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# MESSAGE FROM OUR PRINCIPAL INVESTIGATOR



The Ontario Best Practices Research Initiative (OBRI) pilot began in 2005. Through the collaborative efforts of physicians, payers, researchers and patients, the Ontario cohort has grown to include 91 sites (both community and academic) and over 4000 patients. The OBRI focuses on the safety and effectiveness of treatments for patients living with Rheumatoid Arthritis (RA) and Psoriatic Arthritis (PsA).

OBRI's unique platform integrates clinical data from rheumatologists, patient-reported data from participants, and administrative data from the Institute for Clinical Evaluative Sciences (ICES) to monitor comparative drug safety and effectiveness and patient quality of care. Government, payers and researchers are now incorporating Real World Evidence into decision-making processes. With over 15 years of expertise in Real World Data, the OBRI is well positioned to work with Real World Evidence (RWE) and to collaborate with RWE stakeholders.

The 2023 OBRI Annual Conference returned to an in-person format to the delight of investigators and sponsors, and OBRI-PsA investigators gathered to have a first look at the data collected in this new cohort. OBRI presented findings at national and international meetings, and had four articles accepted for publication. Visit our website at <a href="https://www.obri.ca">www.obri.ca</a> to access our publications and learn more about OBRI.

We are excited to share this overview of our 2023 activities and look forward to 2024.

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Dr. Claire Bombardier, OBRI Principal Investigator

# **ABOUT OBRI**

#### Who We Are

The Ontario Best Practices Research Initiative (OBRI) is a collaborative data platform involving rheumatologists, researchers, and patients that follows patients in routine care along their clinical path. Originally created as the Ontario Biologics Research Initiative, our registry was officially renamed in 2013 to reflect the expansion of the OBRI's goals beyond the scope of biologic treatments.

## **Our Mission & Mandate**

To improve the care and health outcomes for Rheumatoid Arthritis (RA) and Psoriatic Arthritis (PsA) patients by gathering and analyzing long-term information on therapies, clinical practice patterns, and health care utilization in the real world. Our goals are to:

- Define safety, effectiveness, and sustainability of available RA and PsA therapies in the real world
- Identify clinical practice patterns that improve patient health outcomes
- Use real world clinical data to inform health care decisions

The OBRI generates outcome data specifically related to pharmacotherapy, disease activity, practice patterns and population health. The OBRI team also provides leadership in best practices for ethics and obtaining consent, data management, real world data analysis, and administrative database validations.

## **Our Value Proposition**

The OBRI has evolved into a powerful decision-making tool used to shape and inform the future of arthritis care. The rich source of clinical data collected by the OBRI can be combined with provincial administrative health data to carry out research on real-world outcomes. Our research is vetted through scientific rigor and the active involvement of a clinical advisory committee so that it may be used by policy makers to influence health care and clinical treatment decisions.

### What is in Our Data?

### **Physician Reported Data**

- Personal Health Information
- RA History
- Previous RA Medications
- Physician Global Assessment
- Patient Global Assessment
- Co-morbidities
- Adverse Events
- Laboratory (ESR, CRP)
- Tender Joint Count
- Swollen Joint Count
- Erosions
- Current RA Medications



#### **Patient Reported Data**

- Demographics
- RA History
- Previous Anti-Rheumatic Meds
- Current Medications
- HAQ / RADAI
- Patient Global Assessment
- Quality of Life
- Fatigue and Sleep
- Socio-demographics
- Work Productivity
- Adverse Events
- Vaccinations
- COVID-19

# Physician visits collected by OBRI as of December 31, 2023 = 53,875 # Patient interviews conducted by OBRI as of December 31, 2023 = 49,356

## **Research Priorities**



#### **Drug Impact and Outcomes**

Effectiveness, safety, adherence, and persistence/survival



#### **Clinical Management and Practice Patterns vs. Guidelines**

Clinical measures, quality indicators, and practice guidelines



#### **Population Health**

Epidemiology, models of care, economics

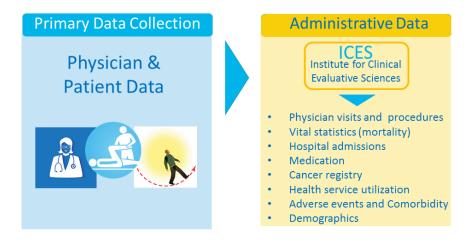


#### **Collaborations with RA Registries**

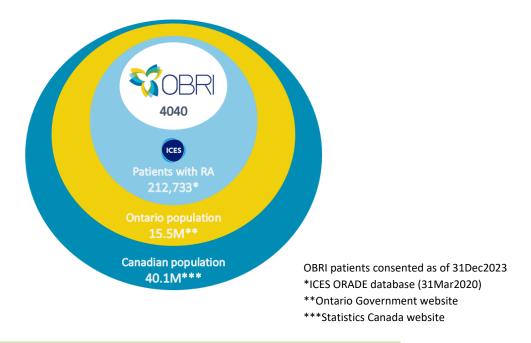
National (e.g., Rhumadata) and international (e.g., Swiss Registry for Inflammatory Rheumatic Diseases) RA registries

## Our Data Linkages

The OBRI clinical data has been linked to the provincial administrative databases held by the Institute for Clinical Evaluative Sciences (ICES).



