Appendix 1. Algorithm – Holistic assessment, diagnosis and management of knee and/or hip osteoarthritis

Assessment and diagnosis

Holistic assessment

- Effect on person's function, quality of life, occupation, mood, relationships and leisure activities
- · History of presenting symptoms and pain assessment
- · Red flags: Signs and symptoms of infection, history of cancer, unexpected weight loss and fractures
- Medication use, doses, frequency, effectiveness and side effects
- · Quality of sleep and fatigue
- Psychological factors
- · Health beliefs, concerns, expectations and knowledge
- · Modifiable risk factors (eg obesity, physical activity)
- Comorbidities

Physical examination for the knee (unless otherwise specified)

- Malalignment or deformities
- Bony enlargement
- Effusion
- Joint line tenderness
- Restricted movement
- Physical performance
- Crepitus
- Gait abnormalities (knee and hip)
- Limited range of motion (hip internal rotation, hip flexion or knee flexion/extension)
- Pain on hip internal rotation and flexion

Clinical diagnosis without further assessment

- Aged ≥45 years
- · Activity-related joint pain
- Morning stiffness lasts <30 minutes

Formulate an individualised management plan tailored to person's needs, values and preferences

- Educate individual on disease aetiology, risk factors, persistent pain and prognosis
- Inform individual about treatment options, including benefits, harms and costs
- Emphasise exercise and weight management
- Counter common misconceptions
- Encourage individual to take an active role in the management of their condition
- Establish treatment goals and monitor periodically to maximise adherence and behaviour change

Exclude alternative or additional diagnosis

- · Crystal arthropathy
- Spondyloarthropathies
- · Inflammatory arthritis
- Septic arthritis
- Fibromyalgia
- Tendinopathy
- Osteonecrosis

Additional tests if atypical symptoms or red flags

- X-rays: if alternative diagnoses are suspected
- Magnetic resonance imaging (MRI) or ultrasound: if suspicion of serious pathology not detected by X-ray
- Laboratory tests: if inflammatory or immune diseases are suspected

Referral to a specialist for Medicare Benefits Schedule (MBS) reimbursed MRI tests

Do not request routine imaging to diagnose osteoarthritis (OA) unless for atypical or severe symptoms

Management

Non-surgical management for knee and/or hip OA

Core: Long-term management

- STRONG Ongoing education and information about disease management and prognosis
- STRONG Land-based exercise
- STRONG Weight management (aim for loss ≥5% body weight if overweight or obese)

Referral to allied health and multidisciplinary care as required (below for existing services)

Optional adjunctive management - Trial for short term and cease if ineffective

- CONDITIONAL Aquatic-based exercise
- CONDITIONAL Thermal therapy (ie heat pad)
- CONDITIONAL Massage, manipulation and mobilisation
- CONDITIONAL Assistive walking devices
- CONDITIONAL Cognitive behavioural therapy (CBT) for pain coping or psychological symptoms
- CONDITIONAL Transcutaneous electrical nerve stimulation (TENS)
- CONDITIONAL Nonsteroidal anti-inflammatory drugs (NSAIDs)

- Regular patient review
- Reassess effectiveness
- Monitor drug side effects

Advanced pharmacological attempts - Trial for short term if symptom still persistent

- CONDITIONAL Intra-articular corticosteroid if a flare of symptoms or rapid pain relief is required
- CONDITIONAL Duloxetine (off-label use)

Referral to a specialist if symptoms increase with severe functional impairment despite the best conservative management

Surgical management for knee and/or hip OA

Consider joint replacement surgery for severe disease when all conservative options have failed

- Perform X-ray to confirm disease severity
- Referral to an orthopaedic surgeon

Do not refer for arthroscopic procedures unless the patient also has true mechanical locking

For detailed services and prescribing information

- Victoria Osteoarthritis Hip and Knee Service (www2.health.vic.gov.au/hospitals-and-health-services/patient-care/specialist-clinics/osteoarthritis-hip-knee-service)
- NSW Osteoarthritis Chronic Care Program (www.aci.health.nsw.gov.au/resources/musculoskeletal)
- NSW Pain management services (www.health.nsw.gov.au/pharmaceutical/doctors/Pages/pain-management-services.aspx)
- Get Healthy Service (www.gethealthynsw.com.au)