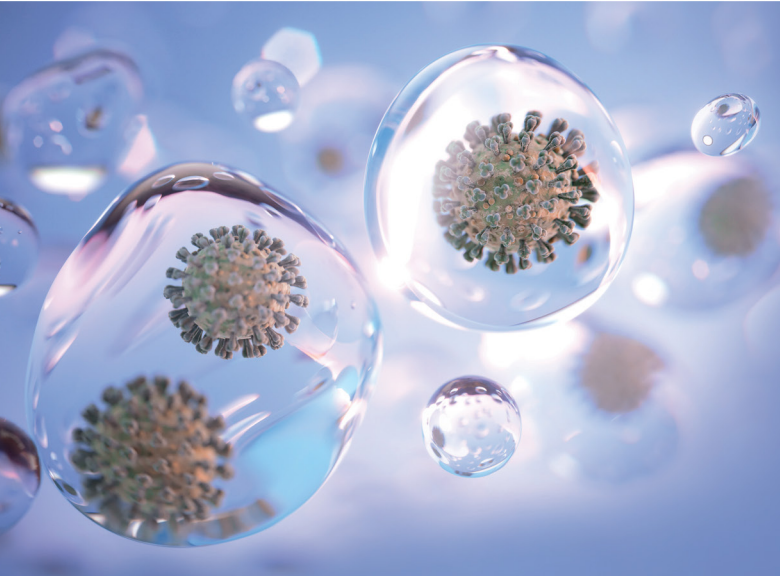


# CRA SCR

The Journal of the Canadian Rheumatology Association



## *Focus on:* COVID-19 and Its Impact on Canadian Rheumatology

### *Editorial*

Saving Lives: Easier for Neurologists  
Than for Rheumatologists?

### *Northern (High)lights*

RheumVision: Harnessing Telemedicine to Improve  
Access to Care in Rural British Columbia

Training in the Shadow of the COVID-19 Pandemic

Tips for Effective Virtual Meetings:  
Crowd-sourced Advice from Around the CRA

Virtual Small Group CME

COVID-19: Innovations in Delivering Science  
to Rheumatologists and Patients

Physician Well-being in the Midst of a  
Pandemic – From Individual Well-being to  
Compassion Culture

### *Hallway Consult*

MIS-C and PIMS: The Alphabet Soup of  
COVID-associated Hyperinflammation in Children

### *Regional News*

Update from Manitoba

### *Joint Count*

Survey Results: Telehealth Use in Canada

### *What's the CRA Doing for You?*

Update on CRA Initiatives

### *CIORA*

How to Get More Buck for Your Bang!  
The Ins and Outs of SR&ED Credits

### *Joint Communiqué*

The Schroeder Arthritis Institute: Transforming  
Arthritis Care Through Research and Education

ACR Convergence 2020 Review

The Arthritis Society – Expanding Our Online  
Medical Cannabis Resources

Addressing Inequity in Northern Ontario:  
A Look to the Future

Treat to Target in Gout

### *In Memoriam*

Tribute to Dr. Robert “Bob” McKendry

Testimonial to Dr. Hanna Strawczynski

# NOW INDICATED TO TREAT ACTIVE PSORIATIC ARTHRITIS

## UNCOVER TREMFYA<sup>®</sup>

ACR  
20

### IN ADULTS WITH ACTIVE PSORIATIC ARTHRITIS<sup>1-3††</sup>

#### RESPONSES<sup>‡§</sup>

#### DISCOVER-2 TRIAL

64% (159/248) of patients achieved ACR20 responses at Week 24 with TREMFYA<sup>®</sup> 100 mg q8w vs. 33% (81/246) with placebo (primary endpoint,  $p < 0.0001$ )<sup>1,3††</sup>

#### DISCOVER-1 TRIAL

52% (66/127) of patients achieved ACR20 responses at Week 24 with TREMFYA<sup>®</sup> 100 mg q8w vs. 22% (28/126) with placebo (primary endpoint,  $p < 0.0001$ )<sup>1,2\*\*</sup>

#### Indications and clinical use:

TREMFYA<sup>®</sup>/TREMFYA ONE-PRESS<sup>™</sup> (guselkumab injection) is indicated for the treatment of adult patients with active psoriatic arthritis. TREMFYA<sup>®</sup>/TREMFYA ONE-PRESS<sup>™</sup> can be used alone or in combination with a conventional disease-modifying antirheumatic drug (cDMARD) (e.g., methotrexate).

