

# Arthritis in Canada: What Do We Know and What Should We Know?

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**ABSTRACT.** Doctors' visits for inflammatory arthritis reportedly represent only 6% of the overall visit rates for all arthritis and related conditions (163 per 1000), with about 40% of these patients seeing a specialist. Data from provincial drug plan databases show that although the proportion of the population aged 65 years and older with prescriptions for disease modifying antirheumatic drugs increased to 1% in 2000, this is only half the expected prevalence of rheumatoid arthritis in this age group. There are large provincial variations. Despite data on the efficacy and importance of treatment of early inflammatory arthritis, research is lacking on: the experience of arthritis, decision-making about seeking medical care, and factors affecting access to, and payment for, treatment, including drugs and rehabilitation; primary care decision-making about referral and treatment; organizational aspects of specialist care and access to drugs; and new ways of delivering services to reach patients in underserved or remote areas. Monitoring the population impact of arthritis, including economic costs, is a priority for research, as are epidemiological studies on risk factors. (J Rheumatol 2005;32 Suppl 72:39-41)

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## WHAT DO WE KNOW?

Relatively little is known about the occurrence of inflammatory arthritis in Canada. Most of what we know relates to arthritis as a whole. The data from the Canadian Community Health Survey show that 16.6% of the population aged 15 years and older, some 4 million people, reported arthritis and rheumatism as a longterm health problem diagnosed by a health professional<sup>1</sup>. The prevalence increased with age and was higher in women in every age group. However, because of the age structure of the population, the majority of people with arthritis were aged between 45 and 75 years. With the aging of the baby boomer population it is estimated that by the year 2026 more than 6 million Canadians will have arthritis.

Inflammatory arthritis is only part of the overall picture. Assuming that the prevalence of all types of inflammatory arthritis is about 1%, these conditions are likely to affect about 300,000 people in Canada. Assuming an average duration of disease of 30 years, a rough calculation suggests at most there will be only one new case each year in every 3000 people. Data from provincial physician billing databases showed an estimated 7.4 people per 1000 population made at least one visit to a doctor that was assigned a billing code for rheumatoid arthritis (RA);

and a further 1.9 and 1.1 per thousand made visits for connective tissue disorders (e.g., lupus) and ankylosing spondylitis, respectively<sup>2</sup>. For RA there were 2.4 women making visits for every man, and visit rates in both sexes increased with age. Unfortunately, provincial physician billing data do not allow us to validate the diagnostic codes. Patients with inflammatory arthritis visiting physicians need to be set against the overall visit rates for all arthritis and related conditions of 163 per 1000 population. The visits for inflammatory arthritis represent only 6% of all arthritis patients. Given the relative rarity of inflammatory arthritis it is hardly surprising that research shows there are problems with the primary care diagnosis and referral of early RA<sup>3</sup>.

There is mounting and compelling evidence that treatment of early RA and some other types of inflammatory arthritis with disease modifying antirheumatic drugs (DMARD) can slow the disease progression and prevent disability<sup>4</sup>. These drugs are usually prescribed by specialists. Special care is also appropriate given the nature of the disease and its relatively low incidence. Analysis of provincial physician billing databases suggested that every year about 40% of patients seeing a doctor for inflammatory arthritis saw a specialist<sup>2</sup>. The proportion varied greatly by province and there seemed to be a trade-off between rheumatology and general internal medicine services. Those provinces with a high proportion seeing rheumatologists tend to have a lower proportion seeing general internal medicine specialists and vice versa. While this may reflect the availability of rheumatology services, it could also relate to the way in which physician specialty is recorded in provincial databases.

Data from provincial drug plan databases show the proportion of individuals aged 65 years and older with

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prescriptions for DMARD has been increasing over time<sup>5</sup>. Unfortunately, data for younger individuals are lacking, as this age group is not generally covered by provincial drug plans. Despite the increase, in 2000 the proportion of older people with a prescription for DMARD (for any reason) was only 1%, which is half the expected prevalence of RA in this age group. Other work suggests patients with RA seen by a specialist were 5 times more likely to get these drugs than those seen by a primary care physician, and that people living in areas with less access to rheumatologists were also less likely to be prescribed DMARD<sup>6</sup>. Given the national shortage of rheumatologists, difficulties in recruitment, and reported barriers to providing adequate care<sup>7</sup>, access to appropriate care, including DMARD, is clearly an issue for management of inflammatory arthritis.

### WHAT SHOULD WE KNOW?

There is an increasing amount of clinical research concerning treatment of early inflammatory arthritis, mainly from the disease outcomes perspective<sup>4</sup>. However, all the therapies in the world will be of little use unless they can reach those who need them. There are very few existing research studies from the patient perspective on the experience of early arthritis, decision-making about seeking medical care, and factors affecting access to, and payment for, treatment, including drugs and rehabilitation. Similarly there is a lack of information on the need for education and other supportive interventions.

Even with the best of treatment, given our current knowledge, patients with RA still face the prospect of living with the disease over the long term. It is difficult to cover all relevant aspects in a brief overview. Let it be said that this area of research needs to be interdisciplinary and will draw heavily on behavioral and social sciences. Important areas include coping with illness factors such as pain and fatigue, the role and evaluation of assistive devices and other nonpharmacologic modalities, and reducing the impact on the various activities of daily living.

The experiential aspects of inflammatory arthritis that have been neglected include issues of dependence, psychological distress, stress, loss of opportunity, and perceptions of self. The influence of a person's arthritis on family members, including children, and friends also deserves attention.

