Knee Pathway (V9) 30.04.2019

SELF-CARE AND SELF-MANAGEMENT

Integrated MSK Service Website: https://sussexmskpartnershipcentral.co.uk/

OUTCOME MEASURES

- MSK-HQ
- Oxford Knee Score

Referral reason / Patient presentation	Osteoarthritis Knee Established
Primary Care Management	Consider 6 weeks of conservative management prior to referral Examination, History & Assessment Age History Co-morbidities Joint examination Signpost patient to Knee Decision Aid Investigation: WBing AP & Lateral X-Ray if appropriate Management (including condition-specific self-care options): Patient education ADL modifications Step-wise approach to analgesia – follow the analgesic ladder Consider steroid injection NICE OA Advice - Core Access to appropriate information: Offer accurate verbal and written information to enhance understanding of osteoarthritis and management of the condition OA leaflet http://sussexmskpartnershipcentral.co.uk/wp-content/uploads/2016/11/OA-Knee-1.pdf Activity and Exercise: Exercise should include local muscle strengthening and general aerobic fitness Interventions to help weight loss: Offer to people with osteoarthritis who are overweight or obese Health Trainers

Thresholds for Primary Care	Refer to Physiotherapy or patient to self-refer to Physiotherapy - Integrated MSK Service if:
to initiate a referral	flare ups are not settling, or patient does not want a surgical intervention
	Refer to SMSKP (AP / Co-located clinic) -
	X-Ray required - if:
	patient wants surgery e.g. night pain / reduced ADLs / failure to respond to analgesia & therapy - exercise programme for more than 6 months
Management Pathway for the	Patient education and information
Integrated MSK Service	Assessment and Examination (in AP clinic)
	Clinical examination and history
	Review recent imaging X Book if not done to do to.
	 X-Ray if not done to date Review with patient the Knee Decision Aid
	Establish CEC is met
	Medication review and adjustment
	 Joint injection – Efficacy within more established OA is unlikely to be of value. Ensure patient is informed no surgery within 3 months
	Consider Health Trainers support regarding lifestyle changes and weight-loss
	Unloader brace for consideration in the presence of unicompartmental disease
	Joint injection information leaflet: http://sussexmskpartnershipcentral.co.uk/wp-content/uploads/2016/03/Joint-injections.pdf
Thresholds for referral for	If consideration of arthroplasty compliance with CEC guidelines:
Intervention	
	Established OA on X-Ray
Offer patient choice of provider	Uncontrolled, intense, persistent pain resulting in substantial impact on quality of life and moderate functional limitations which have failed for appropriate period
	of conservative treatment or management
	 Physiotherapy, patient education, orthosis, lifestyle improvements have been applied within OA management framework BMI > 35 offer weight loss management services whilst BMI > 40 will not routinely be listed for arthroplasty
	Bivil > 55 offer weight loss management services whilst bivil > 40 will not routinely be listed for artificipliasty
	Offer patient choice of provider if patient needs and wants injections / denervation is fit for the intervention and is appropriate candidate.
Management pathway for	Surgery as appropriate
Specialist In-patient care	Options may include:
	Unicompartmental knee replacement
	Upper tibial osteotomy TKR
	Arthroscopy is not indicated in the presence of OA

Referral reason / Patient presentation	Acute Meniscal Tear (under 35 years of age)
Primary Care Management	Assessment History trauma/trigger/insidious red flags/mechanical signs e.g. locking/instability Examination-ROM, swelling, ligament testing, joint line tenderness Exclude inflammatory pathology / rheumatology opinion Management (including condition specific self-care options). E.g.: Pain relief in line with agreed formularies / guidance
Thresholds for Primary Care to initiate a referral	Refer to A&E or acute knee clinic for acutely locked knee Urgent referral to MSK service
Management Pathway for the Integrated MSK Service	Assessment • History (as before) • Examination (as before) • Diagnostics – XR / MRI Management Diagnostics – urgent MRI
Thresholds for referral for Intervention Offer patient choice of provider	Urgent referral to orthopaedics / co-located knee clinic if MRI confirms meniscus tear for consideration of meniscus repair surgery.
Management pathway for Specialist In-patient care	