TREMFYA<sup>®</sup>/TREMFYA ONE-PRESS<sup>™</sup> is also indicated for the treatment of adult patients with moderate-to-severe plaque psoriasis who are candidates for systemic therapy or phototherapy.

#### Relevant warnings and precautions:

- Do not initiate treatment in patients with any clinically important active infections until the infection resolves or is adequately treated
- Discontinue treatment if patient develops a serious infection or is not responding to standard therapy for infection
- Evaluate patients for tuberculosis infection prior to therapy and monitor for active tuberculosis during and after treatment
- Consider completion of all immunizations prior to treatment
- Concurrent use with live vaccines is not recommended
- Discontinue treatment in cases of serious hypersensitivity reactions, including anaphylaxis, urticaria and dyspnea, and institute appropriate therapy
- Women of childbearing potential should use adequate contraception
- Use during pregnancy only if clearly needed
- The benefits of breastfeeding should be considered along with the mother's clinical needs
- Effect on human fertility has not been evaluated
- Safety and efficacy in pediatric patients have not been evaluated
- Data in patients  $\geq 65$  years of age are limited

#### For more information:

Please consult the Product Monograph at [www.janssen.com/canada/products](http://www.janssen.com/canada/products) for important information regarding adverse reactions, drug interactions, and dosing and administration that has not been discussed in this piece.

The Product Monograph is also available by calling 1-800-567-3331.

\* Multicentre, double-blind, randomized, placebo-controlled phase 3 study in biologic-naïve adults with active psoriatic arthritis (PsA) ( $\geq 5$  swollen joints,  $\geq 5$  tender joints, and a C-reactive protein [CRP] level of  $\geq 0.6$  mg/dL) who had inadequate response to standard therapies (e.g., conventional disease-modifying antirheumatic drugs [cDMARDs], apremilast, or nonsteroidal anti-inflammatory drugs [NSAIDs]), a diagnosis of PsA for  $\geq 6$  months, and a median duration of PsA of 4 years at baseline. Patients were randomly assigned to receive subcutaneous injections of TREMFYA<sup>®</sup> 100 mg at Weeks 0, 4, then q8w, or placebo. Primary endpoint was the percentage of patients achieving an ACR20 response at Week 24.

† Multicentre, double-blind, randomized, placebo-controlled phase 3 study in adults with active psoriatic arthritis ( $\geq 3$  swollen joints,  $\geq 3$  tender joints, and a CRP level of  $\geq 0.3$  mg/dL). Eligibility criteria also included inadequate response to standard therapies (e.g., cDMARDs, apremilast, or NSAIDs), a diagnosis of PsA for  $\geq 6$  months, and a median duration of PsA of 4 years at baseline. About 30% of study participants could have received one or two anti-TNF $\alpha$  agents. Patients were randomly assigned to receive subcutaneous injections of TREMFYA<sup>®</sup> 100 mg at Weeks 0, 4, then q8w, or placebo. Primary endpoint was percentage of patients achieving an ACR20 response at Week 24.

‡ Patients with  $< 5\%$  improvement from baseline in both tender and swollen joint counts at Week 16 were qualified for early escape and were permitted to initiate or increase the dose of concomitant medications, including NSAIDs, oral corticosteroids, and cDMARDs, and remained on the randomized study treatment. At Week 16, 19.0% and 3.1% (DISCOVER-1) and 15.4% and 5.2% (DISCOVER-2) of patients in the placebo and TREMFYA<sup>®</sup> 100 mg q8w groups, respectively, met early escape criteria.

§ Patients with missing data at Week 24 were imputed as non-responders. Patients who initiated or increased the dose of cDMARDs or oral corticosteroids over baseline, discontinued study or study medication, or initiated protocol-prohibited medications/therapies for PsA prior to Week 24 were considered treatment failures and non-responders. At Week 24, 16.7% and 5.5% (DISCOVER-1) and 6.9% and 4.8% (DISCOVER-2) of patients in the placebo and TREMFYA<sup>®</sup> 100 mg q8w groups, respectively, met treatment failure criteria.

†† Treatment differences, 95% CIs and  $p$ -values were based on Cochran-Mantel-Haenszel test stratified by baseline non-biologic cDMARD and prior CRP ( $< 2.0$ ,  $\geq 2.0$  mg/dL).

\*\* Treatment differences, 95% CIs and  $p$ -values were based on Cochran-Mantel-Haenszel test stratified by baseline non-biologic cDMARD and prior anti-TNF $\alpha$  agents. qw8=every 8 weeks; ACR20=American College of Rheumatology 20% improvement from baseline; TNF=tumour necrosis factor; CI=confidence interval; TNF $\alpha$ =tumour necrosis factor alpha.

