



Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Lisik, JP;Dowsey, MM;Petterwood, J;Choong, PFM

Title:

Review of knee arthroscopic practice and coding at a major metropolitan centre

Date:

2017-05-01

Citation:

Lisik, J. P., Dowsey, M. M., Petterwood, J. & Choong, P. F. M. (2017). Review of knee arthroscopic practice and coding at a major metropolitan centre. *ANZ Journal of Surgery*, 87 (5), pp.380-384. <https://doi.org/10.1111/ans.13664>.

Persistent Link:

<https://hdl.handle.net/11343/291774>

A review of knee arthroscopic practice and coding at a major metropolitan centre.

Short (running) Title; “Arthroscopic practices at a major centre.”

James P. Lisik, BBiomedSci, MD¹

Michelle M. Dowsey, BHealthSci, PhD, PG Cert Appl Epi and Biostat^{1, 2}

Joshua Petterwood, BMedSci, MBBS (Hons)¹

Peter F. M. Choong, MBBS, MD, FRACS, FAorthA^{1, 2}

University of Melbourne Department of Surgery, St. Vincent’s Hospital, Melbourne¹

Department of Orthopaedics, St. Vincent’s Hospital, Melbourne²

Content;

Figures; 0

Tables; 2

Word Counts; Abstract 221w (including headings), Manuscript 3316w (inc. references, headings)

Supplementary Data; 3 tables

Correspondence;

Professor Peter Choong,

Hugh Devine Professor of Surgery

University of Melbourne, Department of Surgery, St. Vincent’s Hospital Melbourne

Level 2, Clinical Sciences Building,

29 Regent Street,

Fitzroy 3065, Victoria, Australia

E pchoong@unimelb.edu.au | P +61 3 9231 3955 | F +61 3 9461 3610

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: [10.1111/ans.13664](https://doi.org/10.1111/ans.13664)

ABSTRACT

Background: Arthroscopic knee surgery has been a topic of significant controversy in recent orthopaedic literature. Multiple studies have used administrative (VAED & CHeReL) data to identify trends in practice. This study explored the usage and reporting of arthroscopic knee surgery by conducting a detailed audit at a major Victorian public hospital.

Methods: A database of orthopaedic procedures at St Vincent's Hospital Melbourne was used to retrospectively identify cases of knee arthroscopy from 01/12/2011 to 01/04/2014. Procedures were categorised as diagnostic or interventional, and native and prosthetic joints were analysed separately. Procedure codes were reviewed by comparing a registrar, auditor & hospital coders for agreement.

Results: Of the 401 cases for analysis, 375 were conducted in native knees and 26 in prosthetic joints. Of native knees, 369 (98.4%) were considered interventional. The majority of these were conducted for meniscal pathology (n=263, 70.1%), OA (n=25, 6.7%) and infection (n=28, 7.5%). Comparison of codes assigned by different parties were found to be between 57% ($\kappa = 0.324$) and 70% ($\kappa = 0.572$) agreement, but not statistically significant.

Conclusions: In this study, the most common indication for arthroscopy was meniscal pathology. Arthroscopy was rarely performed for osteoarthritis in the absence of meniscal pathology. Diagnostic arthroscopy was rarely performed in the native knee, and fair to moderate agreement existed between parties in assigning MBS procedure codes.

Keywords: Arthroscopy, Medicare, Knee, Surgery, Knee Arthroscopy

Aims & Introduction

Arthroscopic surgery of the knee may be performed with both diagnostic and therapeutic intent. Arthroscopy is a highly sensitive and specific tool in confirming internal derangement of the knee [1, 2, 3] however purely diagnostic arthroscopy has become increasingly uncommon with the advent of magnetic resonance imaging (MRI); which is associated with decreased cost and surgical risk [4]. The use of diagnostic arthroscopy may however be prudent for specific indications in prosthetic knees [5].

The use of therapeutic arthroscopy is controversial following a number of publications showing no benefit of debridement over placebo in undifferentiated knee osteoarthritis (OA) [6, 7, 8]. Despite this, varied opinions persist amongst surgeons as to the place of arthroscopic intervention in the osteoarthritic knee [9]. A review of Victorian (VIC) data identified that rates of knee arthroscopy had decreased overall in the period 2000-2009, but increased in those with a concurrent diagnosis of OA [10]. A similar study in New South Wales (NSW) concluded that there had been no change in the rate of knee arthroscopy [11]. Both studies identified that over 70% of knee arthroscopy is performed in the private sector.