Referral reason / Patient presentation	Acute Meniscal Tear (over 35 years of age)
Primary Care Management	Assessment History trauma/trigger/insidious red flags/mechanical signs e.g. locking/instability Examination-ROM, swelling, ligament testing, joint line tenderness Diagnostics-consider WB XR AP / Lat Exclude inflammatory pathology / rheumatology opinion
	 Management (including condition specific self-care options). E.g.: Pain relief in line with agreed formularies / guidance Reassurance that unlikely need for surgery Advice upon basic exercises and activity modification
Thresholds for Primary Care to initiate a referral	Refer to A&E or acute knee clinic for acutely locked knee
	Refer to Physiotherapy if: no improvement at 6/52 OR ADLs affected and no joint locking
	Refer to ICATS routinely if: Persistent pain despite conservative management +/- locking Instability Poor response to analgesics / severe pain
Management Pathway for the Integrated MSK Service	Assessment History (as before) Examination (as before)
	Management Diagnostics - MR Exercise program Signposting to relevant self-management support (e.g. weight loss support, right track, HWP)
Thresholds for referral for Intervention	Referral to orthopaedics MRI confirmed painful meniscal tear
Offer patient choice of provider	 Locking knee OR No improvement 3/12 rehabilitation and injection No significant OA on X-Ray
Management pathway for Specialist In-patient care	

Referral reason / Patient presentation	Degenerative meniscal tear See ESSKA guidelines https://cdn.ymaws.com/www.esska.org/resource/resmgr/Docs/2016-meniscus-consensus-proj.pdf
Primary Care Management	 Assessment Age < 35 years History trauma / trigger / insidious red flags / mechanical signs e.g. locking / giving way, previous surgery Examination-ROM, swelling, ligament testing, joint line tenderness Diagnostics-consider WB XR AP / Lat (MRI usually unnecessary unless true locking / giving way / severe pain / red flags – in which case refer to AP clinic) Exclude inflammatory pathology – rheumatology opinion
	 Management (including condition specific self-care options). E.g.: Pain relief in line with agreed formularies / guidance including NSAIDs Consider steroid injection Patient education / exercise sheet (see NICE OA guidance) Reassurance Activity modification Advise if pain increases, re-present to GP Refer to physio at 6/52
Thresholds for Primary Care to initiate a referral	 If severe pain refer to ICATS Refer to Physiotherapy if: If no improvement at 6/52 OR ADLs affected
	 Mild OA or XR Injection may be considered in physiotherapy if no injection to date Refer to Advanced Practitioner (ICATS) if: No improvement following 3/12 of rehabilitation OR mechanical signs of locking OR significant loss of function / ADLs Poor response to analgesics / severe pain
	ESSKA guidelines https://cdn.ymaws.com/www.esska.org/resource/resmgr/Docs/meniscus-consensus-project-s.pdf
Management Pathway for the Integrated MSK Service	Assessment History (as before) Examination (as before) Diagnostics – X-Ray / MRI Management Weight loss Exercise program Signposting to relevant self-management support (e.g. right track, HWP) Consider steroid injection
Thresholds for referral for	Signposting / self-management info https://sussexmskpartnershipcentral.co.uk/wp-content/uploads/2018/07/Meniscal-Tears.pdf Secondary care
Intervention	 No improvement following 3/12 of rehab +/- injection Mechanical signs: locking
Offer patient choice of provider	 MRI reveals degenerative meniscal tear Offer patient choice of provider if patient needs and wants injections / denervation is fit for the intervention and is appropriate candidate.
Management pathway for Specialist In-patient care	Arthroscopic meniscectomy may be considered if the patient is still symptomatic after 3-4 months of appropriate conservative management