The population of Ontario comprises approximately 40% of the Canadian population. The Ontario administrative data identified 212,733 RA patients. Linking the OBRI clinical data to the ICES datasets provides a unique opportunity to answer many research questions.



# **OBRI Psoriatic Arthritis Registry**

Psoriatic arthritis (PsA) is complicated. Clinical trials, which focus mostly on tender and swollen joint counts, do not capture the real burden of the disease. Real world evidence can help us examine the impact of the disease on patients and the response to therapies. Under the leadership of Dr. Sibel Aydin, the OBRI expanded to include a community-based psoriatic arthritis registry. The first patient was enrolled on February 14, 2022.

#### The aims of the study are:

- To better understand sociodemographic, disease activity and physical function profiles across the disease spectrum and disease phenotypes.
- To describe real world treatment practice patterns of newer therapies across different disease phenotypes.
- To determine the impact of real world treatment on disease activity, impairment of physical function, quality of life, work productivity, and health care utilization.
- To create a forum for best practice strategies and post-marketing surveillance in PsA usual care
- To understand practice variation across provinces.

Eligible patients have a diagnosis of PsA with active disease requiring a new treatment (biologic/biosimilar, JAK-inhibitor or DMARD) or are PsA patients undergoing a non-medical switch to biosimilars.

Originally based in Ontario, the registry expanded to British Columbia and Alberta, with the aim of comparing provinces in terms of therapy choices and access, and to advocate for better care and equity. To reflect this change, the PsA registry was renamed the <a href="Mobservational">Observational</a> and <a href="Best Practices">Best Practices</a> <a href="Research Initiative">Research Initiative</a> (OBRI-PsA). On September 15, 2023, the PsA investigators gathered for a first look at the data collected. An abstract describing the cohort will be presented at the CRA 2024 meeting in Winnipeg.

#### **OBRI-PsA Demographics (as of July 03, 2023)**

Age at enrollment (N=73), mean (sd)	53.9 (13.1)
Age at Psoriatic Arthritis Diagnosis (N=72), mean (sd)	46.5 (13.4)
Gender (N=73), n (%female)	43 (59%)
Family history of psoriasis / psoriatic arthritis (N=73), n (%)	32 (44%)
Smoker (current or past) (N=73), n (%)	26 (36%)

# **PsA Steering Committee Members**

The members of the PsA Steering Committee have provided essential input into all aspects of this registry. Their commitment, from reviewing the protocol to creating forms within the Accuro EMR platform to capture all the data required during the physician assessments, has been vital to this project.

Dr. Vandana Ahluwalia
Dr. Sibel Aydin (PI)
Dr. Claire Bombardier
Dr. Vinod Chandran
Dr. Arthur Lau
Dr. Carter Thorne
Jennifer Boyle, Patient Representative

# Thank you to the participating PsA rheumatologists:

Dr. Vandana Ahluwalia (Brampton, ON) Dr. Arthur Lau (Hamilton, ON) Dr. Sankalp Bhavsar (Burlington, ON) Dr. Nancy Maltez (Ottawa, ON) Dr. Jonathan Chan (Vancouver, BC) Dr. Angela Montgomery (Ottawa) Dr. Andrew Chow (Mississauga, ON) Dr. Sherry Rohekar (London, ON) Dr. Rajwinder Dhillon (Niagara Falls, ON) Dr. Elaine Soucy (Mississauga, ON) Dr. Elliot Hepworth (Ottawa, ON) Dr. Carter Thorne (Newmarket, ON) Dr. Catherine Ivory (Ottawa, ON) Dr. Richard Tse (Newmarket, ON) Dr. Britney Jones (Calgary, AB) Dr. Nadil Zeiadin (Newmarket, ON) Dr. Raman Joshi (Brampton, ON) Dr. Olga Ziouzina (Calgary, AB)

# **Knowledge Translation**

# Key Findings from our 2023 Publications

We are pleased to highlight the 4 manuscripts published in peer-reviewed journals in 2023. A complete list of the 43 OBRI publications is available on our website at <a href="https://www.obri.ca">www.obri.ca</a>.

# Is the discontinuation rate of Tofacitinib and TNF inhibitors similar? Results using pooled data from OBRI and Rhumadata.

The OBRI is excited to have once again pooled our data with Rhumadata. Comparing patients on Tofacitinib (TOFA) and TNF inhibitors (TNFi), we examined the discontinuation rates. We found that patients starting TOFA were older, had longer disease duration, had a higher proportion of previous biologic use, had higher disease activity, and were more commonly using it as monotherapy. Ineffectiveness was the most commonly reported reason for discontinuing treatment in both groups (TOFA = 53.6% and TNFi = 54.7%). There was no difference in the discontinuation rate of TNFi users with or without concomitant methotrexate. TNFi users were less likely to discontinue due to adverse events.<sup>1</sup>

## What was the impact of COVID-19 on patients with rheumatoid arthritis?

We examined the potential impact of the pandemic on patient-reported outcomes (PROs), disease activity and medication profiles, comparing the periods pre-pandemic and during the pandemic. We examined the data of 1508 patients who had a physician visit or interview in the 12-months before and after the start of the pandemic. The mean age of the group was 62.7 years, and 79% were female. Despite decreases in the number of in-person visits during the pandemic, there was no significant negative impact on disease activity or PRO scores. The disease activity scores in both periods remained low, with either no clinically significant differences or slight improvement. Scores for mental, social and physical health were either stable or improved. There were statistically significant decreases in conventional synthetic DMARD use (P < 0.0001) and increased Janus kinase inhibitor usage (P = 0.0002). Biologic DMARD use remained stable throughout the pandemic.

