

# MSK Challenges for Complex Patients

It is very common for patients with multiple chronic conditions to suffer from MSK conditions which contribute to pain and limit mobility. This can further weaken musculoskeletal strength and prevent patients from engaging in the active phase of their care, thereby exacerbating existing conditions.

Programs of Care	MSK-Related Conditions/ Symptoms
DIABETES	Approximately 46% of older adults with diabetes were found to have mobility limitations. <sup>5</sup>
SENIORS	1/3 of Canadians over the age of 65 fall every year; half of those will fall more than once. <sup>6</sup> 49% of seniors over the age of 70 suffer from osteoarthritis. <sup>7</sup>
COPD	Approximately 60% of COPD patients suffer from chronic pain; almost 36% of COPD patients experience back pain. <sup>8</sup>
HEALTH PROMOTION	Obesity is associated with an increased risk of LBP. <sup>9</sup>
LOW BACK PAIN	Nearly 20% of Ontarians report having chronic back problems (excluding fibromyalgia and arthritis). <sup>10</sup>



## LOW BACK PAIN

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## Peer Reviewed Evidence

### 1 Disability Improvement

In a 2004 study, back pain patients were randomized into one of four groups: general practice (the control group), exercise, manipulation, and manipulation plus exercise. Compared to the control group, the manipulation group and the manipulation plus exercise group experienced statistically significant disability improvements at both three and 12 months.

UK BEAM Trial Team. (2004). United Kingdom Back Pain Exercise and Manipulation (UK BEAM) randomised trial: Effectiveness of physical treatments for back pain in primary care. *British Medical Journal*, (7479), 1377.

### 2 Reduction in Hospital, Surgical, and Imaging Costs

A four year retrospective claims data analysis found that for back pain patients who had chiropractic coverage versus those who did not, overall back pain related costs were reduced by 28%, hospitalizations were reduced by 41%, back surgeries were reduced by 32% and medical imaging costs including MRI were reduced by 37%.

Legorreta, A., Metz, R., Nelson, C., Ray, S., Chermicoff, H., & DiNubile, N. (2004). Comparative analysis of individuals with and without chiropractic coverage. *Archives of Internal Medicine*, (164), 1985-1992.

### 3 Pain Reduction and Improved Physical Functioning

A prospective, two-arm randomized control trial (RCT) concluded that chiropractic manipulative therapy in conjunction with standard medical care "offers a significant advantage for decreasing pain and improving physical functioning when compared with only standard care, for men and women between 18 and 35 years of age with acute LBP."

Goertz, C., Long, C., Hondras, M., Petri, R., Delgado, R., Lawrence, D., Owens, E., & Meeker, W. (2013). Adding chiropractic manipulative therapy to standard medical care for patients with acute low back pain. *Spine*, 38(8), 627-634.

### 4 Significant Improvement in Condition-Specific Functioning

An RCT comparing full clinical practice guideline (CPG) driven treatment of acute mechanical LBP including chiropractic spinal manipulative therapy (CSMT) to standard medical care concluded "full CPG-based treatment including CSMT is associated with significantly greater improvement in condition-specific functioning."

Bishop, P., Quon, J., Fisher, C., & Dvorak, M. (2010). The Chiropractic Hospital-Based Interventions Research Outcomes (CHIRO) study: a randomized controlled trial on the effectiveness of clinical practice guidelines in the medical and chiropractic management of patients with acute mechanical low back pain. *The Spine Journal*, (12), 1055-1064.



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# What is Chiropractic?

## Practice

- Chiropractors provide diagnosis, treatment and preventive care for a broad range of musculoskeletal (MSK) disorders related to the spine, pelvis, nervous system and joints.
- Depending on a patient's particular needs, treatment may include a range of options, such as: patient education, recommendation of lifestyle modifications, strategies for self-management, prescription of therapeutic exercise, and manual therapy.
- Chiropractors provide care to individuals of all ages and in a range of circumstances, including patients with acute and chronic MSK conditions, seniors rehabilitating after falls, and individuals recovering from injuries resulting from repetitive strain, sports incidents, and motor vehicle accidents.

## High Levels of Patient and Provider Satisfaction

Patients rated their overall satisfaction with chiropractic care at 94.2 on a 100 point scale in a recent MOHLTC funded project in which chiropractors played a consulting and assessing role for low back pain patients.

