1. SCOPE AND PURPOSE OF GUIDELINE

- **Objective:** This guideline covers diagnosis, assessment, and management of osteoarthritis in adults. It covers both pharmacological and non-pharmacological treatments, including referral to specialist services, surgical interventions as well as follow-up/review. This guideline aims to promote effective treatment options to control pain, improve function and quality of life, and prevent adverse events in people with osteoarthritis.

- **Target population:**
  - Adults with a working diagnosis of osteoarthritis
  - A working diagnosis of osteoarthritis, according to this guideline, should include:
    - Persistent joint pain that becomes worse with use
    - Predominantly in people age 45 years or older
    - Morning stiffness lasting no more than half an hour

- **Target users:** Health care professionals

- **Health condition:** Osteoarthritis
  - Osteoarthritis refers to a clinical syndrome of joint pain accompanied by varying degrees of functional limitation and reduced quality of life.
  - It is the most common form of arthritis, and the most commonly affected peripheral joints are the knees, hips and small hand joints.

2. KEY RECOMMENDATIONS

- **Assessment**
  - Diagnose osteoarthritis clinically without investigations if a person:
    - is 45 or over and
    - has activity-related joint pain and
    - has either no morning joint-related stiffness or morning stiffness that lasts no longer than 30 minutes
Education and self-management

- Take a holistic approach to osteoarthritis assessment and management, based on shared-decision making between the patient (and their family members or carers as appropriate) and provider; offer advice on the following core treatments to all people with clinical osteoarthritis.
  - Access to appropriate information
  - Activity and exercise
  - Interventions to achieve weight loss if the person is overweight or obese

- Offer accurate verbal and written information to all people with osteoarthritis to enhance understanding of the condition and its management, and to counter misconceptions, such as that osteoarthritis inevitably progresses and cannot be treated. Ensure that information sharing is an ongoing, integral part of the management plan rather than a single event at time of presentation.
- Agree on individualized self-management strategies with the person with osteoarthritis. Ensure that positive behavioral changes, such as exercise, weight loss, use of suitable footwear and pacing, are appropriately targeted.

Treatment: non-pharmacological management

- Advise people with osteoarthritis to exercise as a core treatment, irrespective of age, comorbidity, pain severity or disability. Exercise should include:
  - Local muscle strengthening and
  - General aerobic fitness.

  It has not been specified whether exercise should be provided or whether the healthcare professional should provide advice and encouragement to the person to obtain and carry out the intervention themselves. Exercise has been found to be beneficial but the clinician needs to make a judgement in each case on how to effectively ensure participation. This will depend upon the person's individual needs, circumstances and self-motivation, and the availability of local facilities.

- The use of local heat or cold should be considered as an adjunct to core treatments.
- Manipulation and stretching should be considered as an adjunct to core treatments, particularly for osteoarthritis of the hip.
- Offer interventions to achieve weight loss as a core treatment for people who are obese or overweight.
- Healthcare professionals should consider the use of transcutaneous electrical nerve stimulation (TENS) as an adjunct to core treatments for pain relief.
- Do not offer acupuncture for the management of osteoarthritis. *
- Do not offer glucosamine or chondroitin products for the management of osteoarthritis.
- Offer advice on appropriate footwear (including shock-absorbing properties) as part of core treatments for people with lower limb osteoarthritis.
▪ People with osteoarthritis who have biomechanical joint pain or instability should be considered for assessment for bracing/joint supports/insoles as an adjunct to their core treatments.

▪ Assistive devices (for example, walking sticks and tap turners) should be considered as adjuncts to core treatments for people with osteoarthritis who have specific problems with activities of daily living. If needed, seek expert advice in this context (for example, from occupational therapists).

▪ Treatment: pharmacological management

▪ Oral analgesics
  o Healthcare professionals should consider offering paracetamol for pain relief in addition to core treatments; regular dosing may be required. Paracetamol and/or topical non-steroidal anti-inflammatory drugs (NSAIDs) should be considered ahead of oral NSAIDs, cyclo-oxygenase 2 (COX-2) inhibitors or opioids.
  o If paracetamol or topical NSAIDs are insufficient for pain relief for people with osteoarthritis, then the addition of opioid analgesics should be considered. Risks and benefits should be considered, particularly in older people.