In this cohort, disease activity and PROs of RA patients remained stable during the COVID-19 pandemic.<sup>2</sup>

# What are the factors affecting the discrepancy between patient and physician global assessment in early rheumatoid arthritis?

We aimed to assess the prevalence and factors affecting the discrepancy between patient global assessment (PtGA) and physician global assessment of disease activity (PhGA) in patients with early rheumatoid arthritis (RA) at enrolment and after one year. The discrepancy between PtGA and PhGA was calculated by simple subtraction (PtGA-PhGA). Significant discrepancy was found in approximately one-quarter of early RA patients. In the majority of these patients, PtGA was higher than PhGA.

The PtGA-PhGA discrepancy was mostly affected by swollen joint count (SJC28), pain and fatigue. Higher discrepancy between PtGA-PhGA was associated with lower SJC28 and higher pain score at enrollment and lower SJC28 and higher pain and fatigue score at 1-year follow-up.<sup>3</sup>

# Cardiovascular Risk Factors and the Risk of Discontinuation of Advanced Therapies Due to Treatment Failure in Rheumatoid Arthritis

Patients with rheumatoid arthritis are at increased risk of cardiovascular disease. In this study, we investigated if cardiovascular disease (CVD) risk factors are associated with the retention of biologic disease-modifying antirheumatic drugs (bDMARDs) or targeted-synthetic DMARDs (tsDMARDs) in patients with rheumatoid arthritis (RA).

In this sample of 872 patients, 58% (n = 508) discontinued their b/tsDMARD after a median of 13 months from the time of initiation. The most common causes for discontinuation were primary failure (n = 72), secondary failure (n = 126), or adverse events (n = 133). Patients with no CVD risk factors experienced significantly longer treatment survival compared to patients with 1 or  $\geq$ 2 CVD risk factors. In multivariable-adjusted analysis, there was a significant association between the presence of >1 CVD risk factor and treatment discontinuation, notably due to secondary treatment failure, but not due to adverse events.<sup>4</sup>

## References

- Movahedi M, Choquette D, Coupal L, Cesta A, Li X, Keystone E, Bombardier C, OBRI Investigators. <u>Discontinuation of tofacitinib and TNF inhibitors in patients with</u> <u>rheumatoid arthritis: analysis of pooled data from two registries in Canada.</u> BMJ Open. 2023 Mar 6;13(3):e063198. doi: 10.1136/bmjopen-2022-063198. PMID: 36878650; PMCID: PMC9990670.
- Wong-Pack M, Hepworth E, Movahedi M, Kuriya B, Pope J, Keystone E, Thorne C, Ahluwalia V, Cesta A, Mously C, Bombardier C, Lau A, Aydin SZ. <u>Impact of the COVID-19</u> <u>pandemic on patients with rheumatoid arthritis: data from the Ontario Best Practices</u> <u>Research Initiative (OBRI).</u> Rheumatol Adv Pract. 2023 Apr 26;7(2):rkad042. doi: 10.1093/rap/rkad042. PMID: 37179654; PMCID: PMC10172034.
- Akhavan PS, Movahedi M, Cesta A, Bombardier C; and other OBRI investigators. <u>Factors affecting the discrepancy between patient and physician global assessment in early rheumatoid arthritis: The Ontario Best Practices Research Initiative</u>. Clin Exp Rheumatol. 2023 Nov;41(11):2249-2256. doi: 10.55563/clinexprheumatol/r7b8go. Epub 2023 Jun 15. PMID: 37382462.
- Aboulenain S, Li X, Movahedi M, Bombardier C, Kuriya B on behalf of OBRI Investigators. <u>Cardiovascular Risk Factors and the Risk of Discontinuation of Advanced</u> <u>Therapies Due to Treatment Failure in Rheumatoid Arthritis: Results from the Ontario</u> <u>Best Practices Research Initiative</u>. ACR Open Rheumatology, 17 November 2023 https://doi.org/10.1002/acr2.11629.

# OBRI Annual Conference (September 15, 2023)

This annual meeting brings together arthritis stakeholders from across the province for the presentation of cohort findings, investigator led research, and new research linkages and collaborations. The conference returned to in-person on September 15, 2023 and the attendees, including OBRI Investigators, industry partners, research coordinators, patients, and members of arthritis consumer and advocacy groups, were excited to gather once again for the annual update.

A panel of rheumatologists, Dr. Carter Thorne, Dr. Sibel Aydin, Dr. Elliot Hepworth, Dr. Sahil Koppikar, and Dr. Vandana Ahluwalia (Chair) presented "Models of Care in Rheumatology – What comes next?"