Most recently the efficacy of knee arthroscopy in the treatment of meniscal tears has been disputed [12, 13, 14]. For patients with degenerative meniscal tears, a number of randomised, controlled trials have found no benefit of arthroscopic partial meniscectomy over physical therapy - both in cohorts with [12, 14] and without significant OA [13]. Another study comparing arthroscopic partial meniscectomy to sham surgery in patients with symptoms of degenerative meniscal tears also found no benefit [15].

Given these findings a number of groups have attempted to review current arthroscopic practice. In attempting to analyse trends in knee arthroscopy, Victorian Admitted Episodes Data (VAED) or Centre for Health Record Linkage (CHeReL) data have been used in published studies [10, 11]. The International Classification of Diseases 10, Australian Modification (ICD10-AM) codes here used may not be an accurate reflection of the indications for arthroscopic surgery as the codes are representative of the procedure performed rather than the rationale, and are

often input by hospital coders rather than by the operating surgeon. Furthermore, given more complex procedure codes carry higher remunerations [16], there may exist incentive in both public and private practice to overstate procedure codes.

The aim of this study was to i) quantify the use of diagnostic and interventional arthroscopy occurring at a major metropolitan public teaching hospital; and to ii) describe patterns of reporting using MBS codes at this institution by comparing a sample of codes assigned by an orthopaedic registrar, hospital coding staff, and the auditor.

METHODS

Study Institution

This study was conducted at St Vincent's Hospital Melbourne (SVHM), and approved by the human research ethics committee at the same institution.

Audit

The Orthopaedic department at SVHM maintains a clinical audit database Filemaker Pro (FMP) from which 432 cases of knee arthroscopy performed between 1st January 2012 and 30th April 2014 were identified. This database aims to include every orthopaedic procedure performed at SVHM, and is maintained to a high standard by orthopaedic registrars. Procedures performed for cruciate ligament reconstruction were excluded.

Case data was extracted from the hospital's online medical records system according to a structured template. Administrative data was collected from the hospital's Patient Administration System to calculate Socio-Economic Index For Areas (SEIFA) [17] decile. Information regarding indication, procedure performed, operative diagnoses and use of imaging was obtained from both paper and online records. Charlson Comorbidity Index [18] was derived from data contained within the pre-operative anaesthetic and outpatient records.

Data cleaning involved the removal of duplicates (n=12), cancellations (n=14) and other inaccuracies (n=5), leaving 401 cases for analysis. Up to 3 preoperative indications or diagnoses were recorded, and where ambiguous the *primary* indication was chosen according to the relative strength of specific indication for knee arthroscopy. For example, meniscal tears were considered a stronger indication than OA, non-cruciate ligamentous pathologies, and loose bodies. Cases were grouped by primary indication for analysis (Table S2). Cases that did not state 'meniscal tear' or other specific indication, but rather described preoperative 'mechanical symptoms' such as locking and catching, were grouped together. One case of Medial Patellofemoral Ligament (MPFL) tear was included in this group. Cases where there was either no preoperative indication identified, or the data was not available were grouped as "unknown". Groups of less than 10 cases were amalgamated into the category "other".

This same priority system was applied to operative diagnoses, with notable inconsistency of the operative diagnosis of "synovitis" (see Table S2). These non-specific diagnoses were grouped according to pre-operative and discharge information; for example into 'infection' or 'rheumatological' categories.

Procedures were described as either diagnostic or interventional based on *intent*. Arthroscopies were considered diagnostic if performed for a non-specific clinical indication such as 'pain' or 'unknown' diagnosis in the absence of any other indication or imaging showing otherwise. Operations performed for clinical suspicion of septic prosthetic (but not native) knees were also considered diagnostic. Native and prosthetic joints were analysed separately.

Correlation of preoperative indication and operative diagnosis was assessed in cases of meniscal and cartilaginous pathologies, native knee infections, and loose bodies. Remaining groups were either too small, or could not be effectively analysed in this fashion.

Statistics are presented as mean (standard deviation), or number of cases (percentage). Detailed statistics are not included for groups < 15 cases. All analyses were performed using IBM SPSS v22.

