissioning Groups (CCGs) within Greater Manchester, who will commission treatments/procedures in accordance with the criteria outlined in this document.

In creating this policy GMSS has reviewed this clinical condition and the options for its treatment. It has considered the place of this treatment in current clinical practice, whether scientific research has shown the treatment to be of benefit to patients, (including how any benefit is balanced against possible risks) and whether its use represents the best use of NHS resources.

This policy document outlines the arrangements for funding of this treatment for the population of Greater Manchester.

This policy follows the principles set out in the ethical framework that govern the commissioning of NHS healthcare and those policies dealing with the approach to experimental treatments and processes for the management of individual funding requests (IFR).

Equality & Equity Statement

GMSS/CCGs have a duty to have regard to the need to reduce health inequalities in access to health services and health outcomes achieved, as enshrined in the Health and Social Care Act 2012. GMSS/CCG is committed to ensuring equality of access and non-discrimination, irrespective of age, gender, disability (including learning disability), gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, gender or sexual orientation. In carrying out its functions, GMSS/CCG will have due regard to the different needs of protected characteristic groups, in line with the Equality Act 2010. This document is compliant with the NHS Constitution and the Human Rights Act 1998. This applies to all activities for which they are responsible, including policy development, review and implementation.

In developing policy the GMSS Policy Team will ensure that equity is considered as well as equality. Equity means providing greater resource for those groups of the population with greater needs without disadvantage to any vulnerable group.

The Equality Act 2010 states that we must treat disabled people as *more equal* than any other protected characteristic group. This is because their 'starting point' is considered to be further back than any other group. This will be reflected in GMSS evidencing taking 'due regard' for fair access to healthcare information, services and premises.

An Equality Analysis has been carried out on the policy. For more information about the Equality Analysis, please contact policyfeedback.gmscu@nhs.net.

Governance Arrangements

Greater Manchester EUR policy statements will be ratified by the Greater Manchester Association Governing Group (AGG) prior to formal ratification through CCG Governing Bodies. Further details of the governance arrangements can be found in the Greater Manchester EUR Operational Policy.

Aims and Objectives

This policy document aims to ensure equity, consistency and clarity in the commissioning of treatments/procedures by CCGs in Greater Manchester by:

- reducing the variation in access to treatments/procedures.

- ensuring that treatments/procedures are commissioned where there is acceptable evidence of clinical benefit and cost-effectiveness.
- reducing unacceptable variation in the commissioning of treatments/procedures across Greater Manchester.
- promoting the cost-effective use of healthcare resources.

Rationale behind the policy statement

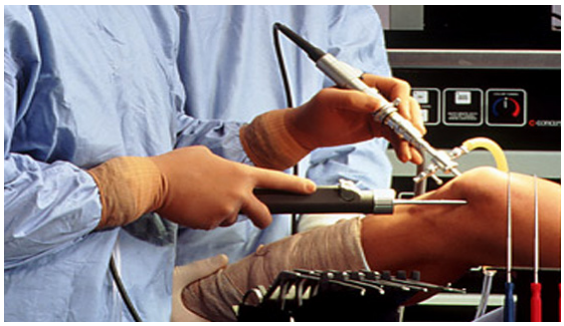
Despite growing evidence that the benefits of knee arthroscopy (with or without washout) for degenerative disease of the knee are minimal and are outweighed by the risk of the procedure, the most frequent indication for knee arthroscopy is degenerative joint disease in middle aged and older patients. Each year around 150,000 arthroscopies are done in the United Kingdom.

The aim of this policy is to target knee arthroscopy, lavage and debridement to the relatively small group of patients for whom it is of benefit and to stop the procedure in patients where there is little to no benefit, but in whom this procedure carries significant risks, including symptomatic deep venous thrombosis (95% confidence interval, 1.78 to 9.60 events per 1000 procedures), pulmonary embolism, infection, and death (Thorlund et all – see evidence summary).

