REPORT

Surgical Services Taskforce

Appropriateness of Surgery: Knee Arthroscopy

Strategies to ensure appropriate performance in NSW

NSW GOVERNMENT

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Introduction

The Bureau of Health Information presented results of an investigation into the knee arthroscopy[1] in NSW public and private hospitals at a Surgical Services Taskforce meeting in August 2018.

Strong evidence exists that patients with osteoarthritis of the knee do not benefit from arthroscopy of the joint, and that arthroscopy is not clinically beneficial for patients over the age of 50, regardless of the presence of osteoarthritis.[2,3,4] Instead, conservative treatment (such as patient education, support for weight loss and exercise advice and pharmacological management of symptoms) is recommended in the first instance.

Conservative management mitigates the impact of inappropriate surgical interventions on patients, such as the risk associated with anaesthetic agents, potential post-operative complications and recovery time. There is also an impact on surgical waiting times, with other patient cohorts waiting longer to access surgical services when resources are allocated to procedures that are not clinically indicated.

The Australian Commission for Safety and Quality in Healthcare and Australian Orthopaedic Association further advise that arthroscopy should only be offered if the patient has mechanical locking of the joint, co-existing conditions such as obstructive meniscal tears, symptomatic loose bodies or other clinical appropriate indications.[5,6]

To assess knee arthroscopy in NSW hospitals, a retrospective analysis using linked data was performed to identify both the volume of patients undergoing arthroscopy of the knee, and proportion of these procedures that were potentially inappropriate, whereby the procedure was not clinically indicated. Based on the evidence and for the purposes of the analysis, potentially inappropriate procedures were defined as:

- those performed on patients 50+ years of age with or without osteoarthritis
- those performed on patients under 50 years with osteoarthritis.

Results of the analyses were presented at the state, local health district (LHD)/specialty health network (SHN) and hospital level for age, sex and split across public and private hospitals.

Key results

Data were analysed and presented on public and private patients undergoing knee arthroscopy in NSW between 1 July 2016 and 30 June 2017. It was found that all NSW LHDs performed knee arthroscopies that were not clinically indicated at the time. SHNs were not included in these analyses.

In summary:

- 78% of total knee arthroscopies that were not clinically indicated were performed in private facilities and 22% in public hospitals (3,651 procedures in 2016-17).
- 78% of total knee arthroscopies that were not clinically indicated were performed for patients over 50 years of age (public and private hospitals combined).
- In 2016-2017 the rate of knee arthroscopies that were not clinically indicated ranged from 43% to 85% in LHDs.

- It was noted that while the majority of arthroscopies are performed in private facilities, there is limited scope to influence this from the public sector. By comparison, the proportion of knee arthroscopies that were not clinically indicated in private hospitals ranged from 27% to 92% in 2016-17.
- There was a decline in procedure numbers over time in NSW public hospitals from 4,832 procedures in 2011-12 (of which 71% of which were not clinically indicated) to 3,651 procedures in 2016-17 (of which 59% were not clinically indicated).

This assessment was intended as a screening tool, and further work may be required to fully differentiate variation according to clinical presentation at the hospital level and with clinician input.

Purpose

This report has been developed based on strategies in place in NSW public hospitals to foster appropriate practice in orthopaedic surgery and minimise potentially inappropriate knee arthroscopy procedures.

Information has been obtained directly from district and specialty representatives of the Surgical Services Taskforce during the period September to December 2018.

LHDs and hospitals are encouraged to review this document and identify strategies to further strengthen local clinical practice to address unwarranted clinical variation.

Strategies to encourage appropriate surgical practices

Multidisciplinary consultation and peer review

Implementation of a multidisciplinary review process for patients referred for knee arthroscopy is reported to drive significant improvement in appropriateness of procedures.

Under this model, patients referred for arthroscopies are discussed by a multidisciplinary team (MDT) consisting of surgical, medical, nursing, allied health representatives to ensure agreement across multiple health professionals. This occurs prior to booking surgery. Where agreement cannot be reached by the MDT review, escalation points are established (such as consultation with the clinical stream directors, director of surgery, or directors of clinical governance).

Alternatively, some hospitals have established review processes for specific patient cohorts. Senior clinicians in some districts review arthroscopy referrals for patients 50 years and over against existing hospital protocols and clinical guidelines. Maintaining focus on appropriate care via this mechanism, and in conjunction with regular audit of local data, has demonstrated reduction in total procedure volumes at these sites over time.

It was further noted that patients referred from private rooms to public facilities often present on the day of surgery with limited information and clinical history, creating further challenges in ensuring appropriate treatment decisions. Developing strategies to improve transfer and timeliness of information will further support appropriate clinical decision-making.

Clear definition and reinforcement of patient selection criteria

Developing clear indication criteria for surgical procedures, including arthroscopy for osteoarthritis, assists clinicians to make appropriately informed care decisions. This extends beyond the

orthopaedic department and division of surgery in the hospital, to include communication with general practitioners and patients.