**References:** 1. TREMFYA<sup>®</sup>/TREMFYA ONE-PRESS<sup>™</sup> (guselkumab injection) Product Monograph. Janssen Inc. September 4, 2020. 2. Deodhar A, Helliwell PS, Boehncke W, et al. Guselkumab in patients with active psoriatic arthritis who were biologic-naïve or had previously received TNF $\alpha$  inhibitor treatment (DISCOVER-1): a double-blind, randomised, placebo-controlled phase 3 trial. Published online March 13, 2020 [https://doi.org/10.1016/S0140-6736\(20\)30265-8](https://doi.org/10.1016/S0140-6736(20)30265-8). 3. Mease PJ, Rahman R, Gottlieb AB, et al. Guselkumab in biologic-naïve patients with active psoriatic arthritis (DISCOVER-2): a double-blind, randomised, placebo-controlled phase 3 trial. Published online March 13, 2020 [https://doi.org/10.1016/S0140-6736\(20\)30263-4](https://doi.org/10.1016/S0140-6736(20)30263-4).



Tremfya One-Press<sup>™</sup>  
(guselkumab)



The image depicted contains models and is being used for illustrative purposes only.

Janssen Inc. 19 Green Belt Drive | Toronto, Ontario | M3C 1L9 | [www.janssen.com/canada](http://www.janssen.com/canada)

© 2021 Janssen Inc. | All trademarks used under license. | CP-199985E



# Saving Lives: Easier for Neurologists Than for Rheumatologists?

By Philip A. Baer, MDCM, FRCPC, FACP

*“There is no difference between saving lives and extending lives, because in both cases we are giving people the chance of more life.”*

– Aubrey de Grey, PhD, biomedical gerontologist

“Saving lives” sounds like a trite answer to the classic medical school admission interview question “Why do you want to be a doctor?”, along the lines of the less dramatic phrase “Helping people.” Watchers of medical dramas on television, such as *ER*, *Chicago Hope*, *Remedy*, *Grey’s Anatomy*, *Saving Hope*, and countless others could be forgiven for thinking we save three lives per hour in dramatic fashion. Particularly in the cognitive specialties, we know that is not the case. Rheumatology is a specialty devoted to reducing morbidity, improving quality of life and somewhat extending life expectancy, rather than dramatically saving those on the verge of imminent death. We are capable of the latter, dealing with vasculitis, scleroderma renal crisis, severe lupus, and the like, but the opportunities arise infrequently for most of us.

Two of my closest to life-saving interventions dealt with people who were not even my patients, and whose problems were neurological, not rheumatological. About twenty years ago, someone I worked with in a non-practice setting told me they were having headaches of new onset. As well, their vision was less sharp, but changing their prescription glasses had not helped. Their GP had requested a computed tomography (CT) scan of the brain, but the wait was going to be months and the person was having trouble functioning at work. Could I expedite matters?

I replied that I was willing to submit a CT requisition at my hospital, in the hopes that this waitlist would be shorter. Under “clinical information and reason for testing,” I mentioned new headaches and impaired vision, followed by the phrase “rule out brain tumour.” I was totally unprepared when my office was interrupted a few days later by one of our hospital’s radiologists to tell me that the scan showed a six cm mass! Calling the person to deliver the bad news was one of my toughest moments in practice. With the help of a neurology colleague married to a neurosurgeon, we arranged for the patient to be promptly assessed at a tertiary centre. Fortunately, this turned out to be a benign, fully resectable tumour, and the long-term results were excellent.

More recently, another person I know through work seemed a bit off. I enquired and found out they were worried about their partner. Ten days earlier, this high-functioning

retiree had crashed their vehicle into a parked car on their street in broad daylight, for no apparent reason. This was attributed to a brief blackout, and there were no visible injuries. Thereafter, the person was noted to be bumping into furniture at home and having some word-finding difficulties. The GP had been consulted virtually due to the pandemic, and had ordered blood tests and a magnetic resonance imaging (MRI) test, which was thought to be weeks to months away.

Whatever spidey senses I have felt this was an emergency. I suggested taking this person directly to a tertiary centre emergency room, at a hospital with full neurosurgery capabilities. The next day, the news was that they had been urgently admitted. A CT scan and an MRI showed a brain tumour. Unfortunately, this one was malignant and not fully resectable. The prognosis is poor.