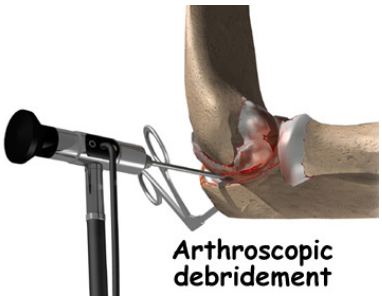
There are an excessive number of knee arthroscopies carried in Greater Manchester. Many of these are done on knees with osteoarthritis where the procedure is considered to be of little to no benefit. According to the Royal College of Surgeons procedures explorers tool the directly age and sex standardised rate for knee arthroscopy across Greater Manchester ranges from 58.56 to 150.08. The number of excess procedures suggests that this is still being done for OA of the knee despite NICE recommendations to the contrary. This policy aims to ensure that this procedure is carried out only in those cases where benefit is proven and not for OA of the knee where there is little to no benefit from a risky procedure.

Treatment / Procedure

Knee arthroscopy is surgery that uses a tiny camera to look inside the knee. Small cuts are made to insert the camera and small surgical tools into the knee for the procedure. Lavage (also referred to as “wash out”) is a procedure in which intra-articular fluid is aspirated and the joint is washed out, removing inflammatory mediators, debris, or small loose bodies.



Lavage is a procedure in which intra-articular fluid is aspirated and the joint is washed out, removing inflammatory mediators, debris, or small loose bodies (also referred to as debridement).



Epidemiology and Need

Osteoarthritis (OA) is one of the most common chronic diseases, with an estimated overall prevalence in the general adult population of 24% for knee OA.

OA is age-related, with manifestations often not occurring until middle age.

Risk factors

- Genetic factors:
  - Heritability estimates for hand, knee, and hip OA are about 40-60%
  - The responsible genes are largely unknown
- Constitutional factors:
  - Ageing
  - Female sex
  - Obesity
  - High bone density - risk factor for development of OA
  - Low bone density - risk factor for progression of knee and hip OA
- Local, largely biomechanical, risk factors:
  - Joint injury
  - Occupational and recreational stresses on joints
  - Reduced muscle strength
  - Joint laxity
  - Joint malalignment

Each year around 150,000 arthroscopies are done in the United Kingdom. The majority of these are done for OA in the middle aged or older patient despite growing evidence of its ineffectiveness.

Adherence to NICE Guidance

This policy adheres fully to the recommendations made in NICE IPG230.

Audit Requirements

There is currently no national database. Service providers will be expected to collect and provide audit data on request.

Date of Review

One year from the date of approval by Greater Manchester Association Governing Group and thereafter at a date agreed by the Greater Manchester EUR Steering Group, unless new evidence or technology is available sooner.

The evidence base for the policy will be reviewed and any recommendations within the policy will be checked against any new evidence. Any operational issues will also be considered at this time. All available additional data on outcomes will be included in the review and the policy updated accordingly. The policy will be continued, amended or withdrawn subject to the outcome of that review.

Glossary

Term	Meaning
Aspirated	Withdrawal of fluid by suction.
Biomechanical	Study of forces exerted by muscles, gravity etc. on the on other parts of the body e.g. the skeleton.
Compartment damage	Damage to the joint space of the knee.
Constitutional	Relating to someone's nature or physical condition.
Debridement	The removal of damaged tissue or foreign objects from a wound.
Debris	Damaged tissue or foreign objects.
Degenerative joint disease	Also known as osteoarthritis, this type of arthritis is caused by inflammation, breakdown and eventual loss of the cartilage of the joints.
Genetic	Relating to genes or heredity.
(High / low) bone density	The amount of mineral matter per square centimeter of bones.
High tibial osteotomy	A surgical procedure to realign the leg and reduce the pain from the knee knee by transferring the body weight to the preserved normal outer side of the knee.
Imaging (medical)	Techniques and processes that create visual representations of the interior of a body for clinical analysis and medical intervention.
Inflammatory mediators	Molecules that are released by immune cells during times when harmful agents invade the body.
Intra-articular fluid	Fluid with the joint space.
Joint laxity	Looseness or instability of a joint.
Joint malalignment	A failure of parts of the body to line up properly.
Knee arthroscopy	Surgery that uses a tiny camera to look inside the knee.
Lavage	Washing out of a body cavity with water or a medicated solution.
Locking (of the knee)	Fixed position of the knee (unable to bend or straighten) usually as a result of a piece of torn cartilage.
Loose bodies	Pieces of bone or cartilage that have detached and are now loose in the joint space.
NICE	National Institute for Health and Care Excellence
NICE CKS	Clinical Knowledge Summaries
NICE IPG	Interventional Procedure Guidance
Osteoarthritis	Degeneration of joint cartilage and the underlying bone, most common from middle age onward. It causes pain and stiffness, especially in the hip, knee, and thumb joints.