- Dr. Thorne presented the creation of the "Centre of Arthritis Excellence"
   (CArE) in Newmarket a team-based regional program addressing the needs of the community.
- Dr. Aydin and Dr. Hepworth described the creation of the Ottawa
   Rheumatology CompreHEnSive TReatment and Assessment Clinic
   (ORCHESTRA) at the Ottawa Hospital a program the provides co-morbidity screening, pre-biologic clearance/vaccine counselling, disease activity assessment and protocolized MSK Ultrasound (MSUS) Assessment and injection training/1st injection.
- Dr. Koppikar discussed the implementation of arthritis assessment centres in Northern Ontario using the "hub and spoke" model of care and ACPAC (Advanced Clinical Practitioner in Arthritis Care) therapists. The goal is to create these assessment centres in all major northern communities.
- Dr. Ahluwalia shared the benefits of using medical scribes in her clinic and the creation of a program to train medical scribes.
- For many attendees, the highlight of the panel was the presentation by the patient partner, Donna, who shared a coherent, and at times emotional, summary of her RA journey.

Dr. Lau and Dr. Wong-Pack shared the work they are doing with the Fit-Frailty Assessment and Management app developed at McMaster University. They hope the

results from the fit-frailty assessment will provide valuable diagnostic information to help guide healthcare teams in improving holistic management, developing appropriate treatments to improve function and other outcomes, triaging & prioritizing geriatric services, and assisting with planning transitions in care.

Dr. Sibel Aydin presented the data collected at baseline and first follow-up for the OBRI-PsA registry; Dr. Bindee Kuriya presented updates on the OBRI cohort; and the meeting concluded with a poster tour of OBRI's latest research.

### National and International Conferences

In 2023, OBRI abstracts were accepted for presentation at the following national and international scientific meetings:

Canadian Rheumatology Association Annual Scientific Meeting, Quebec City, PQ, February 8-11, 2023

Bhavsar S, Mohavedi M, Cesta A, Pope J, Bombardier C, and other OBRI investigators. Retention of triple therapy with methotrexate, sulfasalazine, and hydroxychloroquine compared to combination methotrexate and leflunomide in rheumatoid arthritis. Poster Tour

Li X, Cesta A, Movahedi M, Bombardier C. <u>Late-onset rheumatoid arthritis has a similar time to remission as younger-onset rheumatoid arthritis.</u> Poster Presentation

Choquette D, Bombardier C, Cesta A, Coupal L, Keystone e, Li X, Movahedi M on behalf of OBRI and RHUMADATA investigators. What is the real-world effectiveness, safety profile, and persistence of Upadacitinib in real-world Canadian RA patients in mono and in combination with csDMARDs compared to biologic agents, in all lines of therapy. Poster Presentation

Aboulenain S, Li X, Movahedi M, Bombardier C, Kuriya B on behalf of OBRI Investigators. <u>Cardiovascular Risk and Advanced Therapies Retention in Rheumatoid Arthritis: Results from the OBRI.</u> Poster Presentation

Wong-Pack M, Hepworth E, Movahedi M, Kuriya B, Pope J, Keystone E, Thorne C, Ahluwalia V, Cesta A, Mously C, Bombardier C, Lau A, Aydin SZ. <u>Impact of COVID-19</u> <u>pandemic on patients with rheumatoid arthritis: Data from the Ontario Best Practices</u> <u>Research Initiative (OBRI).</u> Poster Presentation

# Ontario Rheumatology Association Annual Scientific Meeting, Kingsbridge Conference Centre, ON, May 24-26, 2023

Bhavsar S, Mohavedi M, Cesta A, Pope J, Bombardier C, and other OBRI investigators. Retention of triple therapy with methotrexate, sulfasalazine, and hydroxychloroquine compared to combination methotrexate and leflunomide in rheumatoid arthritis. Podium Poster

Movahedi M, Cui K, Cesta A, Li X, Bombardier C. Ontario Rheumatology Association Annual Scientific Meeting. Physical function and disease activity are affected by social determinants of health in patients with rheumatoid arthritis; Real world data from a Rheumatoid Arthritis Registry in Canada. Podium Poster

#### EULAR European Congress of Rheumatology, Milan, Italy, May 31-June 3, 2023

Movahedi M, Cui K, Cesta A, Li X, Bombardier C. <u>Physical function and disease activity are</u> <u>affected by social determinants of health in patients with rheumatoid arthritis; Real world data from a Rheumatoid Arthritis Registry in Canada.</u> Oral Presentation

Choquette D, Bombardier C, Cesta A, Coupal L, Keystone E, Li X, Movahedi M on behalf of OBRI and RHUMADATA investigators. What is the real-world effectiveness, safety profile, and persistence of Upadacitinib in real-world Canadian RA patients in mono and in combination with csDMARDs compared to biologic agents, in all lines of therapy. Accepted for publication

Movahedi M, Cesta A, Li X, Bombardier C. <u>Discontinuation and Effectiveness of Originator and Biosimilar TNFi in Patients with Rheumatoid Arthritis: Real World Data from a Rheumatoid Arthritis Registry in Canada</u>. Accepted for publication

International Conference on Pharmacoepidemiology & Therapeutic Risk Management, Halifax, NS, August 23-27, 2023

Bhavsar S, Mohavedi M, Cesta A, Pope J, Bombardier C, and other OBRI investigators. Retention of triple therapy with methotrexate, sulfasalazine, and hydroxychloroquine compared to combination methotrexate and leflunomide in rheumatoid arthritis. Poster Presentation