Referral reason / Patient presentation	MCL sprain
Primary Care Management	Assessment History: mechanism of onset, focal location of pain over MCL, examination. No diagnostic. Examination Working / differential diagnosis Management Management
	 If no significant loss of function or strength Pain relief in line with agreed formularies / guidance. Patient advice and education: PRICE Patient education / exercise sheet file://5p6fs003/5p6p-rdf/BarnardK/Downloads/knee-pain-pamphlet%20(1).PDF Activity modification. Advise to self-refer to physiotherapy if pain not improving within 4-6 weeks
Thresholds for Primary Care to initiate a referral	Urgent referral to iCATS within 2/52 if: difficulty weight bearing, instability and loss of function Refer to physiotherapy if: strength and function maintained but symptoms persist beyond 4 weeks
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	Assessment History: sudden vs gradual onset. Examination: significant joint effusion, localised pain, and positive ligament stress testing. Differential diagnosis Acute vs chronic MCL vs medial meniscus
	Diagnostics Consider investigations (MRI and XR) if symptoms persist despite physio.
	Management Consider hinged knee brace, full ROM, needed. If isolated MCL injury manage in ICATS With co-existing injury see relevant pathway
Thresholds for referral for Intervention	N/A
Offer patient choice of provider	
Management pathway for Specialist In-patient care	N/A

Referral reason / Patient presentation	Osteochondral Defect Pathway
Primary Care Management	Assessment Often < 35 years Mechanism of injury – often torsional weight bearing trauma May be present at rest Likely exacerbated with weight bearing The knee may give way if a long-standing injury results in substantial muscle wasting or there is associated ligamentous instability Locking is reported if a loose fragment impedes articular movement There may be an effusion Tenderness is found on palpation of the joint line, with pain induces both by passive and active movements Wasting of the quadriceps will be seen later on Crepitus is palpable on passive joint movement in a usually stable knee
Thresholds for Primary Care to initiate a referral	Urgent referral to fracture clinic or acute knee clinic if: • Evidence of relevant mechanism of injury • Effusion • Locking Weight bearing X-Ray
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	N/A
Thresholds for referral for Intervention Offer patient choice of provider	N/A
Management pathway for Specialist In-patient care	Surgical management may include: 1. Micro fracture and drilling 2. Pinning 3. Mosaicplasty 4. Allograft Osteoarticular Transplantation (OATS)

Referral reason / Patient presentation	Osteochondral Defect Pathway
Primary Care Management	Chronic OCD often picked up incidentally on imaging
	Assessment Often < 35 years Mechanism of injury – often torsional weight bearing trauma May be present at rest Likely exacerbated with weight bearing The knee may give way if a long-standing injury results in substantial muscle wasting or there is associated ligamentous instability Locking is reported if a loose fragment impedes articular movement There may be an effusion Tenderness is found on palpation of the joint line, with pain induces both by passive and active movements Wasting of the quadriceps will be seen later on Crepitus is palpable on passive joint movement in a usually stable knee
Thresholds for Primary Care to initiate a referral	Chronic (> 6 months) Routine ICATS referral
Management Pathway for Physiotherapy	

Management Pathway for the Integrated MSK Service	History Question nature of activity / sport Confirm specific mechanism and nature of injury Onset of swelling Ongoing locking Pain at rest Worse with weight bearing Assessment Effusion Palpable crepitus Ongoing locking Tender predominantly over joint line Common differentials or co-injuries may include: OA, meniscal injury, patellofemoral pain or ligamentous injury
	Common differentials or co-injuries may include: OA, meniscal injury, patellotemoral pain or ligamentous injury MRI scan if OCD suspected
Thresholds for referral for	Management Consider: 1. DAPOT X-Ray if not done 2. MRI 3. Physiotherapy if patient declines surgery 4. Off-loader brace 5. Injections 6. Pain relief Osteochondral defects should be referred for a surgical opinion unless the patient declines surgical management
Intervention Offer patient choice of provider	Offer patient choice of provider if patient needs and wants injections / denervation is fit for the intervention and is appropriate candidate.
Management pathway for Specialist In-patient care	1. Micro fracture and drilling 2. Pinning 3. Mosaicplasty 4. Allograft 5. Osteoarticular Transplantation (OATS)