So, did I make a difference? Yes. Did I save any lives? Probably not, though I may have prevented these two patients from having a seizure before being accurately diagnosed. I did not actually carry out any treatment on either one. Maybe this type of problem is easier to act on in neurology, where I am not an expert, but know just enough to recognize a high-risk situation when it is described to me, than in my own specialty.

I think I can safely say that I set in motion the work of a multidisciplinary team, expedited the start of therapy, and facilitated the best outcome possible under the circumstances. Maybe that is the best answer to why someone would want to be a doctor: “To work with a team of health care professionals to improve patient outcomes, reduce morbidity, pain and suffering, all while doing challenging, interesting and well-paid work.” Forty years after being accepted into medical school, based more on my grades and Medical College Admission Test (MCAT) scores than any brilliant interview answers, I know what I should have said. Still, participating in saving an occasional life along the way is personally and professionally very fulfilling, albeit rare.

Philip A. Baer, MDCM, FRCPC, FACP  
Editor-in-chief, CRAJ  
Scarborough, Ontario

## CRAJ EDITORIAL BOARD

**Mission Statement.** The mission of the *CRAJ* is to encourage discourse among the Canadian rheumatology community for the exchange of opinions and information.

### EDITOR-IN-CHIEF

**Philip A. Baer, MDCM, FRCPC, FACP**  
President,  
Ontario Rheumatology Association  
Past-Chair, Section of Rheumatology,  
Ontario Medical Association  
Scarborough, Ontario

### CRA EXECUTIVE

**Evelyn Sutton, MD, FRCPC, FACP**  
President,  
Canadian Rheumatology Association  
Associate Dean,  
Undergraduate Medical Education  
Professor of Medicine,  
Dalhousie University  
Halifax, Nova Scotia

**Nilg Haroon, MD, PhD, DM, FRCPC**  
Vice-President,  
Canadian Rheumatology Association  
Co-Director, Spondylitis Program, UHN  
Clinician Scientist, UHN  
Scientist, Krembil Research Institute  
Associate Professor,  
University of Toronto  
Toronto, Ontario

**Vandana Ahluwalia, MD, FRCPC**  
Past-President,  
Canadian Rheumatology Association  
Former Corporate Chief of  
Rheumatology,  
William Osler Health System  
Brampton, Ontario

### MEMBERS

**Cory Baillie, MD, FRCPC**  
Assistant Professor,  
University of Manitoba  
Winnipeg, Manitoba

**Cheryl Barnabe, MD, FRCPC, MSc**  
Associate Professor,  
University of Calgary  
Calgary, Alberta

**Louis Bessette, MD, MSc, FRCPC**  
Associate Professor,  
Université Laval  
Rheumatologist,  
Centre hospitalier universitaire  
de Québec  
Québec City, Quebec

**May Y. Choi, MD, FRCPC**  
Rheumatology Clinical Lecturer,  
Cumming School of Medicine  
University of Calgary and  
Alberta Health Services  
Calgary, Alberta

**Joanne Homik, MD, MSc, FRCPC**  
Associate Professor  
of Medicine,  
University of Alberta  
Edmonton, Alberta



**Stephanie Keeling, MD, MSc, FRCPC**  
Associate Professor  
of Medicine,  
University of Alberta  
Edmonton, Alberta

**Shirley Lake, MD, FRCPC, MSc (QIPS)**  
Assistant Professor,  
Division of Rheumatology,  
University of Toronto,  
Toronto, Ontario

**Deborah Levy, MD, MS, FRCPC**  
Associate Professor,  
University of Toronto,  
Team Investigator,  
Child Health Evaluative  
Sciences Research Institute  
Toronto, Ontario

**Bindu Nair, MD, MSc, FRCPC**  
Professor of Medicine,  
Division of Rheumatology  
University of Saskatchewan  
Saskatoon, Saskatchewan

**Jacqueline C. Stewart, BSc (Hons), B Ed, MD, FRCPC**  
Clinical Assistant Professor,  
Department of Medicine,  
University of British Columbia,  
Rheumatologist,  
Penticton Regional Hospital  
Penticton, British Columbia

**Carter Thorne, MD, FRCPC, FACP**  
Medical Director,  
The Arthritis Program &  
Chief Division of  
Rheumatology,  
Southlake Regional Health  
Centre  
Newmarket, Ontario

The **CRAJ** is online!  
You can find us at:  
**www.craj.ca**

Access code: **craj**

The editorial board has complete independence in reviewing the articles appearing in this publication and is responsible for their accuracy. The advertisers exert no influence on the selection or the content of material published.