References

1. Greater Manchester Effective Use of Resources Operational Policy

Governance Approvals

Name	Date Approved
Greater Manchester Effective Use of Resources Steering Group	16/03/2016
Greater Manchester Chief Finance Officers / Greater Manchester Directors of Commissioning	14/02/2017
Greater Manchester Association Governing Group	07/03/2017
Bury Clinical Commissioning Group	05/04/2017
Bolton Clinical Commissioning Group	24/03/2017
Heywood, Middleton & Rochdale Clinical Commissioning Group	07/03/2017
Central Manchester Clinical Commissioning Group	15/03/2017
North Manchester Clinical Commissioning Group	15/03/2017
Oldham Clinical Commissioning Group	07/03/2017
Salford Clinical Commissioning Group	07/03/2017
South Manchester Clinical Commissioning Group	15/03/2017
Stockport Clinical Commissioning Group	07/03/2017
Tameside & Glossop Clinical Commissioning Group	07/03/2017
Trafford Clinical Commissioning Group	21/03/2017
Wigan Borough Clinical Commissioning Group	03/05/2017

Appendix 1 – Evidence Review

Knee arthroscopy, lavage and debridement
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Search Strategy

The following databases are routinely searched: NICE Clinical Guidance and full website search; NHS Evidence and NICE CKS; SIGN; Cochrane; York; BMJ Clinical Evidence; and the relevant Royal College websites. A Medline / Open Athens search is undertaken where indicated and a general google search for key terms may also be undertaken. The results from these and any other sources are included in the table below. If nothing is found on a particular website it will not appear in the table below:

Database	Result
NICE	NICE IPG230: Arthroscopic knee washout, with or without debridement, for the treatment of osteoarthritis (Published: August 2007)
NHS Evidence and NICE CKS	• NICE IPG and Cochrane study (cited elsewhere)
Cochrane	• **Cochrane Database Systematic Review: Joint lavage for osteoarthritis of the knee,** Reichenbach S, Rutjes AWS, Nüesch E, Trelle S, Jüni P, Published: 2010 • **Cochrane Database Systematic Review: Arthroscopic debridement for knee osteoarthritis,** Laupattarakasem W, Laopaiboon M, Laupattarakasem P, Sumananont C, Published: 2008
BMJ Clinical Evidence	• **BMJ Clinical Review: Osteoarthritis of the knee,** David Scott and Anna Kowalczyk, Search date: October 2006 • **Arthroscopic surgery for degenerative knee: Overused, ineffective, and potentially harmful,** Andy Carr, Professor and Director, Botnar Research Centre, Oxford University Institute of Musculoskeletal Sciences, *BMJ* 2015;350, Published: 16 June 2015 • **Arthroscopic surgery for degenerative knee: systematic review and meta-analysis of benefits and harms,** J B Thorlund, C B Juhl, E M Roos, L S Lohmander, BMJ 2015;350:h2747
General Search (Google)	Nil relevant additional to those cited – multiple provider websites
Medline / Open Athens	Not done as relevant systematic reviews found
Other	**Royal College of Surgeons / British Orthopaedic Association Commissioning Guide: Painful osteoarthritis of the knee,** First published: 2013 (to be reviewed November 2016)

Summary of the evidence

There is limited low quality evidence that arthroscopy of the knee unless carried out for specific reasons is only marginally beneficial in the short term. There is more robust evidence that suggests it is no more beneficial than sham treatment and that the risk of arthroscopy with or without knee arthroscopy, lavage and debridement outweighs the benefits in middle aged or older patients with or without evidence of osteoarthritis.

