



Summary

Chiropractors are musculoskeletal (MSK) experts who are extensively trained to provide comprehensive assessment, diagnosis and treatment for MSK conditions, including osteoarthritis (OA). Additionally, chiropractors are regulated health professionals governed by the College of Chiropractors of Ontario. While most known in the public eye as “back pain” specialists, the *Chiropractic Act* identifies a scope of practice and training for competencies related to assessment, diagnosis and treatment of extremity joints (i.e. hip and knee osteoarthritis).

From the *Chiropractic Act*, the Authorized Acts include¹:

Communicating a diagnosis identifying, as the cause of a person's symptoms,

- *a disorder arising from the structures or functions of the spine and their effects on the nervous system, or*
- *a disorder arising from the structures or functions of the joints of the extremities*

Although research exists related to MSK triage by a number of health care practitioners (e.g. physiotherapists, chiropractors, family physicians, nurses, nurse practitioners, podiatrists), research on working in OA centralized intake and triage programs is quite limited. The available research, however, does demonstrate chiropractors are able to fulfill the responsibilities associated with assessment, case management and screening for centralized intake of patients with osteoarthritis²⁻³. Research also highlights the importance of manual therapies for the treatment of this condition⁴⁻⁸. Most important reviews in this area have identified that “multidisciplinary support mechanisms are critical elements of successful triage systems. Patients are more concerned with access issues than professional boundaries.”⁹

The limited research around chiropractors providing care as part of OA, centralized intake and triage programs can be partly attributed to historical access limitations of chiropractors to publically funding positions in primary care and hospitals, as well as the exclusion of chiropractors from the Advanced Clinician Practitioner in Arthritis Care (ACPAC) academic and clinical training program. The OCA has been encouraging the ACPAC program to include chiropractors for a number of years.

Additionally, due to some overlap in the scopes of practices of chiropractors and physiotherapists and the shared Authorized Acts, physiotherapy specific research in osteoarthritis centralized intake and triage programs is also relevant for chiropractors, specifically related to orthopedic examinations, diagnosis, ability to rules in/out surgery and deciding on actionable non-surgery treatment.

Regarding diagnostic procedures, physiotherapists, chiropractors and MDs all use the same imaging and diagnostic tests to arrive at a diagnosis. While in practice, there might be some practitioner differences in the target goal of hip and knee assessments with respect to treatment planning, in a hip/knee screening clinic, all profession’s goals would be aligned and they would have common training. More specifically, the following summarizes relevant research and clinical education in this area:

a) Relevant Research

I. Chiropractor's ability to assess/diagnose as it relates to Hip and Knee surgical conditions

- "Orthopaedists and chiropractors can to a moderate degree differentiate between hips with or without osteoarthritis."² [Inter-Rater Study]
- "A physiotherapist, chiropractor, or occupational therapist can fulfill many of the responsibilities associated with assessment, case management, and screening [for centralized intake of patients with osteoarthritis and rheumatoid disease]"³[Case Study]
- "A physiotherapist, advanced practice nurse, or chiropractor could potentially complete the MSK screening in the OA clinics. All three providers have a sufficiently broad scope, substantive training in MSK assessments, and the ability to refer to other providers and order x-rays."³ [Case Study]

II. Manual Therapies for Treatment of OA:

- "Manual therapy combined with exercises is recommended in the management of patients with OA."⁴ [Ottawa Panel Clinical Practice Guideline]
- "The effect of the manual therapy program on hip function is superior to the exercise therapy program in patients with osteoarthritis of the hip"⁵ [Randomized Controlled Trial (RCT)]
- "For primary care patients with OA of the hip, a combined intervention of manual therapy and patient education was more effective than a minimal control intervention. Patient education alone was not superior to the minimal control intervention"⁶ [RCT, includes chiropractor providing manual therapies]
- "Participants with knee OA were randomized to 3 groups: 6 manual and manipulative therapy (MMT) sessions alone, training in rehabilitation followed by a home rehabilitation program alone, or MMT plus the same rehabilitation program, respectively... There were significant changes in scores from baseline to week 5 across all groups, suggesting that all 3 treatment approaches may be of benefit to patients with mild-to-moderate knee OA..."⁷ [RPT, includes chiropractors providing manual and manipulative therapy sessions]
- "A short-term manual therapy knee protocol significantly reduced pain suffered by participants with osteoarthritic knee pain and resulted in improvements in self-reported knee function immediately after the end of the 2 week treatment period."⁸[RCT, includes chiropractors providing manual therapies]