▪ Topical treatments
  o Consider topical NSAIDs for pain relief in addition to core treatments for people with knee or hand osteoarthritis. Consider topical NSAIDs and/or paracetamol ahead of oral NSAIDs, COX-2 inhibitors or opioids.
  o Topical capsaicin should be considered as an adjunct to core treatments for knee or hand osteoarthritis.
  o Do not offer rubefacients for treating osteoarthritis.

▪ NSAIDs and highly selective COX-2 inhibitors
  o Where paracetamol or topical NSAIDs are ineffective for pain relief for people with osteoarthritis, then substitution with an oral NSAID/COX-2 inhibitor should be considered.
  o Where paracetamol or topical NSAIDs provide insufficient pain relief for people with osteoarthritis, then the addition of an oral NSAID/COX-2 inhibitor to paracetamol should be considered.
  o Use oral NSAIDs/COX-2 inhibitors at the lowest effective dose for the shortest possible period of time.
  o When offering treatment with an oral NSAID/COX-2 inhibitor, the first choice should be either a standard NSAID or a COX-2 inhibitor (other than etoricoxib 60 mg). In either case, co-prescribe with a proton pump inhibitor (PPI), choosing the one with the lowest acquisition cost.

▪ Intra-articular injections
  o Intra-articular corticosteroid injections should be considered as an adjunct to core treatments for the relief of moderate to severe pain in people with osteoarthritis.
  o Do not offer intra-articular hyaluronan injections for the management of osteoarthritis.
□ **Treatment: invasive treatments for knee osteoarthritis**
  ▪ Do not refer for arthroscopic lavage and debridement as part of treatment for osteoarthritis, unless the person has knee osteoarthritis with a clear history of mechanical locking (as opposed to morning joint stiffness, 'giving way' or X-ray evidence of loose bodies).

□ **Referrals and collaborations**
  ▪ Referral for consideration of joint surgery: base decisions on referral thresholds on discussions between patient representatives, referring clinicians and surgeons, rather than using scoring tools for prioritization
  ▪ Refer for consideration of joint surgery
    ○ For people with osteoarthritis who experience joint symptoms (pain, stiffness and reduced function) that have a substantial impact on their quality of life and are refractory to non-surgical treatment.
    ○ Before there is prolonged and established functional limitation and severe pain

□ **Follow-up and review**
  ▪ Offer regular reviews to all people with symptomatic osteoarthritis. Agree the timing of the reviews with the person. Reviews should include:
    ○ Monitoring the person’s symptoms and the ongoing impact of the condition on their everyday activities and quality of life
    ○ Monitoring the long-term course of the condition
    ○ Discussing the person's knowledge of the condition, any concerns they have, their personal preferences and their ability to access services
    ○ Reviewing the effectiveness and tolerability of all treatments
    ○ Support for self-management
  ▪ Consider an annual review for any person with one or more of the following:
    ○ Troublesome joint pain
    ○ More than one joint with symptoms
    ○ More than one comorbidity
    ○ Taking regular medication for their osteoarthritis

3. **METHODS OF GUIDELINE DEVELOPMENT**

□ Recommendations were drafted on the basis of the NICE Guideline Development Group (GDG) interpretation of the available evidence, taking into account the balance of benefits, harms and costs. When clinical and economic evidence was of poor quality, conflicting or absent, the GDG drafted recommendations based on their expert opinion. The considerations for making consensus based recommendations include the balance between potential harms and benefits, economic or implications compared to the benefits, current
practices, recommendations made in other relevant guidelines, patient preferences and equality issues.

- To learn more: https://www.nice.org.uk/process/pmg20/resources/developing-nice-guidelines-the-manual-pdf-72286708700869

4. CCGI COMMENTS

- The CCGI recommends the use of this guideline, based on its quality and reporting as per the Appraisal of Guidelines Research and Evaluation (AGREE) II tool (available upon request).
- *The CCGI recognizes that acupuncture is one of the commonly used treatments by chiropractors in Canada and would therefore like to highlight how the NICE GDG developed this recommendation: “Overall, even though there was no evidence that acupuncture was harmful, the efficacy data failed to reach the level of a clinically important difference of acupuncture over sham acupuncture. This led the GDG to support a ‘do not offer acupuncture’ recommendation.”
- The CCGI recommends the use of this guideline to chiropractors in Canada, based on the methodology of how this guideline was developed.
- The CCGI would like to acknowledge Drs. Bret Guist, Paul Mastragostino, Jessica Wong and Hainan Yu for their contribution in critical appraisal of this guideline.