



# MODELS OF CARE IN ARTHRITIS: OVERVIEW OF THE NEED FOR MODELS OF CARE

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# Overview

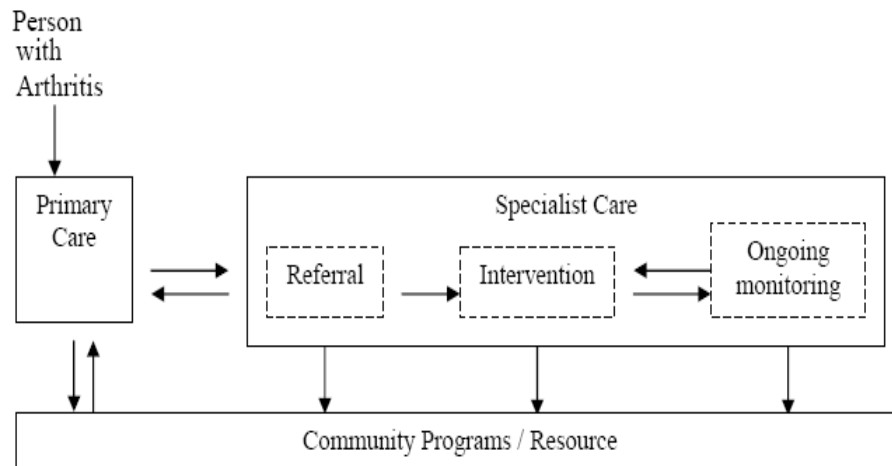
Developing Models of Care (MOC) that will facilitate the transition of the health system from an acute care, curative model to one that addresses the needs of persons with chronic disease across the trajectory of their illness in the face of increasing numbers of Canadians with chronic disease and diminishing health human resources is one of the biggest challenges facing health services delivery in this new century. Nowhere is this more true than for musculoskeletal (MSK) disease which had an estimated economic burden of more than \$22.3 billion in 2000<sup>1</sup>. MSK disorders, which include arthritis, are the most costly group of diseases<sup>1-5</sup>. Arthritis affects 1 in 6 people and is the premier cause of long term disability<sup>6-21</sup>; the personal and societal cost (e.g., loss of independence, social isolation, depression, early retirement) of inflammatory arthritis and osteoarthritis (OA) is huge and generally unrecognized<sup>7;8;10;12-16;21-41</sup>. Additionally, the prevalence of arthritis is projected to increase by more than 50% by 2020 as the population ages and rates of obesity increase<sup>22;40;42-48</sup>.

Arthritis needs to be actively managed to prevent disability<sup>49-52</sup>. Its management is complex and variable across the type and severity of the disease and the continuum of care. There are over 100 types of arthritis<sup>53</sup>. Inflammatory arthritis, with a population prevalence of 1%<sup>33;54-58</sup>, requires appropriate early medical management as new and highly effective treatments have the potential to halt disease progression if started early<sup>59-85</sup>. If untreated, inflammatory arthritis can lead to severe disability, deformity and early death<sup>15;25;59;60;86-89</sup>. OA, a degenerative joint disease, is the most common type of arthritis affecting 10% of the population<sup>54;90;91</sup>. Effective therapies for OA include physical therapy<sup>92-96</sup>, exercise<sup>97-104</sup>, weight reduction for those overweight<sup>105-108</sup>, a variety of pain therapies<sup>109;110</sup>, self-management<sup>49;51;111-121</sup>, and total joint replacement (TJR) surgery for end-stage disease<sup>122-124</sup>.

A seamless system of settings, services, service providers and service levels that meet the needs of clients or defined populations is critical to managing the current and growing burden of arthritis. This system needs to encompass the formal and informal health care systems and include access to primary care providers, specialists and community programs and resources (Figure 1). These include but are not limited to health professionals such as primary care physicians, rheumatologists, orthopaedic surgeons, physical therapists, occupational therapists, nurses, chiropractors, pharmacists and community-based programs and resources related to chronic disease management and wellness promotion.

However, for people with arthritis, such a system is challenged. There is a shortage of primary care physicians in many areas of Canada<sup>140-143</sup> and primary care physicians report lack of confidence in MSK examination<sup>144-149</sup>. There is also sub-optimum referral to specialists<sup>6;144-156</sup>. Population studies show under-utilization of TJR in those with demonstrated need as well as long wait times<sup>1;122;125-129;131;132;135-137;139;157-160</sup>; yet only a proportion (40-80%) of referrals to surgeons for consideration of TJR are appropriate as many people either have not received adequate conservative management or are not willing or medically fit to have surgery<sup>1;161-163</sup>. There are delays in referral of individuals with early inflammatory arthritis to rheumatologists<sup>82;152;163-166</sup>. Similarly, non-pharmacologic therapies are under-employed both at the community level and in primary care<sup>151;167-171</sup>. Constraints in the availability of arthritis relevant human health resources (e.g., rheumatologists, orthopaedic surgeons, rehabilitation therapists), both in absolute numbers and geographic mal-distribution<sup>158;161;172-176</sup>, further limit access to care. There is emerging evidence that lack of availability of arthritis health professionals at the local level contribute to lower rates of treatment<sup>177;178</sup>. As a result, arthritis care lacks an integrated approach that considers the spectrum of the disease and care in the context of multiple care providers.

