

Executive Summary

Introduction

Arthritis is a leading cause of pain, physical disability and health care utilization in Canada, affecting nearly 4 million Canadians aged 15 years and older. With the aging of the population, the number of people in Canada living with arthritis is projected to increase to 6.4 million Canadians by 2025. As a result of the significant personal, societal and economic impacts of arthritis, prevention and management of this disease is critical to public health. This report reviews best practice and evidence-based care for people with arthritis, and looks at both evidence for efficacy (what works) and evidence related to the optimum delivery of interventions (how to apply). Most of the research presented in this report pertains to the most common forms of arthritis, osteoarthritis (OA) and rheumatoid arthritis (RA), respectively.

Methods

A literature review on best practices related to primary prevention, pharmacologic interventions, and non-pharmacologic interventions including rehabilitation interventions and self-management strategies was conducted. A systematic process to critically appraise the literature was undertaken using a standardized tool. Evidence was categorized into three levels based on the following criteria:

- a) **Conclusive evidence:** Systematic review(s) and/or guideline(s) and/or one RCT that are graded “Good” or “Excellent” according to our criteria for appraisal.
- b) **Indicative evidence:** Consistent findings among multiple high quality studies other than RCTs (e.g. cohorts, case control studies, qualitative studies) and/or high quality (“Good” or “Excellent”) review(s) that are not systematic.
- c) **Emerging/Limited evidence:** One - two studies other than RCTs that are graded as “Average” or above according to our criteria for appraisal or one RCT that is graded “Average” according to our criteria for appraisal

Key Findings

In total, 291 studies were retrieved and reviewed. A description of key findings from the literature review of best practices and evidence-based care for arthritis follows.

Primary Prevention

- Prevention strategies can address only identified and modifiable risk factors.
- Prevention strategies must be feasible and accessible.
- Recommended prevention strategies include:
 - Weight control
 - Physical activity
 - Injury prevention

Pharmacologic Treatments for Osteoarthritis and Rheumatoid Arthritis

- Pharmacologic interventions for people with osteoarthritis (OA) and rheumatoid arthritis (RA) must be prescribed in conjunction with non-pharmacologic interventions including patient education, exercise, rehabilitation modalities, and referral to specialty services if necessary.

Osteoarthritis:

- Best practice for pharmacologic interventions for OA includes starting with simple analgesics, only then followed by non-steroidal anti-inflammatory drugs (NSAIDs).
- If NSAIDs are prescribed, gastrointestinal (GI) risk factors should be reviewed and gastroprotective agents should be considered.
- Opioid analgesics may be used in patients with moderate to severe pain who cannot tolerate NSAIDs.
- Intra-articular injection with Hyaluron may be considered before systemic treatment for a symptomatic dry knee joint, and cortisone injection may be considered before systemic treatment for a symptomatic inflamed knee joint.
- There is conclusive evidence that topical agents such as capsaicin and topical NSAIDs can provide short-term pain relief.
- Glucosamine, an over-the-counter agent not currently regulated, has also demonstrated efficacy for pain control.

Rheumatoid Arthritis:

- Early aggressive pharmacologic treatment can halt RA disease progression and yield better patient outcomes.
- There is conclusive evidence that all patients with RA should be offered disease modifying antirheumatic drugs (DMARDs).
- Biologic response modifiers are targeted to the basic biological mechanisms of the disease process and have shown efficacy in randomized control trials (RCT), although their long-term efficacy has yet to be determined.
- NSAIDs continue to be recommended to manage pain and inflammation (with GI protection as required).
- Some patients may require vitamin or mineral supplements.
- Low dose corticosteroids may provide short-term relief for uncontrolled disease and are often used successfully over the long-term with little risk of side effects.

Non-Pharmacologic and Rehabilitation Best Practices in the Management of Arthritis

- There is conclusive evidence in systematic reviews and/or in practice guidelines for the following non-pharmacologic rehabilitation interventions for persons with RA and OA: client education, exercise (aerobic and strengthening), joint protection instruction, assistive devices, and for RA only, orthoses (hand/wrist splint and foot orthosis).

- There is limited or emerging evidence for vocational/work rehabilitation and physiotherapy modalities.
- Persons with arthritis should receive these rehabilitation interventions early in the disease process; however, all interventions should be optimally timed based on client receptivity and need.
- An educational-behavioural approach appears to be an effective manner in which to deliver rehabilitation interventions for persons with arthritis.

Arthritis Self-Management Strategies

- There is conclusive evidence for the use of self-management programs as a best practice for arthritis management due to the short-term benefits shown in recent studies.
- Benefits are particularly positive for education delivered in a group format and are over and above what is already achieved by medications.
- Research supports psychoeducational programs with a skills-building focus as opposed to solely information-based programs.
- A focus on self-efficacy has been associated with changes in health status. Self-efficacy is also an important predictor of adherence.
- Education should be tailored to the individual needs of the patient.

Rehabilitation Best Practices in the Management of Total Joint Replacement

- There is conclusive evidence to support pre-operative education interventions to decrease patient anxiety. Pre-operative rehabilitation tailored according to anxiety or targeted to those with more complex needs (e.g. those who are more disabled or have limited social support) is beneficial in reducing length of stay for individuals undergoing THR or TKR.
- Inpatient rehabilitation following total joint replacement (TJR) is successful in improving patient functional outcomes.
- Patient characteristics that have been consistently associated with discharge to inpatient rehabilitation are older age, comorbidity, and living alone.
- There is a need to identify a standardized approach to determining optimal discharge destinations, given the evidence that is emerging that functional outcomes following TJR for individuals discharged home with home care are similar to those for individuals who receive inpatient rehabilitation.

Access to Orthopaedic Services for Arthritis

- TJR is a widely recognised effective procedure for the treatment of severe OA in terms of improvement of pain, function, and patient satisfaction.
- There is no evidence regarding a uniform definition of appropriateness of TJR. However, the emerging evidence suggests that indications are made primarily based on pain and disability.

- There is a significant population in need of TJR even after accounting for willingness to undergo the surgery.
- Long waiting times for TJR and unmet need suggest that the current level of access does not match demand in Canada.
- There is no published standard protocol for physicians to use in the management and maintenance of waiting lists in Canada. However, protocols are under investigation to standardize this practice.
- Potential positive outcomes of offering arthroscopy include high levels of satisfaction with services among patients and professionals, and improved patient-related outcomes such as quality of life. However, evidence is conflicting with regard to the effectiveness of arthroscopy for OA of the knee necessitating further research.

Summary

Arthritis creates a large burden of morbidity and disability in the population and represents a high direct and indirect cost to society. This report describes the efficacy of interventions for arthritis (what works) and the evidence related to the optimum delivery of interventions (how to apply). It provides an evidence-based foundation for the development of comprehensive interdisciplinary models of care for arthritis which are essential to ensuring people with arthritis get the right care by the right person at the right time.