Coding

In order to analyse the procedure codes applied to arthroscopic procedures information was extracted from the operation reports in 16 binary categories by the auditor – a medical student undertaking a dedicated research semester under supervision of the senior authors. This data was then coded into arthroscopic MBS codes 49558 to 49566 using a logical algorithm based on definitions as at June 2014 [16]. The Decision Support Unit (DSU) provided ‘true’ 7 digit ICD10-AM codes, and a comparison was conducted on a random sample of 30 cases; comparing codes assigned by the auditor (via algorithm), a senior orthopaedic registrar, and DSU. This sample size was chosen utilising normograms as per Hong et al. (2014) [19], assuming a marginal prevalence of 0.1/0.1/0.2/0.3/0.3 for the 5 nominal variables, a null hypothesis (H0) proportion of agreement of 0.6, and a difference between null & alternative of 0.25. The 7 digit ICD10-AM arthroscopy codes provided by hospital coders specify which subtype of that particular cost item is performed and are utilised in casemix funding; but are congruent with MBS item numbers. Cohen’s Kappa [20] was calculated as a measure of agreement between parties.

RESULTS

A total of 401 cases were analysed. The mean (StDev) age was 51.2 (16) years, 209 (52.1%) cases were male, and 227 (56.6%) procedures were performed on the right knee (4 (1%) bilateral). The mean Socio-Economic Indexes for Areas (SEIFA) [17] decile was 6.4 (2.7), with 82 (20.8%) in the lowest tertile. Three hundred and eighty six (96.3%) of the procedures were publicly insured, 10 (2.5%) privately, 3 (0.7%) as ‘overseas’ healthcare, and in 2 cases (0.5%) this data was missing. Three hundred (73.3%) patients had a Charlson Comorbidity Index (CCI) of 0, 95 (23.7%) a CCI of 1 or 2, and 12 (3%) a CCI of 3 or greater.

Diagnostic & Interventional Arthroscopy

Thirty (7.5%) arthroscopies were assessed as having diagnostic intent; though only 6 (of 375; 1.6%) of these were in native knees. The listed indications in native knees were biopsy, inflammatory arthritis, synovitis, OA staging, intramedullary nail position, and impingement. It is of note that in a further 14 native knees (3.73%) data was unavailable. In Prosthetic knees the indications were infection 16 (62%), pain 8 (31%), and 2 (therapeutic) procedures for patellofemoral instability & loose body. Findings for interventional arthroscopy in native knees are presented in Table 1, and a detailed breakdown of group constituents may be found in the supplementary data Tables S2 & S3.

Two hundred and thirty nine (90.9%) procedures for meniscal pathology carried a primary operative diagnosis of the same, while this figure was only 19 (76%) for osteoarthritis (Table S1). While a total of 266 patients had a primary operative diagnosis of meniscal pathology, 280 underwent meniscectomy or meniscal debridement in the audit period.

Coding

A random sample of 30 independently coded cases found only fair to moderate agreement between observers. Fifty seven percent of codes assigned by the registrar and the hospital coding department were concordant, indicating “fair” [20] agreement ($\kappa=0.324$, CI 0.228-0.611). The auditor and registrar were also in “fair” [20] agreement, at 60% ($\kappa=0.425$, CI 0.308-0.673). The coding department and auditor were 70% concordant, indicating “moderate” [20] agreement ($\kappa=0.572$, CI 0.438-0.707).

While the coder and auditor assigned a ‘diagnostic’ (MBS 49557 or ICD-10-AM 49557-00 to -02) code to several cases, the registrar only assigned this code once; to a septic prosthesis washout. Where discrepancies existed, hospital coders tended to code for a more complex procedure code than the auditor, and the registrar more complex than both (Table 2).

Over all 401 procedures, the audit identified 7.5% of procedures as diagnostic; however, 15.9% were coded, and hence submitted to government, as 'diagnostic'.

DISCUSSION

This retrospective audit of arthroscopy practices sought to quantify the amount of diagnostic and interventional knee arthroscopy occurring at a tertiary public teaching hospital; and to describe the patterns of reporting using ICD-10-AM codes; which form the procedural basis of casemix funding and hence VAED data. We identified that very few procedures were performed with diagnostic intent, that the most common indication for arthroscopy was meniscal pathology, and that there was a fair level of concordance in coding between a proceduralist (senior orthopaedic registrar) and the coding department.

