Backgrounder: Arthritis Facts and Figures in British Columbia

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The human costs of arthritis:

- Arthritis is a vastly misunderstood disease; while many people think of it as a mild ailment affecting the elderly, arthritis is actually a group of diseases affecting people of all ages. It can be devastating, debilitating, and fatal^{1,2}.
- There are more than 100 different types of arthritis, which can be broken down into two main types:
 - Osteoarthritis, which is caused by a breakdown of cartilage in the joints.
 - Inflammatory arthritis, which is an autoimmune disease that causes inflammation, pain, and joint damage. Types include rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, and lupus.
- One out of six Canadians—more than 4.5 million—lives with some form of arthritis; 60% of these are between the ages of 15 and 60 years of age³.
- Over 600,000 British Columbians aged 15 years and older live with arthritis and related conditions.
- Approximately 74,000 British Columbians live with inflammatory arthritis, like rheumatoid arthritis, ankylosing spondylitis and psoriatic arthritis.
- Arthritis is among the top three chronic diseases in British Columbia and Canada, affecting more adults than cancer, heart disease, respiratory conditions and spinal cord trauma⁴.
- Arthritis is among the most common chronic diseases in children. One in 1,000 children in Canada has arthritis. In BC, approximately 700 children live with juvenile forms of arthritis.
- Left untreated, arthritis and related conditions can cause devastating joint damage, disability, and even death^{5,6}.
- Inflammatory arthritis causes premature death in the majority of people who have it, often shortening life expectancy by a decade or more⁷.

• A significant number of people with arthritis die from co-morbidities like heart attack/stroke, lymphomas and certain types of cancer as a direct result of having arthritis^{8,9}.

Economic costs of arthritis:

- Arthritis is the leading cost of disability for people over the age of 15.
- The cost of musculoskeletal diseases in Canada has been estimated at \$16.4 billion each year, the second highest cost after heart disease 10. BC's share of this has been estimated at more than \$2.1 billion per year.
- Costs attributable to lost work productivity related to arthritis have been estimated at \$11,500 per person living with the disease¹¹. In BC, this would equate to nearly \$7 billion per year.
- Long-term disability accounts for almost 80% of the economic cost of arthritis. People aged 35-64 incurred 70% of these costs¹².
- For all age groups, arthritis disables two to three times more workers than all other chronic conditions¹³.
- In rheumatoid arthritis, reported rates of work disability are remarkably high: 32% 50% ten years after onset and 50% 90% thirty years after onset. Studies have also shown that work disability occurs early in the course of rheumatoid arthritis¹⁴.
- Disability associated with arthritis costs the Canadian economy about \$4.4 billion/year¹⁵.
- Treating people with rheumatoid arthritis with biologic response modifiers helps them stay at, or return to, work.
- Arthritis is the number one reason a person over the age of 65 visits their family physician.

Treatment for inflammatory arthritis:

- Internationally recognized treatment guidelines recommend the use of inexpensive diseasearresting medications (DMARDs) within the first six weeks of confirming a diagnosis of rheumatoid arthritis¹⁶.
- For many living with the disease, early, aggressive, and sustained use of disease-arresting medications can stop inflammation and prevent joint damage.
- Failure to adopt these treatment guidelines can result in long-term disability, the later need for more expensive biologic medications, the need for joint surgeries, and premature mortality.

- In BC, 64 physicians were identified as having received rheumatology training and having a practice of rheumatology care. This is in the context of more than 600,000 British Columbians living with some form of arthritis, a hugely inadequate specialist-patient ratio for the provision of appropriate treatment and care for all types of arthritis.
- Many citizens located in rural or remote areas do not have consistent access to a rheumatologist. For example Prince George, the largest city in Northern BC, does not have a rheumatologist.
- Approximately 50% of people with rheumatoid arthritis in BC are receiving their arthritis treatment from a family physician.
- Canadian research has shown that family physicians in are only using the recommended "first-line" medications for 10% of their rheumatoid arthritis patients ¹⁷.
- Inflammatory arthritis that does not respond to first-line treatments can be treated with a class of medications called biologic response modifiers or "biologics", the gold standard in treatment for moderate to severe inflammatory arthritis^{18, 19}.
- Biologics, used in combination with traditional Disease Modifying Anti-Rheumatic Drugs (DMARDs) are proved by research to slow or stop the inflammation that causes joint damage and disability.
- When joint damage progresses, expensive joint replacement surgeries and lengthy
 hospitalizations often become necessary, contributing to lengthy surgical waiting lists and
 hospital overcrowding.

