

# Management of Back Pain-related Disorders in a Community With Limited Access to Health Care Services: A Description of Integration of Chiropractors as Service Providers

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## ABSTRACT

**Objective:** The purpose of this study was to evaluate a chiropractic service for back pain patients integrated within a publicly funded, multidisciplinary, primary care community health center in Cambridge, Ontario, Canada.

**Methods:** Patients consulting for back pain of any duration were referred by their medical doctor or nurse practitioner for chiropractic treatment at the community health center. Patients completed questionnaires at baseline and at discharge from the service. Data were collected prospectively on consecutive patients between January 2014 and January 2016.

**Results:** Questionnaire data were obtained from 93 patients. The mean age of the sample was  $49.0 \pm 16.27$  years, and 66% were unemployed. More than three-quarters (77%) had had their back pain for more than a month, and 68% described it as constant. According to the Bournemouth Questionnaire, Bothersomeness, and global improvement scales, a majority (63%, 74%, and 93%, respectively) reported improvement at discharge, and most (82%) reported a significant reduction in pain medication. More than three-quarters (77%) did not visit their primary care provider while under chiropractic care, and almost all (93%) were satisfied with the service. According to the EuroQol 5 Domain questionnaire, more than one-third of patients (39%) also reported improvement in their general health state at discharge.

**Conclusion:** Implementation of an integrated chiropractic service was associated with high levels of improvement and patient satisfaction in a sample of patients of low socioeconomic status with subacute and chronic back pain. (*J Manipulative Physiol Ther* 2017;40:635-642)

**Key Indexing Terms:** *Health Services Research; Community Health Centers; Back Pain; Chiropractic*

## INTRODUCTION

Back pain is a prevalent health problem in the general population and places a tremendous socioeconomic burden on society. Globally, an average of nearly 40% of individuals will experience low back pain at some point in their life, and approximately 1 in 5 are afflicted at any given time.<sup>1</sup> Low back pain is the leading cause of years lived with disability<sup>2</sup> and is among the most common

reasons for visiting a primary care physician.<sup>3,4</sup> As the world's population ages, the number of people with back pain and other musculoskeletal disorders is expected to rise.<sup>1,4</sup> Moreover, these conditions are costly. In Canada, for example, musculoskeletal conditions rank third behind only cardiovascular and neuropsychiatric disorders with respect to medical expenditures (ie, physician services, pharmaceuticals, and hospital care).<sup>5</sup> The societal burden of back pain in terms of economic costs and health resource utilization is also greater among patients with multiple comorbidities, including those of low socioeconomic status.<sup>6-9</sup>

There is evidence to support chiropractic care, including spinal manipulation, as an effective and relatively cost-effective intervention in managing patients with back pain and other musculoskeletal conditions,<sup>10-15</sup> and patients typically report high levels of satisfaction with treatment.<sup>14-16</sup> Despite this, access to chiropractic services is not routinely available through publicly funded health

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care systems in most countries around the world. As such, patients must either use insurance benefits (if any) or pay out-of-pocket for chiropractic treatment. This presents a significant barrier for lower-income groups including the unemployed.<sup>17</sup>

In Ontario, Canada, chiropractic care is not publicly funded. However, as low back pain is such a common problem, the government is looking at different ways to address this. For instance, the provincial government, under its Low Back Pain Strategy, recently announced the provision of limited, one-time pilot funding for the integration of allied health care providers, including chiropractors, within a select number of interprofessional primary care team settings.<sup>18</sup> Notably, chiropractors were also added to the list of health professionals eligible to be employed by these teams.<sup>19</sup> The objective of these initiatives is to improve the management of low back pain in primary care in Ontario, as provided in nurse practitioner-led clinics, family health teams, aboriginal health access centers, and community health centers.<sup>18,19</sup>

Community health centers (CHCs) are nonprofit, publicly funded organizations that provide primary health care traditionally from a team of medical doctors, nurse practitioners, registered nurses, dietitians, social workers, and community health workers.<sup>20</sup> The focus of a CHC is on health promotion, illness prevention, and community development. Its services are provided to priority populations who experience barriers to access (eg, language, culture, physical disabilities, homelessness, and poverty), as well as isolated seniors, at-risk children and youths, and individuals with mental health or addiction issues. Musculoskeletal disorders, including chronic back pain, are prevalent among these patient populations,<sup>17,21</sup> yet many have traditionally faced barriers to accessing chiropractic care.