It is of benefit where there is “locking” of the knee or where there is a clear loose body. It can also be used where a detailed picture of the joint is needed prior to specialist surgery.

The evidence

Levels of evidence	
Level 1	Meta-analyses, systematic reviews of randomised controlled trials
Level 2	Randomised controlled trials
Level 3	Case-control or cohort studies
Level 4	Non-analytic studies e.g. case reports, case series
Level 5	Expert opinion

1. LEVEL N/A: NICE INTERVENTIONAL PROCEDURE GUIDANCE

NICE IPG 230: Arthroscopic knee washout, with or without debridement, for the treatment of osteoarthritis, Published: August 2007

Guidance

1.1 Evidence on the safety and efficacy of arthroscopic knee washout with debridement for the treatment of osteoarthritis is adequate to support the use of this procedure provided that normal arrangements are in place for consent, audit and clinical governance.

1.2 Current evidence suggests that arthroscopic knee washout alone should not be used as a treatment for osteoarthritis because it cannot demonstrate clinically useful benefit in the short or long term.

2. LEVEL 1: SYSTEMATIC REVIEW

Cochrane Database Systematic Review: Joint lavage for osteoarthritis of the knee, Reichenbach S, Rutjes AWS, Nüesch E, Trelle S, Jüni P, Published: 2010

ABSTRACT

Background: Osteoarthritis is the most common form of joint disorder and a leading cause of pain and physical disability. Observational studies suggested a benefit for joint lavage, but recent, sham-controlled trials yielded conflicting results, suggesting joint lavage not to be effective.

Objectives: To compare joint lavage with sham intervention, placebo or non-intervention control in terms of effects on pain, function and safety outcomes in patients with knee osteoarthritis.

Search methods: We searched CENTRAL, MEDLINE, EMBASE, and CINAHL up to 3 August 2009, checked conference proceedings, reference lists, and contacted authors.

Selection criteria

We included studies if they were randomised or quasi-randomised trials that compared arthroscopic and non-arthroscopic joint lavage with a control intervention in patients with osteoarthritis of the knee. We did not apply any language restrictions.

Data collection and analysis: Two independent review authors extracted data using standardised forms. We contacted investigators to obtain missing outcome information. We calculated standardised mean differences (SMDs) for pain and function, and risk ratios for safety outcomes. We combined trials using inverse-variance random-effects meta-analysis.

Main results: We included seven trials with 567 patients. Three trials examined arthroscopic joint lavage, two non-arthroscopic joint lavage and two tidal irrigation. The methodological quality and the quality of reporting was poor and we identified a moderate to large degree of heterogeneity among the trials (I2 = 65%). We found little evidence for a benefit of joint lavage in terms of pain relief at three months (SMD -0.11, 95% CI -0.42 to 0.21), corresponding to a difference in pain scores between joint lavage and control of 0.3 cm on a 10-cm visual analogue scale (VAS). Results for improvement in function at three months were similar (SMD -0.10, 95% CI -0.30 to 0.11), corresponding to a difference

in function scores between joint lavage and control of 0.2 cm on a WOMAC disability sub-scale from 0 to 10. For pain, estimates of effect sizes varied to some degree depending on the type of lavage, but this variation was likely to be explained by differences in the credibility of control interventions: trials using sham interventions to closely mimic the process of joint lavage showed a null-effect. Reporting on adverse events and drop out rates was unsatisfactory, and we were unable to draw conclusions for these secondary outcomes.

Authors' conclusions: Joint lavage does not result in a relevant benefit for patients with knee osteoarthritis in terms of pain relief or improvement of function.

3. LEVEL 1: SYSTEMATIC REVIEW

Cochrane Database Systematic Review: Arthroscopic debridement for knee osteoarthritis, Laupattarakasem W, Laopaiboon M, Laupattarakasem P, Sumananont C, Published: 2008

ABSTRACT

Background: Knee osteoarthritis (OA) is a progressive disease that initially affects the articular cartilage. Observational studies have shown benefits for arthroscopic debridement (AD) on the osteoarthritic knee, but other recent studies have yielded conflicting results that suggest AD may not be effective.