III. Physiotherapy Research:

- As noted in our summary, research regarding osteoarthritis centralized intakes is sparse for all health care professions. There does tend to be more research on this topic on physiotherapists compared to chiropractors, likely due to their ability to receive ACPAC training as well as the fact that more physiotherapists have historically worked in hospitals.
- With that being said, physiotherapists often employ the same modalities as chiropractors and often use the same diagnostic and assessment tools as chiropractors for patients with osteoarthritis. A preliminary search of the available evidence regarding physiotherapists shows that their assessments often involves:

- physical exams
- examining previous x-rays, and
- the Lower Extremity Functional Scale; all of which chiropractors are competent in doing.

b) Chiropractic Education and Entry-To-Practice Examination

To become a chiropractor in Ontario, the successful completion of both an accredited Doctor of Chiropractic program and an entry-to-practice high stakes exam administered by the Canadian Chiropractic Examining Board (CCEB) is required.

- **The Canadian Memorial Chiropractic College curriculum includes the following courses:**¹⁰⁻¹³
 - **Orthopaedics for Chiropractic Practice II:** “The relevant clinical anatomy, pathology, lesions and pathogenesis, diagnostic categories, current diagnostic tests and methods, and treatment strategies for the upper and lower limb and temporo-mandibular joint are reviewed...”
 - **Diagnostic Imaging Interpretation for Chiropractic Practice III:** “The aetiology, pathology, signs and symptoms, radiographic features, and management of major rheumatic diseases are presented as they relate to chiropractic practice... Clinical judgment in ordering and interpreting appropriate imaging studies, a review of the clinical and physiological characteristics related to rheumatologic conditions and their prognoses, orthopaedic examination procedures, interdisciplinary referral and case management are discussed.”
 - **Rehabilitation in Chiropractic Practice I-III:** “The concepts surrounding the prescription of active therapeutics as part of a comprehensive chiropractic treatment plan; the indications and contraindications for therapeutic exercise, and concepts of exercise progression and monitoring; and the contemporary use of exercise for the rehabilitation and functional restoration of the musculoskeletal system, and for enhancing clinical outcomes are introduced. The prescription of strengthening, stretching, proprioceptive and aerobic exercise is examined with application within a treatment plan.”
 - **Clinical X-ray Interpretation and Reporting:** “Skill at producing accurate, concise and effective radiographic reports that meet the expected standards for chiropractic practice... Knowledge gained throughout the radiology and clinical courses in the curriculum is integrated and utilized.”
 - **Advanced Diagnostic Imaging:** “Advanced imaging for the detection and evaluation of musculoskeletal and other conditions is presented, including Magnetic Resonance Imaging (MRI), Diagnostic Ultrasound (DUS), Single Photon Emission Computed Tomography (SPECT), Positron Emission Tomography (PET), Electron Beam Tomography (EBT), Bone Densitometry, Nuclear Medicine and Computed Tomography. A basic understanding of the various techniques, their clinical indications, contraindications and usefulness in a clinical setting, and the need for referral for further evaluation and/or co-management as appropriate are provided.”

- **The CCEB exam tests chiropractors on competencies including:**¹⁴
 - Performing physical exams and interpreting physical exam findings
 - Providing diagnosis of conditions based on the interpretation and integration of patient data and physical findings
 - **Conducting appropriate Orthopedic testing**
 - Radiology practices and interpretation
 - The course of diseases and public health risks
 - Communicating results of evaluations/assessments accurately to other health care professionals when co-managing or referring patients

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