Movahedi M, Cesta A, Li X, Bombardier C. <u>Discontinuation and Effectiveness of Originator and Biosimilar TNFi in Patients with Rheumatoid Arthritis: Real World Data from a Rheumatoid Arthritis Registry in Canada</u>. Poster Presentation

# ANNUAL REPORT 2023 THE ONTARIO BEST PRACTICES RESEARCH INITIATIVE

Movahedi M, Cesta A, Li X, Bombardier C. <u>Discontinuation and Effectiveness of Originator and Biosimilar TNFi in Patients with Rheumatoid Arthritis: Real World Data from a Rheumatoid Arthritis Registry in Canada. Poster Presentation</u>

Besette L, Movahedi M, Choquette D, Coupal L, Bombardier C and other OBRI and RHUMADATA investigators. <u>Impact of Antirheumatic Treatments on the Individual</u>

<u>Components of the ACR Composite Score in Patients with Rheumatoid Arthritis.</u> Poster Presentation

American College of Rheumatology (ACR) Convergence, San Diego, CA, November 10-15, 2023

Choquette D, Bombardier C, Cesta A, Coupal L, Keystone e, Li X, Movahedi M on behalf of OBRI and RHUMADATA investigators. What is the real-world effectiveness, safety profile, and persistence of Upadacitinib in real-world Canadian RA patients in mono and in combination with csDMARDs compared to biologic agents, in all lines of therapy. Poster Presentation

Aboulenain S, Li X, Movahedi M, Bombardier C, Kuriya B on behalf of OBRI Investigators. <u>Cardiovascular Risk and Advanced Therapies Retention in Rheumatoid Arthritis: Results from the OBRI.</u> Poster Presentation

# **Current OBRI Initiatives**

# ICES Linkages (formerly the Institute for Clinical Evaluative Sciences) (www.ices.on.ca)

a) COVID-19 in RA: A cross-sectional study on predictors of infection, admission and mortality and effect of immune-modulating treatments.

ICES data has been linked to the OBRI data to investigate the prevalence and predictors of COVID-19 infection, severe infection requiring hospitalization, intensive care unit admission, intubation, and mortality. The findings from this study will help identify high-risk RA patients and guide treatment decisions.

b) Health Care Cost and Clinical Burden of Herpes Zoster Infections among Patients with Rheumatoid Arthritis

The OBRI has linked its data to ICES administrative databases to create a unique cohort that will enable us to assess the impact of clinical covariates on health care costs related to Herpes Zoster infections.

The OBRI linked data allows for comparison between RA patients and the general population. The results will provide decision makers, payers, clinicians, and patients data on the costs of herpes zoster for RA patients and the clinical burden associated with herpes zoster infections.

# Patient Perspectives and Experiences Following the Ontario Government's Mandated Switch from Biologics to Biosimilars: A Survey for Rheumatoid Arthritis Patients Participating in OBRI

On December 20, 2022, the Ontario government announced that effective March 31, 2023, they would implement a transition policy that requires many patients on biologics to be switched to a biosimilar. OBRI completed pre-switch surveys in January 2023 to identify best practices from a communication and education standpoint (i.e., the patient's perspective during this initiative). The survey will help inform and educate other jurisdictions that implement such policies in the future. The post-switch surveys will be completed in January 2024. The results of this survey will also provide insight on

how to best bridge educational gaps and to appropriately counsel and support patients through such policy changes.

## **Data Sharing and Collaborations**

OBRI's vast experience with the intricacies pertaining to issues of privacy, ethics, data collection, data management and analysis has made OBRI a valuable resource and partner to industry, payers, researchers and government.

#### Rhumadata

The OBRI continues to work closely with Rhumadata (<a href="https://rhumadata.org">https://rhumadata.org</a>), the Quebec RA registry led by Dr. Denis Choquette, to consolidate the data from these two registries. Analysis of the merged data was presented at national and international scientific meetings in 2022 and was accepted for publication in 2023.

#### Swiss Registry for Inflammatory Rheumatic Diseases (SCQM)

The OBRI and Rhumadata are pooling data with the Swiss Registry for Inflammatory Rheumatic Diseases (SCQM) (<a href="https://www.scqm.ch/en/">https://www.scqm.ch/en/</a>) for a retrospective, comparative cohort analysis of the effectiveness of upadacitinib and Tumor Necrosis Factor Inhibitor (TNFi)-treated rheumatoid arthritis patients. We hope this will be the first of many international collaborations.

## Real world data

The availability of an increasing number of medications for the treatment of rheumatoid arthritis, although beneficial to patients and providers, has put tremendous financial strain on payers thereby increasing the need for comparative effectiveness studies. Through the OBRI, we can compare real world (and long-term) effectiveness of different treatment groups with similar indications rather than relying on historical data for comparisons. The large number of patients in the OBRI also allow for comparisons of "matched" controls of similar patients using different treatments. Payers, providers, and decision-makers are turning to the OBRI to provide comparisons of treatments that previously could only be studied in single arm cohorts.

