



DMARD Dialogues: The Impact of Biologics on Rheumatoid Arthritis in the Prevention of Joint Surgeries

University of Calgary, February 25, 2025



BACKGROUND

Biologic medications were introduced in Canada in the early 2000's and have revolutionized the treatment of rheumatoid arthritis (RA) by specifically targeting components of the immune system that drive inflammation and joint damage. Unlike conventional synthetic disease-modifying antirheumatic drugs (csDMARDs), biologics focus on specific molecules—such as tumor necrosis factor (TNF) or interleukins—that are pivotal in the inflammatory process. This targeted approach has led to significant improvements in reducing inflammation, preventing joint damage, and ultimately enhancing the quality of life for many patients with RA.

In 2023, this project was funded through the Evidence Alliance Patient and Public Health Research Topic Priority-Setting exercise. The purpose of our systematic review is to examine the impact of these biologics and other advanced therapies, such as the newer JAK inhibitors in treating our disease, specifically their role in the prevention of joint surgeries, such as hip and knee replacements. The patient partners who identified the research query were involved in co-leading the project (Linda Wilhelm, Laurie Proulx) felt this was an important unanswered research question, particularly given their role with the Canadian Arthritis Patient Alliance, who have long advocated for access to treatments. The patient partners have observed that many public and private payers desire evidence of health system costs in order to prompt examination of current reimbursement algorithms which mean using older csDMARDs even in patients with severe RA and worse prognosis. As patients living with RA for decades, they wanted to expand our knowledge on the value of biologics and other advanced therapies. A systematic review was done but gave us no clear answer to the question.

The patient partners identified this query through a priority setting exercise led by the Evidence Alliance. Funding was secured from the Evidence Alliance for the project and the knowledge translation event entitled “DMARD Dialogues”. This was a multi-interest holder dialogue that included patients, researchers, clinicians, policy makers and industry.

“The event was a perfect example of a discussion on a project initiated and led by people living with rheumatoid arthritis. Representatives of key sectors were present and contributed to discuss the challenges and impact of this project. This activity illustrates that patients-scientists’ partnerships, based on open communication, shared decision-making, and mutual respect can achieve big results.”

-Clinician-scientist participant

WHY DO RA PATIENTS CARE ABOUT THIS RESEARCH?

As patients, this research is important to us. We continue to defend our need for accessing biologics to drug programs, repeatedly being told that these medications are a significant to their programs. Contrary to what many believe, patients are often reluctant to begin treatment with a biologic medication fearing short- and long-term serious side effects. We need as much information as possible about our medications to be able to make fully informed decisions. Prevention of joint damage and the need for surgery is a big part of that decision making process. This research could lead to an acknowledgement that, for some patients with severe RA, it might be more cost effective for them to be prescribed a biologic before older disease modifying drugs rather than the stepped criteria that is currently accepted practice.

"It was quite insightful to witness the patient group being so passionate and deeply involved in their work. Their dedication to bridging data gaps through studies is remarkable and sets a gold standard for what we can expect from an organization. Seeing such commitment firsthand was inspiring, and I believe it will have a significant impact on the community."

-Pharmaceutical industry participant

DMARD DIALOGUES EVENT

The event was attended by diverse interest holders, including patient partners, industry, researchers, clinicians, and policy makers (refer to the Appendix for a list of participants). The event was hosted at the University of Calgary on February 25, 2025, before the Canadian Rheumatology Association Annual Scientific Meeting. Louise Crane opened the event and presented the inequities in healthcare experienced by Indigenous people living with arthritis. She shared how they receive poor care based on bias and assumptions in healthcare delivery and limited access to medications through Non-Insured Health Benefits program. Laurie Proulx and Dr. Shannon Kelly (research co-lead) co-presented the systematic review results which were not conclusive in showing the impact of biologics and other advanced therapies on preventing joint surgeries. The identified studies showed mixed positive, negative and neutral results.

"I found the speakers at the event very interesting, and it gave me food for thought."

-Patient partner participant

KEY DISCUSSION THEMES

There were a number of themes that emerged from the discussions:

1 Access and Value of Medications: There were concerns about restricting patient access to medications and the additional stress of navigating healthcare, co-pays, and stress associated with navigating the system. This has to be balanced with the need for patients and payers to get good value for money. There are frustrations among rheumatologists and patients regarding strict criteria for biologic renewals with discussion about the need for the Health Assessment Questionnaire (HAQ) required for renewals not adequately reflecting patient experiences and needs.

2 Evidence and Study Design: It was noted that although there is strong evidence that biologics prevent joint damage from clinical trials, there is a lack of good evidence to understand the true impact that biologics have had on reducing joint surgery. One of the issues is that joint surgery often occurs years after joint damage occurred. This makes it challenging to relate the impact of a drug on surgical outcomes. Patients who are taking a biologic and have a joint surgery, may have developed the joint damage many years ago before they were on a biologic. Challenges were raised about the design of randomized controlled trials using placebo was ethical. There was a debate over the simplest way for the industry to demonstrate a treatment's effect in a controlled setting.