The low incidence of diagnostic arthroscopy in native knees identified in this audit is in keeping with published literature [1, 3, 4], and likely reflects a shift towards MRI use [21]. The authors however note that the distinction between diagnostic or interventional arthroscopy is difficult; particularly as the procedure can be both [9]. A limitation of our retrospective data is that diagnostic intent was derived from written notes and accepted practice; in a procedure for which indications are controversial [9]. Despite these considerations, our findings would suggest that the true proportion of diagnostic arthroscopy is inadequately quantified by review of administrative data alone.

The majority of procedures in prosthetic joints were diagnostic, and the therapeutic utility of arthroscopic surgery in this group has been questioned [5, 22, 23].

The majority of therapeutic procedures in the audit were performed for meniscal tears. Arthroscopic meniscectomy is a very common procedure [10, 24], though its value in degenerative tears has been recently challenged [12, 13, 15]. Degenerative meniscal tears typically occur in patients over 40 years, and are associated with age-related degradation of

meniscal tissue [21] and the presence of OA [13]. While it was difficult to ascertain whether the tear was degenerative or traumatic in a retrospective analysis, the high comorbid OA in meniscectomy groups suggests practices are not congruent with published literature [12-15]. Evidence for use of arthroscopy to treat OA is conflicting [6, 8, 26], but it is generally not recommended [27]. The high congruence between indication and operative diagnosis is likely a reflection of pre-operative MRI accuracy [4].

In our coding comparison, formally submitted ICD-10-AM codes were compared with their MBS equivalents assigned by the auditor & senior orthopaedic registrar. ICD-9-AM and ICD-10-AM procedure codes are based on the MBS, and describe the same procedures in more detail. While the kappa values are not statistically significant, our audit identified fair to moderate agreement between the three coding parties, and should we assume the registrar as gold standard the accuracy fell short of the 84.2% average quoted by a recent review [30]. As coding of procedures is seemingly quite subjective and complex a larger sample size would be of uncertain benefit here, and to formally assess coding accuracy an alternative study design would be required. The level of disagreement seen is however sufficient to question coding practices; be that in surgeons or coders.

The discrepancy between diagnostic intent and diagnostic procedure coding would suggest that the 'diagnostic' codes do not necessarily represent diagnostic arthroscopies. However, all arthroscopic knee procedures correlated with arthroscopic procedure codes, and the data is correct insofar as an arthroscopic procedure code means that *an arthroscopic procedure* occurred. Given publications utilising VAED or CHeReL data such as Bohensky et al [10] and Harris et al [11] did not differentiate between arthroscopy codes, our audit suggests that the data accessed in these studies is accurate to purpose.

The implications of our findings are significant for public hospital and proceduralist funding streams, which rely on the accuracy of these codes for fair remuneration. The SVHM coding department overall underestimated the complexity of procedures relative to a senior

orthopaedic registrar in the audit; which would directly result in reduced funding for those cases. In other centres, it is possible that this balance is skewed in the opposite direction, leading to excess Medicare rebates for knee arthroscopy.

A significant strength of this study is the use of an independent orthopaedic database and a thorough data extraction protocol. Large studies [10, 11] often utilize public hospital databases or claims data, which are collected for a variety of reasons and can be inaccurate, or of limited resolution as demonstrated in our review. Our audit was able to record detailed data allowing for in-depth assessment of the use of arthroscopic knee surgery in a public setting. The use of this database however also limits the generalisability of the findings as data were sought from one metropolitan public hospital. Missing data was a limitation of this study, and operative indication was unavailable or incomplete in 19 cases.

Conclusion

In this audit of knee arthroscopy partial meniscectomy was the most commonly performed procedure, while arthroscopy for osteoarthritis in the absence of known meniscal pathology was uncommon. Diagnostic arthroscopy of the native knee was also rarely performed. There was fair to moderate agreement between an orthopaedic registrar, auditor and hospital coders in assigning Medicare Benefit Schedule coding. Due to this disagreement, the authors would question the integrity of ICD-10-AM (i.e. VAED) data in its differentiation between knee arthroscopic procedures; particularly between those with diagnostic or therapeutic intent.