Objectives: To identify the effectiveness of AD in knee OA on pain and function.

Search methods: We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library Issue 2, 2006); MEDLINE (1966 to August, 2006); CINAHL (1982 to 2006); EMBASE (1988 to 2006) and Web of Science (1900 to 2006) and screened the bibliographies, reference lists and cited web sites of papers.

Selection criteria: We included randomised controlled trials (RCT) or controlled clinical trials (CCT) assessing effectiveness of AD compared to another surgical procedure, including sham or placebo surgery and other non-surgical interventions, in patients with a diagnosis of primary or secondary OA of the knees, who did not have other joint involvement or conditions requiring long term use of non-steroidal anti-inflammatory drugs (NSAIDs). The main outcomes were pain relief and improved function of the knee.

Data collection and analysis: Two review authors independently selected trials for inclusion, assessed trial quality and extracted the data. Results are presented using weighted mean difference (WMD) for continuous data and relative risk (RR) for dichotomous data, and the number needed to treat to benefit (NNTB) or harm (NNTH).

Main results: Three RCTs were included with a total of 271 patients. They had different comparison groups and a moderate risk of bias. One study compared AD with lavage and with sham surgery. Compared to lavage the study found no significant difference. Compared to sham surgery placebo, the study found worse outcomes for AD at two weeks (WMD for pain 8.7, 95% CI 1.7 to 15.8, and function 7.7, 95% CI 1.1 to 14.3; NNTH=5) and no significant difference at two years. The second trial, at higher risk of bias, compared AD and arthroscopic washout, and found that AD significantly reduced knee pain compared to washout at five years (RR 5.5, 95% CI 1.7 to 15.5; NNTB=3). The third trial, also at higher risk of bias, compared AD to closed-needle lavage, and found no significant difference.

Authors' conclusions: There is 'gold' level evidence that AD has no benefit for undiscriminated OA (mechanical or inflammatory causes).

4. LEVEL 1: SYSTEMATIC REVIEW

BMJ Clinical Review: Osteoarthritis of the knee, David Scott and Anna Kowalczyk, Search date: October 2006

ABSTRACT

Introduction: Osteoarthritis of the knee affects about 10% of adults aged over 60 years, with risk increased in those with obesity, and joint damage or abnormalities. Progression of disease on x rays is commonplace, but x ray changes don't correlate well with clinical symptoms.

Methods and Outcomes: We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of non-surgical treatments for osteoarthritis of the knee? What are the effects of surgical treatments for osteoarthritis of the knee? We searched: Medline, Embase, The Cochrane Library and other important databases up to October 2006 (BMJ Clinical Evidence reviews are updated periodically, please check our website for the most up-to-date version of this review).We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).

Results: We found 74 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.

Conclusions: In this systematic review we present information relating to the effectiveness and safety of the following interventions: acupuncture, capsaicin, chondroitin, education to aid self-management, exercise and physiotherapy, glucosamine, insoles, intra-articular corticosteroids, intra-articular hyaluronan, joint bracing, knee replacement, non-steroidal anti-inflammatory drugs (including topical non-steroidal anti-inflammatory drugs), opioid analgesics, osteotomy, simple analgesics, and taping.

5. LEVEL N/A: MIX OF SYSTEMATIC REVIEWS AND PROFESSIONAL EXPERT OPINION

Royal College of Surgeons / British Orthopaedic Association Commissioning Guide: Painful osteoarthritis of the knee, First published: 2013 (to be reviewed November 2016)

Surgical option: Arthroscopy

Knee arthroscopy, lavage and debridement should be considered in patients:

- With clear history of mechanical symptoms e.g. locking that have not responded to at least 3 months of non-surgical treatment
- a specific surgical target such as loose bodies
- Where a detailed understanding of the degree of compartment damage within the knee is required, above that demonstrated by imaging, when considering patients for certain surgical interventions (e.g. high tibial osteotomy)

Knee arthroscopy, lavage and debridement should NOT be offered for patient with non-mechanical symptoms of pain and stiffness.