Referral reason / Patient presentation	Spontaneous Osteonecrosis of the knee (SONK) Insufficiency fractures (due to underlying OA)
Primary Care Management	 Assessment History - acute onset of knee pain, atraumatic, worse on weight bearing, Night pain Examination - Effusion, Medial femoral condyle tenderness. Pain out of proportion to any X-Ray findings X-Ray (usually normal) useful to rule out severe OA, other fracture
	 Management: NSAIDs Reduce weight bearing Weight loss Vitamin D deficiency
Thresholds for Primary Care to initiate a referral	Urgent referral to ICATS if: significant/severe pain (typical of SONK) with exquisite condylar tenderness and normal appearance on X-Ray.
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	Consider investigations Urgent MRI if suspects SONK Consider bloods Partial weight bearing with appropriate walking aids. Unloader bracing if not suitable or cannot use elbow crutches. Reassessment at 6/52 for improvement in pain and tenderness before allowing increased weight bearing. Consider reimaging to assess bone oedema Consider referral to bone health specialist
Thresholds for referral for Intervention Offer patient choice of provider	 Failure to improve after 3/12 of non-operative treatment, WB protection Size of lesion >3.5cm² or > 50 of fem condyle Any chondral collapse on repeat imaging
Management pathway for Specialist In-patient care	

Referral reason / Patient presentation	Patella Tendinopathy
Primary Care Management	Assessment: Associated with increased training volume and frequency. Linked to activities demanding energy storage and release from the tendons Pain localised to the inferior pole of the patella Load dependent pain increases as load increases Rarely pain at rest
	 Management: Reduce load to tendon with exercise/ training modification. Possibly use patella tendon strap Pain relief in line with agreed formularies / guidance Advise to self-refer to physiotherapy if does not improve within 6 week
Thresholds for Primary Care to initiate a referral	Referral for physiotherapy treatment if: pain persists and does not respond to activity modification and pain relief for a period of 6 weeks Refer to ICATS if: it does not respond to 3 months of appropriate physiotherapy
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	Consider ultrasound if pain persists and does not respond to physiotherapy treatment.
Thresholds for referral for Intervention Offer patient choice of provider	Consider opinion of orthopaedic knee specialist if not responding to conservative treatment in the form of extensive rehabilitation over 6 months, exercise modification and pain relief.
Management pathway for Specialist In-patient care	

Referral reason /	Patellofemoral Pain
Patient presentation	Falenoiemoral Familia
Primary Care Management	Assessment Mechanism of injury Location of pain – over patella Management (including condition specific self-care options). Eg: Pain relief in line with agreed formularies / guidance Patient education / exercise sheet http://sussexmskpartnershipcentral.co.uk/wp-content/uploads/2016/07/Managing-my-patellofemoral-pain.pdf Reassurance Activity modification
	Advise if pain does not respond to 6 weeks of conservative management to self-refer to physiotherapy
Thresholds for Primary Care to initiate a referral	Refer to physiotherapy if: Symptoms persist beyond 6 weeks
Management Pathway for Physiotherapy	•
Management Pathway for the Integrated MSK Service	 Physiotherapy for at least 3 months had not helped X-Ray – AP and lateral – weight bearing Consider MRI (with tracking views) if Ax demonstrates possible patella instability or abnormal tracking Consider psychosocial drivers Consider steroid injection
Thresholds for referral for Intervention Offer patient choice of provider	If MRI demonstrates abnormal significant P/F pathology- OA or damage to extensor mechanism
Management pathway for Specialist In-patient care	

Referral reason / Patient presentation	Patella dislocation Acute
Primary Care Management	 Assessment History: often traumatic lateral dislocation of the patella Examination: painfully limited range of movement with pain anteriorly
	Diagnostics X-Ray to rule out bony injury
	Management Immobilise
	Refer to physiotherapy urgently
Thresholds for Primary Care to initiate a referral	Referral to A&E if: patella not reduced
	Urgent referral to physiotherapy if: patella reduced
	Referral to ICATS if: it does not respond to 6 weeks of physiotherapy
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	1 st time dislocation-DAPOT X-Ray if not done by primary care and consider MRI (with tracking views)
Thresholds for referral for Intervention	Urgent referral to secondary care If MRI shows rupture of p/f ligament or quadriceps mechanism
Offer patient choice of provider	If MRI demonstrates abnormal significant P/F pathology- OA or damage to extensor mechanism
Management pathway for Specialist In-patient care	

Referral reason / Patient presentation	Patella dislocation Chronic
Primary Care Management	Assessment History: recurrent history of patella dislocation Examination Diagnostics None
	 Management If no significant loss of function or pain Pain relief Activity modification Advise to self-refer to physiotherapy if symptoms persist more than 6 weeks
Thresholds for Primary Care to initiate a referral	Referral to Physiotherapy Routine- if symptoms persist after 6 weeks. Refer to ICATS if patient not responding to physiotherapy after 3/12 of rehabilitation
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	Consider MRI scan (with tracking views)
Thresholds for referral for Intervention	If pain and function significant- onward referral for possible tibial tubercle transfer or trochlioplasty
Management pathway for Specialist In-patient care	