In Cambridge, Ontario, Canada, a self-directed group of chiropractors from the Waterloo Regional Chiropractic Society recently established an agreement with the Langs organization<sup>22</sup> to provide a partially subsidized chiropractic service within their CHC. The agreement was reached after several face-to-face discussions between the chiropractors and the executive staff of Langs, with the goal of creating access to chiropractic care for back pain-related disorders in a community with limited access to health care services. From its inception in January 2014, this program has been completely integrated, and all participating chiropractors to date have had full access to the Center's electronic medical records system. Yet, despite being a novel initiative for Langs, this is not the first program of its kind in Canada. Successful integration of chiropractic has previously been described within 3 other CHCs in the provinces of Ontario<sup>21,23,24</sup> and Manitoba, Canada.<sup>25</sup> However, studies evaluating or demonstrating the value of these services within other Canadian CHC settings are scarce. The aim of this study was to describe a service provided by chiropractors for back pain patients integrated within a

multidisciplinary primary care CHC setting using a health services research design and focused on patient-reported outcomes and satisfaction with treatment.

## METHODS

### Service Design

This was a service evaluation<sup>26</sup> of a new back pain service provided by chiropractors integrated into a primary care CHC setting. This initiative provided access to chiropractic care on Tuesdays and Thursdays from 12 to 2 PM (for a total of 4 hours per week) at the Langs CHC. The service was provided on a rotating basis by 4 chiropractors (P.C.E., A.L.B., D.F.C., and A.F.P.). Eligible patients were those at Langs who were seen by their primary care medical doctor or nurse practitioner for back pain (of any duration), were unable to privately pay for chiropractic care, and were suitable for manual therapy (ie, absence of "red flags").<sup>27</sup> The service was pragmatic in that each patient was assessed and treated as would occur in usual chiropractic practice. Treatment sessions were evidence based<sup>27</sup> and included any or all of the following: high-velocity, low-amplitude spinal manipulative therapy (applied to the lumbar and/or thoracic spine); soft-tissue massage/trigger point therapy; education and reassurance (eg, pain management, ergonomic, and activities of daily living recommendations); and home advice (eg, icing, spinal stretching, and core muscle strengthening exercises). Consistent with current clinical practice guidelines,<sup>27</sup> patients were discharged after 3 months or a maximum of 12 visits, although some continued with treatment after discharge from the service evaluation to manage further episodes of exacerbation/flare-up. Patients discharged prior to this were those not responding to care or those who had reached a clinical plateau in their recovery (ie, maximum therapeutic benefit).<sup>27</sup>

### Data Collection

Similar to methodology employed by Gurden et al,<sup>28</sup> this service was evaluated using patient-reported outcome measures, and data were collected prospectively throughout the first 2 years of the program between January 2014 and January 2016. On entry to the service (ie, baseline), patients were asked to complete a comprehensive questionnaire including sociodemographic data and clinical characteristics of their back pain complaint. Outcome measures included the Bournemouth Questionnaire (BQ), a validated outcome measure for back pain,<sup>29</sup> designed for use in the routine practice setting; the Bothersomeness questionnaire<sup>30</sup>; and the EuroQol 5 Domain (EQ-5D) measure of general health status.<sup>31</sup> Patients then completed a second questionnaire at discharge from the service. This included the BQ, the Bothersomeness questionnaire, and EQ-5D, as well as a 7-point global improvement scale (ie, completely better,

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