Prevention and treatment for osteoarthritis

- Weight management and appropriate physical activity are key strategies for preventing and managing osteoarthritis.
- Currently, no comprehensive model of osteoarthritis treatment and care has been implemented in BC.
- Early diagnosis and appropriate management of osteoarthritis are key to preventing joint damage, disability, and the need for expensive joint replacement surgeries.
- Family physicians are given 17 hours of less of musculoskeletal training during the entirety of their medical schooling.
- Although obesity is a major factor in the progression of osteoarthritis, fewer than one in four British Columbians who have been diagnosed with arthritis and are overweight or obese, have seen a dietician or used a weight-loss program.

irsc.gc.ca/e/documents/arthritis_mpkit_0607_e.pdf

irsc.gc.ca/e/documents/arthritis_mpkit_0607_e.pdf

¹² Canadian Institute of Health website, http://www.cihr-irsc.gc.ca/e/35184.html

irsc.gc.ca/e/documents/arthritis_mpkit_0607_e.pdf

¹⁴Burton W, Morrison A, Maclean R, Ruderman E. Systematic review of studies of productivity loss due to rheumatoid arthritis. *Occup Med (Lond)* 2006;56:18–27.

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¹⁵ Canadian Institute of Health Arthritis Fact Sheets, accessed March 24 2009: http://www.cihr-

irsc.gc.ca/e/documents/arthritis_mpkit_0607_e.pdf

¹ Canadian Institute of Health Website, accessed September 3, 2008: http://www.cihr-irsc.gc.ca/e/35184.html

² ibid ³ Arthritis Community Research and Evaluation Unit (ACREU) website accessed September 3, 2008: http://www.acreu.ca/about/fag.html

⁴ Public Health Agency of Canada website, "Arthritis In Canada" accessed September 3, 2008: http://www.phac-aspc.gc.ca/publicat/ac/index-eng.php

⁵ Gabriel, SE, Crowson, CS and O'Fallon WM. (1999) "Comorbidity in Arthritis" in *Journal of Rheumatology*, Nov. 26(11): 2475 – 2479.

⁶ Maradit-Kremers H., Nicola PJ, Crowson CS, Ballman KV and Gabriel SE. (2005). "Cardiovascular death in rheumatoid arthritis: a population-based study" in *Arthritis and Rheumatism*, March; 52(3): 722-732.

⁸ Maradit-Kremers H, Crowson CS, Nicola PJ, Ballman KV, Roger VL, Jacobsen SJ, Gabriel SE. (2005) "Increased unrecognized coronary heart disease and sudden deaths in rheumatoid arthritis: a population-based cohort study." In Arthritis Rheum. Feb;52(2):402-11.

⁹ Koivuniemi R, Paimela L, Suomalainen R, Piirainen H, Karesoja M, Helve T, Leirisalo-Repo M. Causes of death in patients with rheumatoid arthritis autopsied during a 40-year period.(2008) in *Rheumatol Int*. 2008 Oct;28(12):1245-52. Epub 2008 Aug 21.

¹⁰ Canadian Institute of Health Arthritis Fact Sheets, accessed September 3, 2008: http://www.cihr-

¹¹ Li X, Gignac MA, Anis AH. The indirect costs of arthritis resulting from unemployment, reduced performance, and occupational changes while at work. In Med Care. 2006 Apr;44(4):304-10

¹² Canadian Institute of Health Arthritis Fact Sheets, accessed September 3, 2008: http://www.cihr-

¹³ Canadian Institute of Health Arthritis Fact Sheets, accessed March 24 2009: http://www.cihr-

¹⁶ Saag, K.G. et al. (2008). "American College of Rheumatology 2008 Recommendations for the Use of Nonbiologic and Biologic Disease-Modifying Antirheumatic Drugs in Rheumatoid Arthritis" in *Arthritis & Rheumatism* (Arthritis Care & Research), Vol. 59, No. 6, June 15, 2008, pp 762–784

¹⁷ Lacaille et al. Arthritis Rheum 2005, Vol.53, No. 2, pp 241-248

¹⁸ Boonen et al. Arthritis Rheum 2006;65:201-8.;

¹⁹ Kavanaugh, A. et al. (2007). Ann Rheum Dis, Vol.66:498-505;