### PUBLISHING STAFF

**Paul F. Brand**  
Executive Editor

**Jyoti Patel**  
Managing Editor

**Catherine de Grandmont**  
Senior Medical Editor (French)

**Donna Graham**  
Production Manager

**Dan Oldfield**  
Design Director

**Robert E. Passaretti**  
Publisher

Copyright©2021 STA HealthCare Communications Inc. All rights reserved. THE JOURNAL OF THE CANADIAN RHEUMATOLOGY ASSOCIATION is published by STA Communications Inc. in Pointe Claire, Quebec. None of the contents of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the prior written permission of the publisher. Published every three months. Publication Mail Registration No. 40063348. Postage paid at Saint-Laurent, Quebec. Date of Publication: March 2021.

The opinions expressed herein are those of the editors and authors and do not necessarily reflect the views of STA Communications or the Canadian Rheumatology Association. THE JOURNAL OF THE CANADIAN RHEUMATOLOGY ASSOCIATION selects authors who are knowledgeable in their fields. THE JOURNAL OF THE CANADIAN RHEUMATOLOGY ASSOCIATION does not guarantee the expertise of any author in a particular field, nor is it responsible for any statements by such authors. Physicians should take into account the patient's individual condition and consult officially approved product monographs before making any diagnosis or treatment, or following any procedure based on suggestions made in this document.

Please address requests for subscriptions and correspondence to: THE JOURNAL OF THE CANADIAN RHEUMATOLOGY ASSOCIATION, 6500 Trans-Canada Highway, Suite 310, Pointe-Claire, Quebec, H9R 0A5.



# Update on CRA Initiatives



The Canadian Rheumatology Association (CRA) is pleased to provide the following updates on upcoming initiatives:

## Telehealth Working Group

The COVID-19 pandemic has forced rheumatologists to quickly adapt to using telehealth and, love it or hate it, telehealth is here to stay. The CRA Joint Count survey (page 26) gives an overview of how telehealth is used, billed, and the challenges our members and patients face.

The Telehealth Working Group is developing a position statement that can be used for advocacy, and is considering the development of training opportunities and resources to help address the needs that have been identified through the CRA survey. More announcements will be made in the coming months. Many thanks to co-chairs Vandana Ahluwalia, Deborah Levy and Brent Ohata for leading these efforts.

## Youth to Adult Rheumatology Transition Care Working Group

The Youth to Adult Rheumatology Transition Care Working Group seeks to advance a national strategy to ensure high quality transition care can be accessed throughout the country. Led by Cheryl Barnabe, this group was formed in the fall of 2019 to identify urgent priorities through a CRA needs assessment and an environmental scan. Based on the outcomes of the prioritization, working group members from the CRA and the Arthritis Health Professions Association (AHPA) have engaged in activities to address the needs identified.

Included in that list of priorities is curating an accessible collection of resources to support transition care across the country and adapting transition care guidelines for practice in Canada, which will be published later this year. An educational blueprint will be developed to support strategic post-graduate medical education and continuing professional development activities, and members of the working group are providing workshops on transition care topics and virtual transition care orientation sessions and presentations. To support advocacy efforts, the group is developing a resource that CRA members can use to lobby for the funding they require to support transition care in their jurisdiction. Stay tuned for CRA announcements about these important and much-needed initiatives in the coming months.

## National Undergraduate Rheumatology Curricula Project (NURC)

Many graduating medical students lack confidence and competence in the evaluation and management of rheumatic and musculoskeletal disorders (RMDs). A major barrier to improving this situation is the lack of agreement

between rheumatologists on how much and what to teach about RMDs in medical school and a lack of standardization of rheumatology learning outcomes.

The CRA's National Undergraduate Rheumatology Curricula Project (NURC) is currently working towards developing learning outcomes that will serve as a resource for all Canadian undergraduate rheumatology programs. A modified Delphi technique was used to generate consensus opinion of learning outcomes critical to Canadian undergraduate rheumatology curricula and presented at the 2021 CRA Annual Scientific Meeting. Further presentations and publications will be prepared with an overarching goal to nationally disseminate the final list of learning outcomes to all Canadian undergraduate rheumatology programs by summer 2021.

## CRA COVID-19 Response Webinar Series

The CRA COVID-19 Response Webinar Series was developed out of necessity at the start of the global pandemic to provide the health care providers within the rheumatology community additional educational resources to assist with their patient outcomes.