# Focused evaluation of biosimilars and targeted small molecules

New biosimilars and targeted small molecules continue to be approved in Canada and they will continue to emerge at a rapid rate as they offer potential and real cost savings in the treatment of many chronic diseases – particularly in Rheumatology, Gastroenterology and Dermatology. With many new products entering the Canadian market, the growing need to understand the long-term safety, effectiveness, and economic benefit of biosimilars remains an important priority. OBRI continues to identify and monitor the long-term safety and effectiveness of all biologics, including biosimilars, so that it can document and provide comparative real world insights and evidence for physicians, patients, researchers, and policy makers when evaluating these new molecules.

# **Our Rheumatologists**

The OBRI rheumatologists represent diverse regions of Ontario. In addition to the broad geographical distribution, our rheumatologists also work in several practice settings. Approximately half of our investigators work in an academic setting and the remaining half are community based. Investigators work either in an individual practice or as part of a large group. This wide range of clinical settings allows OBRI to examine regional differences in both practice patterns and patient populations, adding to the richness of our data.

The OBRI is dedicated to producing high quality data and ensuring precise and accurate data collection using a rigorous process of confirmation, validation, queries and constant communication with primary investigators and their research teams. The data is used to provide investigators with an individualized annual site report that compares their practice to all OBRI investigators. This annual report includes patient characteristics, patient reported outcomes, disease activity and medication use, thereby providing rheumatologists with a valuable tool for practice self-evaluation.

In 2023, four of our valuable investigators stepped away from research and/or clinical practice. We thank Dr. Louise Perlin (Toronto), Dr. Dharini Mahendira (Toronto), Dr. Heather McDonald-Blumer (Toronto), and Dr. Jane Purvis (Peterborough) for their contribution to OBRI. We were pleased to welcome the following rheumatologists to OBRI: Dr. Imtiaz Khan (Mississauga), Dr. Stephanie Tom (Mississauga), Dr. Kangping Cui (Bracebridge), Dr. Arpita Gantayet (Brampton), Dr. Melissa Holdren (Newmarket), Dr. Sonja Gill (Oakville), Dr. Hart Goldhar (Toronto) and Dr. Joanna Ueng (Mississauga).

#### **Awards**

Congratulations to Dr. Janet Pope, recipient the Canadian Rheumatology Association Distinguished Teacher-Educator Award in 2023.

Congratulations to Dr. Derek Haaland for obtaining the William Bensen Models of Care Initiative Grant in 2023.

## Royal College MOC credits for OBRI investigators

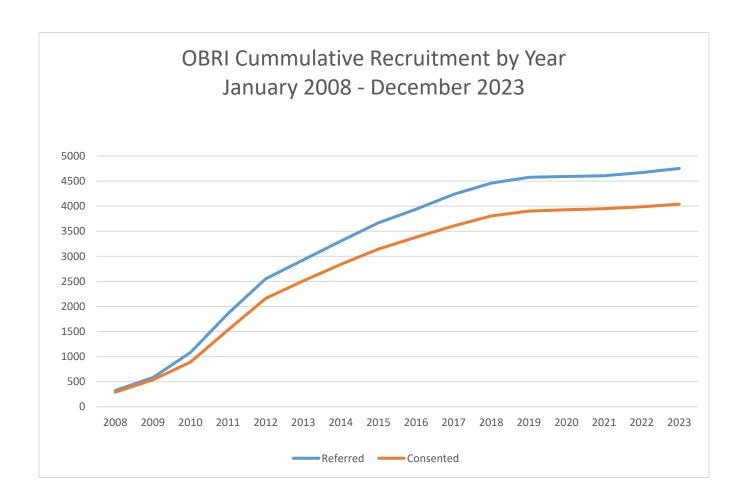
OBRI investigators may claim credits under Section 3 as Performance Assessment. Investigators who collect and complete the OBRI data collection tools, attend the OBRI Annual General Meeting and review/reflect on their individualized OBRI reports for self-improvement may record up to 25 hours (75 credits) for this program.