References;

1. Selesnick FH, Noble HB, Bachman DC, Steinberg FL. Internal derangement of the knee: diagnosis by arthrography, arthroscopy, and arthrotomy. *Clinical Orthopaedics & Related Research*, 1985; **198**: 26-30.
2. Ireland J, Trickey EL, Stoker DJ. Arthroscopy and arthrography of the knee: a critical review. *The Journal Of Bone And Joint Surgery (UK)*, 1980; **62-B**(1): 3-6.
3. von Engelhardt LV, Lahner M, Klusmann A, et. al. Arthroscopy vs. MRI for a detailed assessment of cartilage disease in osteoarthritis: diagnostic value of MRI in clinical practice. *BMC Musculoskeletal Disorders*, 2010; **11**: 75-754. Carmichael IW, MacLeod AM, Travlos J. MRI CAN PREVENT UNNECESSARY ARTHROSCOPY. *Journal of Bone & Joint Surgery (UK)*, 1997; **79-B**(6): 624-625.
5. Verhelst L, Vanhegan IS, Haddad FS. Evaluation of the painful total knee replacement. *Techniques in Orthopaedics*, 2011; **26**(2): 56-61.
6. Laupattarakasem W, Laopaiboon M, Laupattarakasem P, Sumananont C. Arthroscopic debridement for knee osteoarthritis. *Cochrane Database Syst Rev*, 2008(1); Cd005118.
7. Kirkley A, Birmingham TB, Litchfield RB, et al. A randomized trial of arthroscopic surgery for osteoarthritis of the knee. *New England Journal of Medicine*, 2008; **359**(11): 1097-1107.
8. Reichenbach S, Rutjes AWS, Nüesch E, Trelle S, Jüni P. Joint lavage for osteoarthritis of the knee. *Cochrane Database Syst Rev*, 2010(5): Cd007320.
9. Mayr HO, Rueschenschmidt M, Seil R, et. al. Indications for and results of arthroscopy in the arthritic knee: A European survey. *International Orthopaedics*, 2013; **37**(7): 1263-1271.
10. Bohensky MA, Sundararajan V, Andrianopoulos N, et. al. Trends in elective knee arthroscopies in a population-based cohort, 2000-2009. *Medical Journal of Australia*, 2012; **197**(7): 399-403.
11. Harris IA, Madan NS, Naylor JM, Chong S, Mittal R, Jalaludin BB. Trends in knee arthroscopy and subsequent arthroplasty in an Australian population: A retrospective cohort study. *BMC Musculoskeletal Disorders*, 2013; **14**: 143.

12. Sihvonon R, Paavola M, Malmivaara A, et. al. Arthroscopic Partial Meniscectomy versus Sham Surgery for a Degenerative Meniscal Tear. *New England Journal of Medicine*, 2013; **369**(26): 2515-2524.
13. Katz JN, Brophy RH, Chaisson CE, et. al. Surgery versus Physical Therapy for a Meniscal Tear and Osteoarthritis. *The New England Journal of Medicine*, 2013; **368**(18): 1675-84.
14. Yim JH, Seon JK, Song EK, et. al. A comparative study of meniscectomy and nonoperative treatment for degenerative horizontal tears of the medial meniscus. *Am J Sports Med*, 2013; **41**(7): 1565-70.
15. Herrlin SV, Wange PO, Lapidus G, Hållander M, Werner S, Weidenhielm L. Is arthroscopic surgery beneficial in treating non-traumatic, degenerative medial meniscal tears? A five year follow-up. *Knee Surg Sports Traumatol Arthrosc*, 2013; **21**(2): 358-64.
16. Medicare Benefits Schedule. *Department of Human Services (AUS)*, 2014(March).
17. Census of population and housing: Socio-Economic Indexes for Areas (SEIFA), Australia - Technical paper. *Australian Bureau of Statistics*, 2004; (ABS Cat. No. 2039.0.55.001.) <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2039.0.55.0012001?OpenDocument> (accessed Jul 2012).
18. Charlson ME, Sax FL, MacKenzie CR, Braham RL, Fields SD, Douglas RG Jr. Morbidity during hospitalization: can we predict it? *Journal Of Chronic Diseases*, 1987; **40**(7): 705-712.
19. Hong et al (2014) Normogram for sample size calculations on a straightforward basis for the kappa statistic, *Annals of Epidemiology*.
20. Viera AJ, Garrett JM. Understanding interobserver agreement: The kappa statistic. *Family Medicine*, 2005; **37**(5): 360-363.
21. McDermott, I. Meniscal tears, repairs and replacement: their relevance to osteoarthritis of the knee. *British Journal of Sports Medicine*, 2011; **45**(4): 292-297.
22. Mandalia V, Eyres K, Schranz P, Toms AD. Evaluation of patients with a painful total knee replacement. *Journal of Bone & Joint Surgery (UK)*, 2008; **90-B**(3): 265-271.
23. Davda K, Nathwani D. (i) Investigation of the painful knee arthroplasty. *Orthopaedics and Trauma*, 2012; **26**(2): 69-79.