The webinars are an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada and approved by the CRA. One-hour sessions are developed based on needs identified by the CRA membership, are delivered live, and available on-demand afterwards. Series 1, launched in the early days of COVID-19, drew from lessons learned from other countries and spanned topics on telehealth, SARS-CoV-2 testing and the journey of the rheumatology patient. As we continue to learn more about COVID-19, patient care, and treatments, our members' needs have evolved, and so has the series. Series 2, launching in early 2021, will focus on vaccination and immunity, therapeutics, telehealth and the global rheumatology COVID registry data. For more information, visit [rheum.ca/covid19-response-webinar-series/](https://rheum.ca/covid19-response-webinar-series/).

## National Written Rheumatology In-Training Examination (NWRITE)

The 12th National Written Rheumatology In-Training Examination (NWRITE), for adult rheumatology subspecialty residents, provides reliable and valid national comparisons between residents. The CRA, in collaboration with training programs, delivered this in English and French again in 2020. This formative (practice) exam timing has moved to October to provide feedback prior to the trainees' Royal College exam.

# RheumVision: Harnessing Telemedicine to Improve Access to Care in Rural British Columbia

By Brent Ohata, MD, CM, FRCPC

The current COVID-19 pandemic has resulted in a widespread embrace of telemedicine inconceivable prior to the pandemic. Even after the resolution of the COVID-19 pandemic, ongoing acceptance and usage of telemedicine will likely persist.

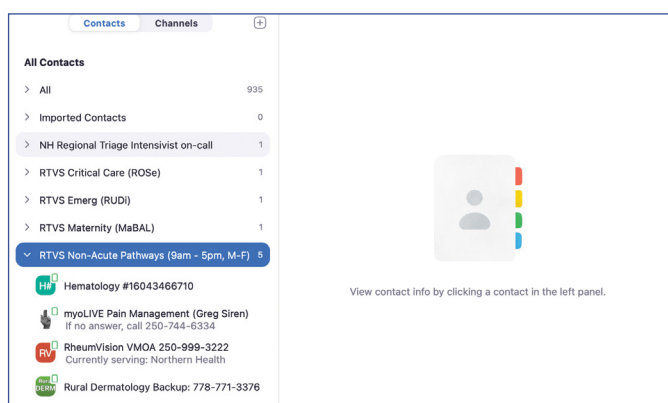
In British Columbia, we are trying to harness this newfound embrace of telemedicine to establish a video-based rheumatology hotline for rural physicians, called RheumVision. Rural physicians simply click on an app link to set up a video chat room with themselves, the patient and the rheumatologist on call. Visual data from the encounter is an improvement on the previous telephone-based hotline that currently exists in the province. Additionally, the RheumVision rheumatologist has the option to provide longitudinal care for the patient until the closest local rheumatologist can assume care.

This initiative is part of a suite of exciting apps now available to BC rural physicians. Similar video hotlines also provide critical care, pediatric, ER, dermatology, maternity, hematology, thrombosis and pain management advice on demand, in real-time. More subspecialty pathways will be added in the future. Beyond the subspecialized education that occurs, video technology has also facilitated procedural support. Intensivists have virtually assisted with the conscious sedation and cardioversion of unstable patients. RheumVision rheumatologists have coached physicians through first-time joint aspirations and injections.

As in many parts of Canada, rural British Columbians frequently face barriers accessing medical subspecialists, including rheumatologists. Most BC rheumatologists practice in only a handful of urban locations, and only sporadically visit smaller, more remote communities via traveling clinics. Perilous roads, unforgiving employers, limited finances, and personal struggles all contribute to missed in-person appointments for rural patients. Improving outcomes for these patients requires a change in our mode



Connecting with a family physician and patient on a remote reserve 14 hours from Vancouver. The patient had a definite flare of her rheumatoid arthritis, and we were able to advance care without her leaving her community.



A look at the app now available to all rural BC family physicians.

of healthcare delivery. Although increasing rheumatologic manpower in underserved areas has long been the envisioned solution to this problem, few gains have ever materialized.

Innovative models of care such as RheumVision have the potential to lower the barriers to care that many rural patients face. Instead of travelling hours to see their specialist, patients can access their rheumatologist at their local health clinic. Patients are also seen when their schedule permits, not when the rheumatologist has availability.

History teaches us that, after the Plague of 1347, came the Renaissance. Without the changes that accompanied the COVID-19 epidemic, a program such as RheumVision could never have been implemented. Patients and health-care providers alike were more resistant to telehealth one year ago. All of humanity has suffered as a consequence of COVID-19. But COVID-19 has also accelerated many necessary changes in society. One hopes that RheumVision is the beginning of many good things to come.