3 Comparative Trials and Real-World Evidence (RWE): Policy makers noted that importance of head-to-head comparison trials to guide public payer decision making. The shift in drug review criteria to include broader societal impacts and long-term health outcomes was discussed.

KEY DISCUSSION THEMES

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Inclusion Criteria: There was concern that current studies may use outdated criteria and might not adequately represent the diversity of patients, particularly comparing homogenous patient groups to more varied RA populations including those with more severe RA.

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Tapering of Biologics and Aligning Incentives: Dr. Glen Hazlewood (research clinical advisor) shared that work is being done on tapering biologics, with studies showing that a significant proportion of patients (around 25%) can reduce their dosage by an average of 50%. Discussion focused on the idea that aligning incentives (e.g., reducing paperwork and easing documentation for flares) could encourage appropriate tapering, saving drug costs and reducing medication burden on patients. Many patients can safely taper their biologic with no adverse effect on health outcomes. Trust needs to be built to enable this type of work. Patients are unlikely to agree to a taper for fear of not being able to go back to the higher dose if RA flares.

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Reimbursement and Regulatory Issues: Questions were raised about how manufacturers can prove the benefits of their drugs to secure reimbursement, noting that clear guidelines from the Canada's Drug Agency (CDA) are needed.

KEY DISCUSSION THEMES

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Patient Engagement: There was concern that patients are slow to be engaged in regulatory and reimbursement processes. Concerns were expressed that Canada's smaller market size can limit changes in evidence packages presented to regulatory bodies or provincial pharmacare programs.

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Real-World Evidence and Appropriate Use: Patient partners emphasized the importance of aligning the discussion with federal priorities, such as ensuring the "appropriate use" of medications. Canada's Drug Agency has done extensive work around real-world evidence and appropriate use which applies to this work. It was recognized that there is potential integration of real-world evidence in assessing long-term outcomes was raised as a future consideration.



We had an in-depth discussion on the complicated forms provincial and territorial pharmacare programs require for renewals of special authorization medications, like biologics. Many participants shared that these forms are not a good indicator of how patients are doing in terms of their current disease status and take valuable time away from patient care. Clinicians in Alberta voiced their concerns about the need for these forms and noted similar concerns from their colleagues in other jurisdictions.

WHAT'S NEXT?

Shortly after the event was held, Primary and Preventative Health Services in Alberta eliminated the requirement for the Health Assessment Questionnaire to be completed as a condition of biologic medication renewal. Rheumatologists have long believed adds limited to no value but takes precious time to complete. It is clear that to answer the research question posed in the systematic review, additional research is needed. The limitations identified during the meeting and through the systematic review persist. However, we feel there is potential to examine patient cohorts pre 2003 (the approximate date when biologics were listed on public drug plans) and compare to patients having no access to biologics.

New studies could focus on comparing outcomes to newly diagnosed RA patients after 2005 looking at the number of joint surgeries in both cohorts. An important case study includes the work of the Canadian Institute of Health Information (CIHI) who examined the impact of Trikafta for people with Cystic Fibrosis and their use of acute and routine care.



APPENDIX - LIST OF PARTICIPANTS

There were twenty-two people in attendance, with four individuals participating virtually.

Panel Members

Dr. Sasha Bernatsky, Rheumatologist; Researcher, McGill University

Dr. Alexandra Charlton, Alberta Health Services, Pharmacist

Dr. Fiona Clement, Researcher, University of Calgary

Dr. Glen Hazlewood, Rheumatologist, Researcher, University of Calgary, Research clinical advisor

Kimberley Neid-Weiss, Director of Professional and Industry Relations, Primary and Preventative Health Services (Alberta)

Linda Wilhelm - Moderator, Patient Perspective, project co-lead

Patient Partners

Louise Crane

Clare Hildebrandt

Lucy Kovalova-Woods

Laurie Proulx - Presenter, Patient Perspective, project co-lead

Policymakers and Industry

Michelle Gibbens, Canada's Drug Agency

Pradyumna Krishnappa, Pfizer

Valerie Lunt, Abbvie

Tianna Margel, Canadian Institutes of Health Research

Researchers/Clinicians

Dr. Cheryl Barnabe, Rheumatologist; Researcher, University of Calgary

Dr. Ines Colmegna, Rheumatologist; Researcher, McGill University

Dr. Shannon Kelly, Presenter; Researcher, project co-lead

Dr. George Wells, Researcher, co-project lead

Dr. Steven Katz, Rheumatologist, Researcher, University of Alberta

Jordi Pardo Pardo, Methodologist, Cochrane Collaboration, University of Ottawa

Ellen Wang, Researcher, Arthritis Research Canada

Jocelyn Thomas-Purdue, University of Calgary



SPOR Evidence Alliance
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Stratégie de recherche axée sur le patient

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