6. LEVEL N/A: BMJ EDITORIAL

Arthroscopic surgery for degenerative knee: Overused, ineffective, and potentially harmful
Andy Carr, Professor and Director, Botnar Research Centre, Oxford University Institute of Musculoskeletal Sciences, *BMJ* 2015;350, Published: 16 June 2015

The most frequent indication for knee arthroscopy is degenerative joint disease in middle aged and older patients. Each year, more than 700 000 knee arthroscopies are done in the United States and 150 000 in the United Kingdom. Magnetic resonance imaging evidence of meniscal abnormality, osteophytes, cartilage damage, and bone marrow lesions is often present. All these imaging abnormalities are common in the general population and are often asymptomatic. The evidence base for arthroscopic surgery is known to be weak, and a pressing need exists for more high quality multicentre randomised controlled trials, systematic reviews, and meta-analyses to inform clinicians and improve care for patients. Researchers have already reported that trials of arthroscopic surgery find no benefit over control interventions ranging from exercises to placebo surgery.

A linked paper by Thorlund and colleagues (doi:10.1136/bmj. h2747) adds substantially to the debate by systematically reviewing all the evidence on the benefits and harms of arthroscopic knee surgery for middle aged and older adults with knee pain and degenerative knee disease. The authors report that the small benefit seen after arthroscopic surgery of the knee is short lived and disappears within one to two years. In the light of this evidence, why is arthroscopy still so common? It even seems to be increasing in both North America and Europe. Is the published evidence flawed? This is certainly the view of some surgeons, including the editors of the journal *Arthroscopy* who believe that "the *New England Journal of Medicine* is biased against knee surgery." In the journal's defence, the available evidence is certainly of low quality in places. Only two of the nine trials reviewed by Thorlund and

colleagues were adequately blinded, and many of the other trials had a high risk of bias. In five of the nine trials, the comparator was exercise therapy that was poorly described and given at a suboptimal dose. Another possibility is that surgeons are falling prey to confirmation or myside bias, whereby robust and high quality evidence is contested and ignored in favour of deeply held convictions or entrenched attitudes. Such bias is not new and was well described by Leo Tolstoy in 1899: “I know that most men not only those considered clever, but even those who are very clever, and capable of understanding most difficult scientific, mathematical, or philosophic problems can very seldom discern even the simplest and most obvious truth if it be such as to oblige them to admit the falsity of conclusions they have formed, perhaps with much difficulty conclusions of which they are proud, which they have taught to others, and on which they have built their lives.” One thing is clear from all randomised trials: patients improve after arthroscopy. This is in line with surgeons’ own observations and with evidence from uncontrolled observational studies. However, in robust and bias-free trials that use placebo controls, active treatment works no better than control treatment. In response, leaders of the arthroscopic surgery community have asserted that patients who participate in placebo controlled trials “may not be of entirely sound mind” and that “ethically, sham surgery is a questionable research method, which may be harmful.” A recent systematic review of the use of placebo in surgical trials shows that in more than half of these studies surgery had no greater effect than a placebo. This review also reported that very few harms occurred after placebo surgery. Placebo surgery was safer than the treatment under investigation. These findings make a strong case for the use of placebo controls when a placebo effect may be present and for the discontinuation of procedures that offer patients no discernible benefit. The treatment effect associated with arthroscopic surgery of the knee may well have a placebo component. Outcomes are mostly subjective—improvement in pain is the main justification for the procedure. Placebo effects can be modified and substantially enhanced by a variety of factors that alter beliefs and expectations. Importantly, Thorlund and colleagues also review the harms associated with arthroscopic knee surgery. They were unable to identify harm from randomised trials alone because the trials were too small, so they did a wider review including observational studies. These studies were heterogeneous and inconsistent, but the risks associated with non-surgical treatment including exercises are clearly rare and minor. Harms associated with arthroscopic surgery are also rare but include serious adverse events such as deep venous thrombosis, infection, pulmonary embolus, and death.