*Brent Ohata, MD, CM, FRCPC  
Clinical Assistant Professor,  
UBC Division of Rheumatology  
Burnaby, British Columbia*

---

# Training in the Shadow of the COVID-19 Pandemic

By Azin Ahrari, MD, FRCPC; and Peter van Stolk, MD, FRCPC

Drs. Azin Ahrari and Peter van Stolk were rheumatology trainees at the University of British Columbia in 2020 and discuss here their experience during the pandemic.

After completing internal medicine residency, we have two years to prepare for a career in rheumatology. We are advised to interact with as many patients as we can, feel 1,000 joints or more, and foster mentorships upon which our expertise is built. This past year has forced programs and trainees to adapt to a new physically-distanced, virtually-connected world.

As doctors in training, schedules and expectations are generally laid out for us on a color-coded sheet. However, in March 2020, our schedules were changed in a matter of days. We were removed from clinics and asked to cover in-patient services where there was an anticipated need. By July 2020, we were able to return to regularly scheduled rotations, but we returned to clinics that were mostly virtual. This reduced our ability to practice critical skills of physical examination and joint injections. However, we honed our skills of performing telehealth assessments including physical examination at a distance. We learned to establish rapport with our patients on the phone or through video. We mastered the art of knowing when our patients needed to be seen in person. These were skills that we never set out to learn at the beginning of our rheumatology careers, but will prove to be useful in this new age of medicine.

Aside from impacting rheumatology training, the pandemic has led to cancellation or re-imagining of many domestic and international meetings. Networking and mentorship have been fostered over phone calls and Zoom meetings. We took for granted the opportunity to start a conversation with a stranger while standing in line for a coffee, a random interaction that may lead to a collaboration, mentorship or friendship. As rheumatology trainees, these meetings served a pivotal role in inspiring us, helping us grow, and connecting us with others in the field.

Rheumatology residency is also a time for travelling electives, which have been drastically limited. Exposure to rheumatology in another jurisdiction not only enriches our knowledge, but perhaps provides a chance at discovering a program or city that is right for us.



We must express gratitude for our teachers who strived to meet our needs in creative ways. Whether it be online objective structured clinical examinations (OSCEs) or lecture series, we have maintained connections with our colleagues despite physical distancing. Most patients have learned to trust us despite our limited ability to physically be by their side. We appreciate frontline workers in the community and in the hospital more than ever. Oddly enough, we relish the memories of flight delays, taxis and hotels, because it meant we were on our way to share knowledge and a few laughs with good friends. Our training may have been different, but perhaps we are better equipped to serve our patients with rheumatic diseases in a post-pandemic and virtually-oriented medical landscape. We are ready for new challenges in our early post-training careers, and look forward to navigating these with the adaptability and skills we have honed this past year!

*Azin Ahrari, MD, FRCPC  
Rheumatology Resident,  
University of British Columbia  
Vancouver, British Columbia*

*Peter van Stolk, MD, FRCPC  
Rheumatologist,  
Kelowna, British Columbia*



# Tips for Effective Virtual Meetings: Crowd-sourced Advice from Around the CRA

Compiled by Cory Baillie, MD, FRCPC

COVID-19 has changed many aspects of our professional lives and the way that we meet with our colleagues and other professionals is no exception. Virtual meetings can be an effective tool but require extra effort from all participants and especially the meeting Chair to optimize the time spent together.

Here are a few dos and don'ts from CRA members based on their experiences with virtual meetings.

**Do** make sure if you are the chair that you log in earlier than everyone else so that everyone can access the meeting. To ensure you start on time, ask all participants to sign in a few minutes before the meeting starts to avoid any technical difficulties, especially if you're using an unfamiliar platform.

– Dr. David Robinson, Winnipeg, and Dr. Ahmad Zbib, Toronto

**Do** optimize your set up with a quiet space free of distractions; use earbuds with a built-in microphone; place your laptop on top of books etc. so that your camera is at eye level; maximize lighting behind your camera and not behind you, and when speaking try to look at your webcam and not other people's images.

– Dr. Cory Baillie, Winnipeg

**Do** consider doing an “around the room” at the start of the meeting. People are more likely to speak and be engaged if they have the opportunity to share at least once at the start.

– Dr. Joanne Homik, Edmonton

**Do** keep everyone engaged if you are the chair. If you notice someone is not very active, consider private messaging them in the chat to make sure they are ok and ask if they have any ideas they want to share. Some people are naturally more quiet, and online meetings can be an overwhelming space to express your opinion.