# Thank you to the OBRI-RA Investigators

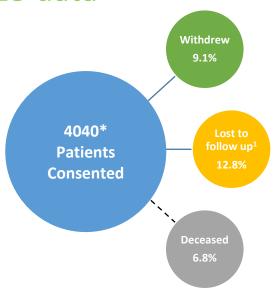
Dr. Vandana Ahluwalia <sup>1</sup>	Dr. Hart Goldhar	Dr. Angela Montgomery
Dr. Zareen Ahmad	Dr. Derek Haaland <sup>1</sup>	Dr. Manisha Mulgund <sup>1</sup>
Dr. Pooneh Akhavan	Dr. Sara Haig	Dr. Edward Ng
Dr. Lori Albert	Dr. Brian Hanna <sup>3</sup>	Dr. Ahmed Omar
Dr. Catherine Alderdice <sup>3</sup>	Dr. Nigil Haroon	Dr. Tripti Papneja
Dr. Tooba Ali	Dr. Elliot Hepworth	Dr. Viktoria Pavlova
Dr. Michael Aubrey	Dr. Jackie Hochman <sup>3</sup>	Dr. Louise Perlin <sup>3</sup>
Dr. Henry Averns <sup>2</sup>	Dr. Melissa Holdren	Dr. Janet Pope
Dr. Sibel Aydin	Dr. Susan Humphrey-Murto	Dr. Jane Purvis <sup>3</sup>
Dr. Sangeeta Bajaj	Dr. Catherine Ivory	Dr. Saara Rawn
Dr. Pari Basharat	Dr. Anna Jaroszynska	Dr. Gina Rohekar
Dr. Mary Bell	Dr. Sindhu Johnson	Dr. Sherri Rohekar
Dr. William Bensen <sup>3</sup>	Dr. Raman Joshi	Dr. Thanu Ruban
Dr. Sankalp Bhavsar	Dr. Allan Kagal	Dr. Alexandra Saltman
Dr. Raja Bobba	Dr. Arthur Karasik <sup>1</sup>	Dr. Nooshin Samadi
Dr. Tristan Boyd	Dr. Jacob Karsh³	Dr. Sharron Sandhu
Dr. Claire Bombardier	Dr. Edward Keystone <sup>3</sup>	Dr. Dale Seguin
Dr. Arthur Bookman	Dr. Nader Khalidi	Dr. Suneet Sekhon
Dr. Julie Brophy	Dr. Imtiaz Khan <sup>1</sup>	Dr. Saeed Shaikh
Dr. Antonio Cabral	Dr. Faiza Khokhar	Dr. Ali Shickh
Dr. Simon Carette <sup>3</sup>	Dr. Bindee Kuriya	Dr. Rachel Shupak <sup>3</sup>
Dr. Raj Carmona	Dr. Margaret Larché	Dr. Doug Smith <sup>3</sup>
Dr. Andrew Chow¹	Dr. Arthur Lau <sup>1</sup>	Dr. Medha Soowamber
Dr. Shirley Chow	Dr. Nicole Le Riche <sup>3</sup>	Dr. Elaine Soucy
Dr. Gregory Choy	Dr. Felix Leung	Dr. Amanda Steiman
Dr. Patricia Ciaschini <sup>1, 3</sup>	Dr. Frances Leung <sup>3</sup>	Dr. Jonathan Stein
Dr. Alfred Cividino	Dr. Dharini Mahendira <sup>3</sup>	Dr. Ashley Sterrett
Dr. Dana Cohen	Dr. Nancy Maltez	Dr. Andy Thompson <sup>3</sup>
Dr. Kangping Cui	Dr. Mark Matsos <sup>3</sup>	Dr. John Thomson
Dr. Julie D'Aoust	Dr. Eilish McConville	Dr. Carter Thorne <sup>1</sup>
Dr. Rajwinder Dhillon	Dr. Heather McDonald-Blumer <sup>3</sup>	Dr. Stephanie Tom
Dr. Sanjay Dixit	Dr. Emily McKeown	Dr. Richard Tse
Dr. Rafat Faraawi	Dr. Ines Midzic <sup>3</sup>	Dr. Joanna Ueng
Dr. Arpita Gantayet	Dr. Nataliya Milman	Dr. Ola Wierzbicki
Dr. Amit Ghelani	Dr. Shikha Mittoo <sup>3</sup>	Dr. Sharon Wilkinson <sup>3</sup>
Dr. Sonja Gill	Dr. Ami Mody	Dr. Nadil Zeiadin
	<u> </u>	- t

 $^{1}$ RA & SpA Pilot;  $^{2}$ SpA Pilot only;  $^{3}$ Retired/No longer participating in OBRI

# 2023 Recruitment Activity

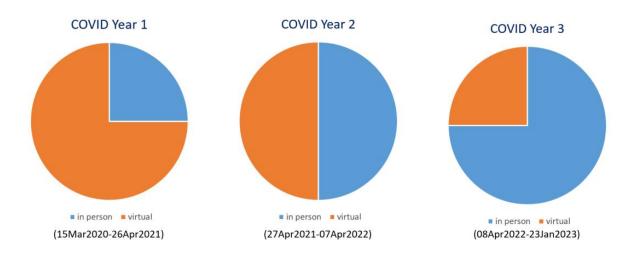


# Our 2023 data



\*Data as of December 31, 2023  $^1$ Interviewer not able to contact patient. No data from patient for  $\geq$  18 months AND no physician reported data has been received for  $\geq$  18 months

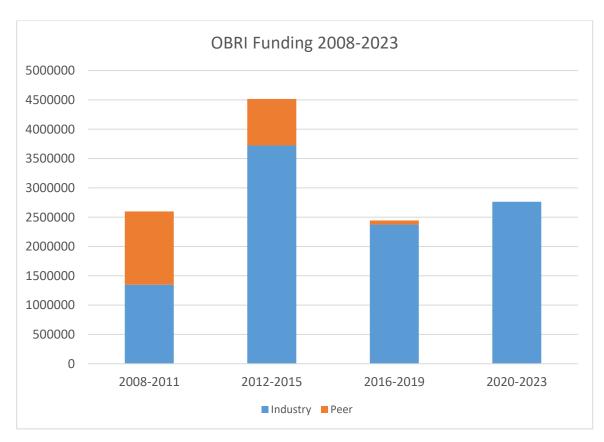
# In-person vs. virtual physician visits continued to increase during Year 3 of the pandemic