Supporting or justifying a procedure with the potential for serious harm, even if this is rare, is difficult when that procedure offers patients no more benefit than a placebo. If, as reported, the mortality associated with arthroscopic knee surgery is 0.96 (95% confidence interval 0.04 to 23.9) per 1000 cases and the rate of deep venous thrombosis is 4.13 (1.78 to 9.60) per 1000 cases then, with rates of surgery at their current level, a substantial number of lives could be saved and deep venous thromboses prevented each year if this treatment were to be discontinued or diminished.

We may be close to a tipping point where the weight of evidence against arthroscopic knee surgery for pain is enough to overcome concerns about the quality of the studies, confirmation bias, and vested interests. When that point is reached, we should anticipate a swift reversal of established practice.

Competing interests: I have read and understood the BMJ policy on declaration of interests and declare the following interests: I am supported by the NIHR Oxford Biomedical Research Unit and have received research grants from NIHR and Arthritis Research UK.

7. LEVEL 1: SYSTEMATIC REVIEW

Arthroscopic surgery for degenerative knee: systematic review and meta-analysis of benefits and harms, J B Thorlund, C B Juhl, E M Roos, L S Lohmander, BMJ 2015;350:h2747

ABSTRACT

Objective: To determine benefits and harms of arthroscopic knee surgery involving partial meniscectomy, debridement, or both for middle aged or older patients with knee pain and degenerative knee disease.

Design: Systematic review and meta-analysis.

Main outcome measures: Pain and physical function.

Data sources: Systematic searches for benefits and harms were carried out in Medline, Embase, CINAHL, Web of Science, and the Cochrane Central Register of Controlled Trials (CENTRAL) up to August 2014. Only studies published in 2000 or later were included for harms.

Eligibility criteria for selecting studies: Randomised controlled trials assessing benefit of arthroscopic surgery involving partial meniscectomy, debridement, or both for patients with or without radiographic signs of osteoarthritis were included. For harms, cohort studies, register based studies, and case series were also allowed.

Results: The search identified nine trials assessing the benefits of knee arthroscopic surgery in middle aged and older patients with knee pain and degenerative knee disease. The main analysis, combining the primary endpoints of the individual trials from three to 24 months postoperatively, showed a small difference in favour of interventions including arthroscopic surgery compared with control treatments for pain (effect size 0.14, 95% confidence interval 0.03 to 0.26). This difference corresponds to a benefit of 2.4 (95% confidence interval 0.4 to 4.3) mm on a 0-100 mm visual analogue scale. When analysed over time of follow-up, interventions including arthroscopy showed a small benefit of 3-5 mm for pain at three and six months but not later up to 24 months. No significant benefit on physical function was found (effect size 0.09, −0.05 to 0.24). Nine studies reporting on harms were identified. Harms included symptomatic deep venous thrombosis (4.13 (95% confidence interval 1.78 to 9.60) events per 1000 procedures), pulmonary embolism, infection, and death.

Conclusions: The small inconsequential benefit seen from interventions that include arthroscopy for the degenerative knee is limited in time and absent at one to two years after surgery. Knee arthroscopy is associated with harms. Taken together, these findings do not support the practise of arthroscopic surgery for middle aged or older patients with knee pain with or without signs of osteoarthritis.

Appendix 2 – Diagnostic and Procedure Codes

Knee arthroscopy, lavage and debridement
GM034

(All codes have been verified by Mersey Internal Audit's Clinical Coding Academy)