24. Klinger HM, Baums MH, Spahn G, Ernstberger T. A Study of Effectiveness of Knee Arthroscopy After Knee Arthroplasty. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, 2005; **21**(6): 731-738.
25. Montgomery SR, Zhang A, Ngo SS, Want JC, Hame, SL. Cross-sectional Analysis of Trends in Meniscectomy and Meniscus Repair. *Orthopedics*, 2013; **36**(8): e1007-e1013
26. Spahn, G, Hofmann GO, Klinger HM. The effects of arthroscopic joint debridement in the knee osteoarthritis: Results of a meta-analysis. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2013; **21**(7): 1553-1561.
27. Choong, PFM. Dowsey MM. Update in surgery for osteoarthritis of the knee. *International Journal of Rheumatic Diseases*, 2011; **14**(2): 167-174.
28. Steadman JR, Rodkey WG, Rodrigo JJ. Microfracture: Surgical Technique and Rehabilitation to Treat Chondral Defects. *Clinical Orthopaedics and Related Research*, 2001; **391**: s362-s369.
29. Krishnan SP, Hart AJ, Skinner JA, Blackburn JS. Arthroscopic removal of loose bodies - a useful technique. *Annals Of The Royal College Of Surgeons Of England*, 2006; **88**(2): 226-227.
30. Burns EM, Rigby E, Mamidanna R, et. al. Systematic review of discharge coding accuracy. *Journal of Public Health*, 2012; **34**(1): 138-148.

List of Supporting Information

List of Supporting Information

Table S1 – Indication & Operative Diagnosis

Table S2 – Preoperative & Operative Grouping

Table S3 – Analysis of Meniscal Group

Tables & Figures;

Table 1; Interventional Arthroscopy (Native)

Indication	No.	%	Mean Age (StDev)	MRI Pre- Op	%
Meniscal Pathology	263	71.3%	52 (14.7)	223	84.8%
Infection	28	7.6%	47.9 (17.1)	2	7.1%
Osteoarthritis	24	6.5%	54 (10.1)	9	37.5%
Chondral Pathologies	11	3.0%	37.4 (11.4)	11	100.0%
Loose Bodies	12	3.3%	31.6 (11.8)	9	75.0%
Mechanical Symptoms	10	2.7%	42.6 (13.9)	2	20.0%
Other	11	3.0%	n/a	n/a	n/a
Unk./Missing Data	10	2.7%	n/a	n/a	n/a
Total	369	100.0%	(All Native)	267	71.2%

Table 1; interventional arthroscopy in native knees, Mean Ages, Proportions with pre-operative MRI

Table 2; Arthroscopy Codes & Sample Data

MBS	ICD10	Description	Registrar	Auditor	Coders
49557	-00, -01, -02	Arthroscopy of Knee (diagnostic +/- biopsy or meniscal margin excision)	1	10	5
49558	-00, -01, -02	Arthroscopic debridement, chondroplasty, or osteoplasty	6	1	6
49559	-00	Arthroscopic chondroplasty with multiple drilling	0	0	0
49560	-00, -01, -02, -03	Arthroscopic partial or total meniscectomy, removal of loose body or lateral release	4	6	3
49561	-00, -01, -02	Arthroscopic partial or total meniscectomy, removal of loose body or lateral release; with associated debridement, osteoplasty or chondroplasty	18	13	15
49562	-00, -01, -02	Arthroscopic partial or total meniscectomy, removal of loose body or lateral release; with chondroplasty requiring multiple drilling or carbon fibre (or similar) implant and associated debridement or osteoplasty	0	0	0
49563	-00	Arthroscopic meniscus repair; osteochondral graft; or chondral graft (excluding autologous or matrix induced autologous chondrocyte implantation)	1	0	0
49566	-00	Arthroscopic meniscal repair	0	0	1

Table 2; Descriptions of arthroscopic knee procedure codes (excluding those not assessed in our audit, i.e. reconstruction) and quantities assigned in a sample of 30 cases.