# Financial Report

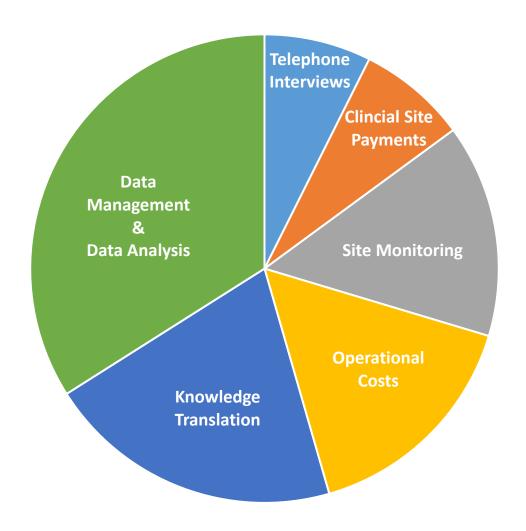
At OBRI, our main source of revenue comes from sponsorship; however, peer-reviewed funding has been awarded to OBRI for specific research activities. In 2023, OBRI received sponsorship from seven industry partners. Sources of funding revenue from 2008-2023 are presented below.

# **OBRI Funding Revenue**



# **OBRI Expenditures**

## **OBRI 2023 Expenditures**



# Patient Advisory Committee (PAC)

The OBRI Patient Advisory Committee (PAC) is a volunteer-led group comprised of patient representatives with rheumatoid arthritis, ankylosing spondylitis, and psoriatic arthritis. The PAC works to improve patient well-being through the promotion of rights detailed in the *Canadian Arthritis Patients Charter*.

The OBRI PAC provides guidance to the OBRI research team through:

- the communication of patient perspectives to research staff, students, investigators and other stakeholders
- priority setting, project planning, and decision making
- patient engagement, communication, and retention activities
- the dissemination of research/knowledge to patients and caregivers

The OBRI PAC oversees the production of an annual patient newsletter "In the Loop" (<a href="http://www.obri.ca/for-patients/patient-newsletters/">http://www.obri.ca/for-patients/patient-newsletters/</a>) to keep patients informed about OBRI research, news, and events. in 2023, PAC member Jennifer Boyle worked with the OBRI data management team and submitted an abstract entitled *Influence of Age and Sex on Disease Trajectory in Rheumatoid Arthritis: Results from The Ontario Best Practices Research Initiative*. This abstract will be presented at the upcoming 2024 CRA & AHPA Annual Scientific Meeting.

#### Patient Advisory Committee:

Catherine Hofstetter David Barker Jennifer Boyle Maureen Forbes

Lynda Linderman Gerald Major Erinn McQueen Denis Morrice

















# Clinical Advisory Committee (RA)

The Clinical Advisory Committee (CAC) was developed in 2015 to serve as an oversight committee to:

- provide expert advice on matters relating to OBRI internal operations
- provide strategic leadership for communications and interactions with external stakeholders (i.e., Patients, Payers, Providers, Professional Associations) and industry relations
- engage and mentor junior investigators
- prioritize research questions to ensure alignment with OBRI overall goals and diversification of funding.
- provide the OBRI with leadership for the development and investigation of clinically-relevant research questions.

Members of the CAC work closely with OBRI staff to explore new research questions relevant to rheumatology care. This collaboration resulted in four publications in 2023.

## **Clinical Advisory Committee:**

Dr. Vandana Ahluwalia

Dr. Sibel Aydin

Dr. Claire Bombardier

Catherine Hofstetter (PAC)

Dr. Edward Keystone

Dr. Bindee Kuriya

Dr. Arthur Lau

Dr. Janet Pope

Dr. Carter Thorne



















# Interviews: Collecting Patient Reported Outcome Measures

One of the unique features of the OBRI is our ongoing collection of patient reported outcome measures through structured telephone interviews with patients.

Patient reported data is collected on a regular basis to document patient experiences with disease activity, quality of life, comorbidity, socioeconomic status, functional ability, and work productivity. These interviews, combined with physician-reported data and administrative data, provide us with a holistic picture of the RA care landscape in Ontario.

We would like to thank our dedicated interviewers for their role ensuring that patient data is collected in a standardized manner.

# **OBRI Interviewers**

Lynda Linderman Andrea McClintock Colleen Perrin







# **OBRITEAM**

The data management centre is staffed by a specialized team with competency in clinical trial management, biostatistics, ethics approvals, privacy, data management, health IT, stakeholder engagement and business development. Since inception, the OBRI has disseminated knowledge insights globally, nationally and provincially through abstracts, presentations, and manuscripts for a variety of vested stakeholders including clinicians, patients, manufactures and payers.

- Claire Bombardier, MD, OBRI Principal Investigator
- Sibel Aydin, MD, OBRI-PsA Principal Investigator
- Angela Cesta, MSc, Clinical Research Manager
- Mohammad Movahedi, MD, PhD, Staff Scientist
- Xiuying Li, Data Manager
- Carol Mously, Site Coordinator
- Leanie Culanding, Budget and Finance Manager (part-time)
- Cheryl Dawson-Titus, Administrative Assistant (part-time)

















# THANK YOU TO OUR 2023 SPONSORS















# Past sponsors:

Aurora, Bristol-Myers Squibb, Celgene, Gilead, Hospira, Janssen, Medexus, Merck, Novartis, Sandoz, Sanofi and UCB



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