GM034 - Knee Arthroscopy, lavage and debridement	
Endoscopic irrigation of knee joint	W85.2
Open debridement of joint NEC	W80.2
Arthroscopic approach to joint (Only when supplementary to W80.2)	Y76.7
Knee joint (Only when supplementary to W80.2)	Z84.6
Endoscopic removal of loose body from of knee joint	W85.1
With the following ICD-10 diagnosis code(s):	
Primary gonarthrosis, bilateral	M17.0
Other primary gonarthrosis	M17.1
Post-traumatic gonarthrosis, bilateral	M17.2
Other post-traumatic gonarthrosis	M17.3
Other secondary gonarthrosis, bilateral	M17.4
Other secondary gonarthrosis	M17.5
Gonarthrosis, unspecified	M17.9
Primary generalized (osteo)arthrosis (If patient has OA of the knee and another joint)	M15.0
Heberden nodes (with arthropathy) (If patient has OA of the knee and another joint)	M15.1
Bouchard nodes (with arthropathy) (If patient has OA of the knee and another joint)	M15.2
Secondary multiple arthrosis (If patient has OA of the knee and another joint)	M15.3
Erosive (osteo)arthrosis (If patient has OA of the knee and another joint)	M15.4
Other polyarthrosis (If patient has OA of the knee and another joint)	M15.8
Polyarthrosis, unspecified (If patient has OA of the knee and another joint)	M15.9
Loose body in knee	M23.4
Other internal derangements of knee	M23.8
Policy excludes knee arthroscopy as a means of accessing the knee joint, which includes the OPCS-4 diagnostic examination codes:	
Diagnostic endoscopic examination of knee joint and biopsy of lesion of knee joint	W87.1
Other specified diagnostic endoscopic examination of knee joint	W87.8
Unspecified diagnostic endoscopic examination of knee joint	W87.9
Endoscopic repair of semilunar cartilage	W82.3
Endoscopic resection of semilunar cartilage NEC	W82.2
Endoscopic total excision of semilunar cartilage	W82.1

Appendix 3 – Version History

Knee arthroscopy, lavage and debridement
GM034

The latest version of this policy can be found here GM Knee arthroscopy, lavage and debridement policy

Version	Date	Summary of Changes
0.1	23/10/2015	Initial draft
0.2	16/12/2015	• GM EUR Steering Group reviewed the draft policy on the 18 November 2015 and requested no changes except to add a funding mechanism of Monitored Approval. • GM EUR Steering Group approved the draft policy to go out for a period of clinical engagement
	15/03/2016	Report updated to Greater Manchester Shared Services template and references to North West Commissioning Support Unit changed to Greater Manchester Shared Services.
1.0	16/03/2016	GM EUR Steering Group reviewed the draft policy on 16 March 2016 following feedback received during Clinical Engagement and the following changes were approved: • Commissioning Recommendation and Section 4. Criteria for Commissioning: o *'Routinely Commissioned'* sub heading added beneath 'Mandatory Criteria' and sentence added to state: *'NOTE: A locked knee that is 'fixed' should be referred urgently'*. o 'Not Commissioned' sub heading added beneath 'Mandatory Criteria' and sentences added to state: *'For the management of uncomplicated degenerative disease'* and also *'NOTE: If any of the above mandatory criteria are also present in a degenerative knee, referral should be made.'* o Under 'Policy Exclusions' the following added to the end of first sentence: *'…, .i.e. locally agreed policies take precedent over this policy (The EUR Team should be informed of any local policy for this exclusion to take effect).*' • Wording for date of review changed • Appendix 2 added ready for list of diagnostic and procedure codes in relation to this policy. Subject to the above changes being made the GM EUR Steering Group approved the policy to go through the governance process
1.1	21/09/2016	The GM EUR Steering Group agreed the following changes: • Following the publication of a new BMJ editorial and review paper the criteria for non-specific knee pain was amended to state that it is not commissioned. • The funding mechanism was amended to monitored approval for locking that has not responded to at least 3 months of non-surgical treatment, individual prior approval for a specific surgical target such as loose bodies and exceptionality for all other cases.
	21/12/2016	List of procedure and diagnostic codes added to Appendix 2.
	07/03/2017	Approved by Greater Manchester Association Governing Group
	08/03/2017	Policy transferred to new template format.

1.2	06/06/2018	<u>Appendix 2</u> • Added OPCS-4 code W85.1 Endoscopic removal of loose body from knee joint • Added ICD-10 codes W82.3 Endoscopic repair of semilunar cartilage; W82.2 Endoscopic resection of semilunar cartilage NEC & W82.1 Endoscopic total excision of semilunar cartilage to 'Exceptions'