The following elements contribute to empowering clinicians with the tools and information to make appropriate care decisions with their patients:

- clearly outlining treatment options, including non-surgical interventions
- defining and communicating patient selection criteria for surgical interventions
- sponsorship from senior management to adhere to best-practice guidelines and regular reinforcement of this messaging.

Patient information leaflets, decision aid tools and local policy directives also assist in appropriate clinical decision-making. Clear policies are required to ensure accurate identification of those patients who will benefit from knee arthroscopy, to ensure they are not disadvantaged.

Local implementation of existing position statements and guidelines

A number of districts and individual facilities indicated that their surgical departments and services have adopted the position statement of the Australian Orthopaedic Association on arthroscopic surgery of the knee and the Australian Commission on Safety and Quality in Healthcare clinical care standard for osteoarthritis of the knee.[5,6]

Some sites have found this specific strategy effective in encouraging appropriate practice, while other districts have paired this strategy with additional supportive actions.

Education, training and mentoring

Encouragement of appropriate clinical care is achieved in some districts as a by-product of training practices and mentoring relationships. The regular communication, advice and analysis of professional practices between registrars and consultant surgeons inadvertently help to self-regulate the potentially inappropriate surgery performed in all fields of clinical practice, including orthopaedic surgery.

In a teaching and learning environment, junior clinicians are encouraged to the question why a particular operation is being performed, providing a mechanism to examine any concerns around appropriateness. This can be an effective strategy in the public system, where a culture of questioning and dialogue between clinicians is encouraged.

Local data audit and review

Retrospective review of local practices, including audit of procedures undertaken in the absence of clinical indication, has been actively undertaken by some districts. This has assisted in raising the topic of appropriateness, encouraging clinicians to reflect on their practices by examining local data sets and providing baseline data from which to monitor improvements.

Districts may also consider inclusion of appropriateness of procedures as a standing item in departmental or morbidity and mortality meetings. This provides a platform to discuss results, concerns and queries on a regular basis in a multidisciplinary environment.

Alignment of strategies with established programs

The Osteoarthritis Chronic Care program (OACCP), under the Ministry of Health's Leading Better Value Care (LBVC) program, was reported as beneficial in encouraging appropriate management of osteoarthritis.

The OACCP aims to support patients with osteoarthritis of the hip or knee to self-manage their condition, explore alternatives to surgical intervention and encourages a holistic approach to wellbeing. While not specific to knee arthroscopy, this program complements efforts to minimise potentially inappropriate care.

The **Choosing Wisely** and **Evolve** initiatives also provide education, tools and resources to promote high-quality, appropriate care for the right patient at the right time.

Conclusion

A number of strategies are in place in NSW public hospitals to encourage appropriate performance of knee arthroscopies for the management of osteoarthritis. These cover a range of clinical and professional boundaries encompassing education, communication, information and data and translation of evidence into practice.

Further practice and behaviour change may be realised through changes in state policy to incentivise evidence-based practice and appropriate clinical decision-making relating to orthopaedic surgery, particularly the NSW Health *Waiting Time and Elective Surgery Policy*, (PD2012_011).[7]

Ongoing monitoring and feedback will also be key to continue progress in minimising potentially inappropriate practices, and evaluating the effectiveness of strategies. These may then be considered for wider application to additional surgical procedures in future.

References

[1] Bureau of Health Information: Healthcare in Focus 2017: How does NSW compare?. 2018. Accessed January 2019 from http://www.bhi.nsw.gov.au/BHI_reports/healthcare_in_focus/2017

[2] Sihvonen R, Paavola M, Malmivaara A, Itälä A, Joukainen A, Nurmi H et al: Arthroscopic partial meniscectomy versus sham surgery for a degenerative meniscal tear. N Engl J Med 2013, 369(26):2515-2524.

[3] Katz JN, Brophy RH, Chaisson CE, De Chaves L, Cole BJ, Dahm DL et al: Surgery versus physical therapy for a meniscal tear and osteoarthritis. 2013, 368(18):1675-1684.

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

[5] Australian Commission for Safety and Quality in Healthcare: Osteoarthritis of the knee clinical care standard. 2017. Accessed January 2019 from https://www.safetyandquality.gov.au/our-work/clinical-care-standards/osteoarthritis-clinical-care-standard

[6] Australian Orthopaedic Association: AKS and AOA Statement on Osteoarthritis and Knee Arthroscopy. 2017. Accessed Jan 2019 from https://www.aoa.org.au/docs/default-source/Advocacy/aoa-and-aks-statement-osteoarthritis-and-knee-arthroscopy-october-2017.pdf?sfvrsn=47b6c404_2

[7] NSW Health. Waiting Time and Elective Surgery policy (PD2012_011). Available at: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2012_011.pdf