Referral reason / Patient presentation	Muscle strain
Primary Care Management	Assessment History Examination – pain on activity, stretching, palpation Consider serious pathology Mo Diagnostics Management
	If no significant loss of function or strength Pain relief in line with agreed formularies / guidance Patient advice and education: PRICE Activity modification, consider relative rest for a few days or use of crutches Review after 5-7 days if lack of improvement, difficulty walking or unable to weight-bear. Advise to self-refer to physiotherapy if not improving within 6 weeks
Thresholds for Primary Care to initiate a referral	Refer to A&E if: tendon rupture, complete tear or > ½ cm belly Acute weakness Palpable gap History of trauma
	Refer to Physiotherapy if: Symptoms not showing signs of improvement, symptoms deteriorating or new symptoms develop or are disproportionate to degree of trauma. Refer to ICATS if: Not responding to 6-8 weeks physiotherapy
Management Pathway for Physiotherapy	
Management Pathway for the Integrated MSK Service	Diagnostics: US or MRI to exclude any other cause of symptoms
Thresholds for referral for Intervention Offer patient choice of provider Management pathway for	Confirmation of muscle tear on imaging Refer as appropriate
Specialist In-patient care	

Referral reason / Patient presentation	Anterior Cruciate Ligament Injury Pathway
Primary Care Management	Assessment: Mechanism of injury (flexion/valgus/internal rotation or hyperextension), immediate swelling +/- bruising, ongoing reported instability. Instability on testing, effusion present Management: Possible Acute Rupture: Refer as urgent into ICATS within 2/52 (see next column under Acute (< 6months). Advice around protection, rest, ice, compression, elevation, range of movement exercises with a focus on maintaining. Advice full knee extension. MSKP leaflet on ACL Possible Chronic Rupture See next column under Chronic (>6 months) N.B. Reported instability = true giving way
Thresholds for Primary Care to initiate a referral	Acute (< 6 months) 1. Urgent Referral iCATS: Evidence of relevant mechanism of injury Evidence of instability on assessment Effusion Reported instability Chronic (> 6 months) 1. Routine Physiotherapy Referral: Evidence of relevant mechanism of injury Possible instability on testing Nii reported instability Has not had any effective rehabilitation Able to carry out activities somewhat to pre-injury level Evidence of relevant mechanism of injury Vidence of relevant mechanism of injury Vidence of relevant mechanism of injury Vidence of instability on testing Reported instability on testing
Management Pathway for Physiotherapy	

Management Pathway for the Integrated MSK Service	History: Question nature of activity / sport Confirm specific mechanism and nature of injury Onset of swelling Ongoing reported instability Assessment: Instability (effusion may mask this) Effusion Differentials or co-injuries may include: PCL injury, posterolateral comer injury, tibial plateaux / fibular head fracture, isolated or co-existing meniscal injury, isolated or co-existing collateral ligament tear. MRI scan if ACL injury suspected
Thresholds for referral for Intervention Offer patient choice of provider	All patients should be offered physiotherapy regardless of surgical or conservative management of confirmed ACL rupture. Discussion with patient explaining risks and benefits of ACL reconstruction – offer choices.
	Before referring on consider: Acute injury: What are the patient's goals and expectations of potential surgery? Age Previous rapture Meniscal co-injury Ongoing instability Does the patient have full knee extension? Chronic injury: What are the patient's goals and expectations of potential surgery? Is pain main issue? Age Previous rupture Meniscal co-injury Any OA Ongoing instability Does the patient have full knee extension? Previous effective rehabilitation (minimum 4 months)? Co-existing knee pain limiting rehabilitation MSKP ACLR leaflet https://sussexmskpartnershipcentral.co.uk/wp-content/uploads/2018/07/Revised-ACL-risk-benefit-doc.pdf
Management pathway for Specialist In-patient care	1. Physiotherapist led rehabilitation prior to surgery
	2. ACL Reconstruction

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