**Figure 1: Continuum of care for people with arthritis**



**Note:** Primary care has traditionally been considered as the primary care physician. However, primary access to the system can also be through other health professionals such as pharmacists, physiotherapists, etc depending on provincial health regulations. Given this we have used the term primary care to reflect the variety of health professionals.

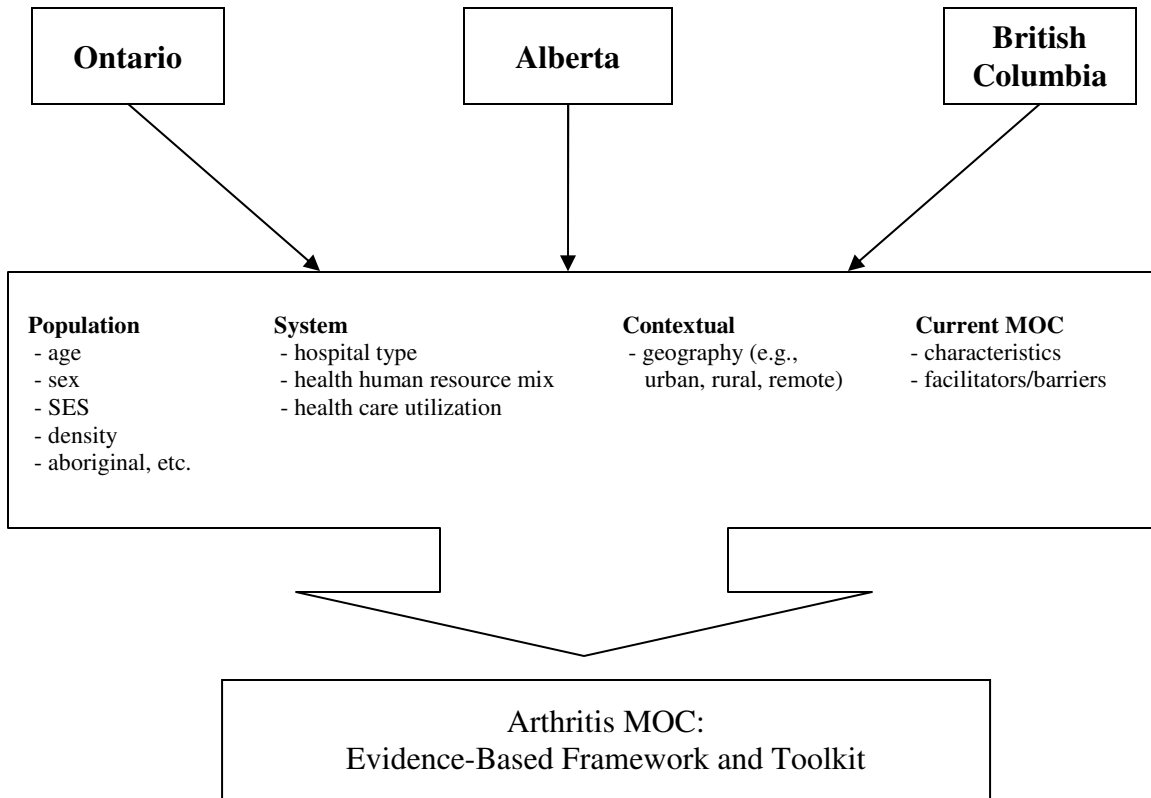
While there is agreement about the need for implementation of arthritis models of care that encompass the continuum of care (the ‘seamless system’); making the best use of specialist resources and skills of arthritis health professionals; and having strong linkages with community resources, policy-makers and health planners continue to struggle in choosing the ‘best’ model for their context based on their community needs and resources.

The objective of the Models of Care in Arthritis (MOCA) project is to develop a toolkit that can be used by health professionals, policy makers and planners in deciding, within their practice or policy environment, the best type of model of care and the resources required to improve access to care for people with arthritis and other chronic MSK diseases. The toolkit will be developed from an understanding of:

- **The Need:** the service gaps based on how many people have arthritis, bone and joint problems in given geographical locations (urban, rural, remote) now and in the future.
- **The Supply:** the available health care providers in different geographical locations.
- **The Current Practice:** the current models of arthritis care including why they were developed, their characteristics, and facilitators and barriers to their implementation.

We will combine these data through a consensus process that involves people with arthritis, health care providers, stakeholder organizations, health policy makers and planners to develop a framework and toolkit for determining the most appropriate model of care in different locations (e.g., urban, rural, remote regions) and settings (e.g., hospital, community) (Figure 2). Triangulating information from British Columbia, Alberta and Ontario, which have geo-political differences, will allow us to compare and contrast similarities and differences in the provinces to enhance the relevancy of the toolkit to other jurisdictions.

**Figure 2: Inputs to the evidence-based framework and toolkit for developing and implementing arthritis models of care.**



Throughout the course of the project, we will present summary data. This first series of reports, based on the literature, provide a summary of existing information related to adults with arthritis in various jurisdictions: the prevalence; health human resources; policy directions that influence care; and, current models of care that have been implemented.

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