Primary care physicians who worked with chiropractors in this project reported increased confidence with respect to decision-making for LBP, targeting treatment, and understanding community resources.<sup>1</sup>

# Chiropractic Collaboration in the Health System

## Interprofessional Collaboration in Primary Care

- A 2011 study found that 74.3% of Canadian family physicians surveyed refer patients for chiropractic care each year.<sup>2</sup>
- In October 2013, the Ministry of Health and Long-Term Care (MOHLTC) announced that, effective immediately, Family Health Teams and Nurse Practitioner-Led Clinics may hire chiropractors onto their teams.
- Chiropractors are also eligible to be employed in Aboriginal Health Access Centres and Community Health Centres.
- For many years chiropractors have been collaborating with interprofessional teams, such as Family Health Teams, in a variety of structured referral and co-location arrangements.

## New Models of Care to Support MSK Patients

- The MOHLTC funded a project in 2011-2012 to evaluate a chiropractic low back pain (LBP) assessment model in primary care environments.
- Trillium Health Partners' Kingsway Financial Spine Centre utilizes the services of chiropractors and physiotherapists in the assessment and triaging of a broad range of MSK patients.
- The University Health Network leads the Interprofessional Spine Assessment and Education Clinics pilot, which employs chiropractors and physiotherapists to assess, educate and triage LBP patients.
- In 2014, the MOHLTC is managing a pilot project in which interprofessional primary care teams will develop and deliver low back pain programs, including treatment, patient education, assessment and referral. These programs will include chiropractors, physiotherapists, occupational therapists and/or kinesiologists.

## Reduced System Costs

Among back pain patients who had access to chiropractic care compared to those who did not research has found:<sup>3</sup>

- 37% reduction in medical imaging costs (including MRIs);
- 41% decrease in hospitalizations; and,
- 32% reduction in back surgeries

# Chiropractors' Role in Interprofessional Care

- Assessment, triage, and early identification of risk factors
- Patient education and recommendation of self-management strategies
- Guided therapeutic exercise
- Manual therapy
- Health promotion, including falls prevention and monitoring changes in health
- Pain management, and potential reduced dependency on pain medication
- Rehabilitation
- Management of acute back pain before it becomes chronic

## Improved Patient Outcomes

A significant advantage for decreasing pain and improving physical functioning was found with chiropractic manipulative therapy in conjunction with standard medical care for LBP when compared with standard medical care alone.<sup>4</sup>

- 1 Centre for Effective Practice, "Consulting Chiropractor in Primary Care Demonstration Project: Final Report." Last modified April 30, 2012.
- 2 Busse, J., Canga, A., Riva, J., Viggiani, D., Dilauro, M., Kapend, P., Harvey, M., & Pagé, I. (2011). *Attitudes towards chiropractic: A survey of Canadian family physicians*. Oral Presentation Family Medicine Forum November 2011, Montreal.
- 3 Legorreta, A., Metz, R., Nelson, C., Ray, S., Chernicoff, H., & DiNubile, N. (2004). Comparative analysis of individuals with and without chiropractic coverage. *Archives of Internal Medicine*, (164), 1985-1992.
- 4 Goertz, C., Long, C., Hondras, M., Petri, R., Delgado, R., Lawrence, D., Owens, E., & Meeker, W. (2013). Adding chiropractic manipulative therapy to standard medical care for patients with acute low back pain. *Spine*, 38(8), 627-634.
- 5 Sinclair, A., Conroy, S., & Bayer, A. (2008). Impact of diabetes on physical function in older people. *Diabetes Care*, 31(2), 233-235.
- 6 Public Health Agency of Canada. (2011). *You can prevent falls!* Retrieved from <http://www.phac-aspc.gc.ca/seniors-aines/publications/public/injury-blessure/prevent-eviter/>
- 7 Bombardier, C., Hawker, G., & Mosher, D. Arthritis Alliance of Canada, (2011). *The impact of arthritis in Canada: Today and over the next 30 years*
- 8 Roberts, M., Mapel, D., Hartry, A., Worley, A., & Thomson, H. (2013). Chronic pain and pain medication use in chronic obstructive pulmonary disease. *Annals of the American Thoracic Society*, 10(4), 290-298.
- 9 Shiri, R., Karppinen, J., Leino-Arjas, P., Solovien, S., & Viikari-Juntura, E. (2009). The association between obesity and low back pain: A meta-analysis. *American Journal of Epidemiology*, 171(2), 135-154.
- 10 Statistics Canada, (2010). *Canadian Community Health Survey*