For a person developing inflammatory arthritis, the primary physician is the first port of call and gatekeeper to other services. There is some limited research on primary care management<sup>3</sup>. However, practical influences on primary care decision-making about referral and treatment have been neglected. These include the local availability of rheumatology services and constraints of a patient's family, job situation, income, or potential travel

difficulties.

Research on specialist care has largely focused on medication and other aspects of treatment. However, as indicated above, there is a shortage of rheumatologists. There is an urgent need to develop ways to extend the reach of the few rheumatologists to serve the many needy patients and support their primary care physicians. We need research on new ways of delivering services to reach patients in underserved or remote areas. There are a number of potential opportunities such as telemedicine, enhancing the contribution of other doctors, such as general internists and primary care physicians, and new roles for other health professionals, such as physical therapists and nurses.

Access to medication, particularly given the advances in therapy, is a major concern, as are the affordability of drugs to patients and the effect on both treatment and outcome. Within our publicly-funded healthcare system, billing policies and regulations affect the way rheumatologists can practice and prescribe drugs. More research is needed on the effects of these and other organization aspects.

There is a relatively meagre research base on other forms of management of inflammatory arthritis. Some studies show the benefits of exercise<sup>8</sup>, rehabilitation<sup>9</sup>, coping skills training<sup>10</sup>, and education<sup>11</sup>, although compared to the amount of attention paid to medical therapies, this domain of research is neglected. More research is needed on evaluation of these other forms of management and on how these can enhance conventional medical care. Similar considerations apply to research on complementary and alternative medicine. Evaluation of the efficacy and effectiveness of all types of therapy is important to underpin the practice of evidence-based medicine.

The above description mainly applies to adults. Unfortunately, we have relatively little information about the impact of arthritis on children and adolescents, including the transition to adult care, and effects of juvenile arthritis on the remainder of life.

This review has focused on the patient and on patient access to care. But if we consider the bigger picture, it is clear that monitoring the population influence of arthritis is also an important priority for research. This includes the economic costs and research to support health policy and planning. Understanding the issues concerned with improving access to care is a prerequisite for ensuring that effective therapies can be provided to all who need them. Special attention needs to be paid to populations known to be at higher risk, such as those with low socioeconomic status and certain ethnic groups such as aboriginal populations.

We should also not forget epidemiological studies. Relatively little is known about risk factors for the devel-

opment of RA and many of the other types of inflammatory arthritis.

In summary, in looking at what we need to know, it is important to have a broad perspective: We need to understand risk factors for disease and ways in which these might lead to preventive strategies. We need to understand more about the impact of arthritis on individuals and their families, and how this affects not only daily life, but also the use of medical and other types of therapy and care. Education and health promotion may also be important ways to improve the outcome of inflammatory arthritis. Similarly there is relatively little research on the role of rehabilitation and community support services. Primary care plays a crucial role in access to specialist care and drug therapy. Overall we need to explore better ways of ensuring that all patients with a possible diagnosis of inflammatory arthritis have access to the right level of care at the right time to receive the right treatment in an appropriate and affordable way.

## REFERENCES

1. Lagace C, Perruccio A, DesMeules M, Badley EM. The impact of arthritis on Canadians. In: Badley EM, DesMeules M, editors. *Arthritis in Canada: An ongoing challenge*. Ottawa: Health Canada; 2003:7-34.
2. Power J, Badley EM. Ambulatory care services. In: Badley EM, DesMeules M, editors. *Arthritis in Canada: An ongoing challenge*. Ottawa: Health Canada; 2003:51-64.
3. Glazier R, Dalby DM, Badley EM, et al. Management of the early and late presentations of rheumatoid arthritis: A survey of Ontario primary care physicians. *CMAJ* 1996;155:679-87.
4. Geletka R, St. Clair EW. Treatment of early rheumatoid arthritis. *Best Pract Res Clin Rheumatol* 2003;5:791-809.
5. Kasman N, Badley EM. Arthritis-related prescription medications. In: Badley EM, DesMeules M, editors. *Arthritis in Canada: An ongoing challenge*. Ottawa: Health Canada; 2003:65-76.
6. Shipton D, Glazier R, Guan J, Badley EM. Effects of use of specialty services on DMARD use in the treatment of rheumatoid arthritis in an insured elderly population. *Med Care* 2004;42:907-13.
7. Shipton D, Badley EM, Bookman AA, Hawker GA. Barriers to providing adequate rheumatology care: implications from a survey of rheumatologists in Ontario, Canada. *J Rheumatol* 2002;11:2420-5.
8. Stenstrom CH, Minor MA. Evidence for the benefit of aerobic and strengthening exercise in rheumatoid arthritis. *Arthritis Care Res* 2003;49:428-34.
9. Helewa A. Physical therapy management for patients with rheumatoid arthritis and other inflammatory conditions. In: Walker JM, Helewa A, editors. *Physical therapy in arthritis*. 1996:245-63.
10. Lorig KR, Mazonson PD, Holman HR. Evidence suggesting that health education for self-management in patients with chronic arthritis has sustained health benefits while reducing health care costs. *Arthritis Rheum* 1993;36:439-46.
11. Superio-Cabuslay E, Ward MM, Lorig KR. Patient education interventions in osteoarthritis and rheumatoid arthritis: a meta-analytic comparison with nonsteroidal anti-inflammatory drug treatment. *Arthritis Care Res* 1996;9:292-301.