– Dr. Shahin Jamal, Vancouver

**Do** use the chat function freely to ask questions either as a speaker to assess agreement and comprehension, or as a listener to prompt discussion.

– Dr. Evelyn Sutton, Halifax, and Dr. Janet Pope, London

**Don't** try and make your virtual meetings too large. No one feels valued and most participants end up multitasking and don't focus on the meeting. Take advantage of tools for virtual breakout rooms to keep meeting sizes smaller.

– Dr. Shahin Jamal, Vancouver

**Don't** forget to schedule appropriate break times. It's hard to stay engaged virtually. For longer meetings, consider something special for entertainment during a longer intermission.

– Dr. Trudy Taylor, Halifax

**Don't** miss the opportunity for more casual interaction with meeting participants. At traditional face-to-face meetings it is the sidebar conversations with your neighbour, in the hallways and at the coffee break that are the most meaningful. They build relationships that last for a lifetime. This is the biggest loss with virtual meetings.

– Dr. Vandana Ahluwalia, Brampton

# Virtual Small Group CME

By Tripti Papneja, MD, FRCPC

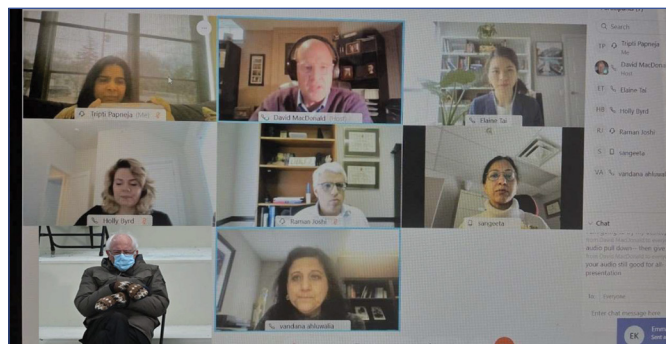
**“Y**ou’re on mute,” was one of the most commonly used phrases in 2020. Traditionally, medical conferences, review courses and journal clubs have always been an opportunity to learn, meet colleagues in person, and discover new cities and restaurants. Our realities changed dramatically with the ongoing COVID-19 outbreak, and our need to keep up with the latest medical knowledge and participate in continuing medical education (CME) substantially increased.

We are a team of four rheumatologists who have been working together for the last eight years serving patients in the larger Brampton region. In March 2020, as our offices closed in the first month of lockdown, the four of us came together to facilitate transition to virtual patient care. We utilized best evidence-based practices to provide our patients with safe and effective virtual and in-person visits. But we were facing an overwhelming amount of new information and unprecedented levels of stress. In response to this need, we resumed our bimonthly CME rounds in May 2020 virtually.

For the last few years, these bimonthly, noon rounds have been sponsored by pharmaceutical companies, allowing for national and international experts in different fields from rheumatology to neurology to present the latest information. In addition, each one of us also formulates our learning needs/goals and takes the opportunity to research and present those learnings to each other. Pharmaceutical (pharma) representatives (reps), medical science liaisons and patient support program representatives also are given an opportunity to update the team about any new advances including products and services. We find that we get the most value from our interactions with pharmaceutical sales reps in this setting, both in terms of relationship-building and product detailing.

Transitioning our rounds from in-person office meetings at our lunch room to a virtual Zoom format or Webex meeting was not difficult for our group. Most of us had already acquired the right technology and improved our technical skills to provide excellent delivery of patient care by telemedicine. We had become more comfortable using a variety of technology platforms and learned to troubleshoot issues as they arose.

Over the last several months, we have been facing many competing priorities while working from home, including childcare, household chores and other inevitable distractions. There is a wealth of online CME opportunities available, but it is very challenging to discipline oneself to at-



Our small group CME rounds have taken place virtually during the pandemic. An unexpected visitor joined us last time!

tend large virtual conferences like the European League Against Rheumatism (EULAR) meeting and the American College of Rheumatology (ACR) meeting or review courses from home. Therefore, it is helpful to have scheduled dedicated learning time with our colleagues to meet CME requirements. We have been able to review most EULAR and ACR abstracts in depth during our noon rounds, and present journal articles of interest and accredited learning programs. A small group size allows ample opportunities for dialogue and discussion where each one of us is fully engaged, sharing and reflecting upon our clinical experiences. These regular collaborative discussions are key to enhancing our learning and retention of knowledge along with testing our own ideas/approaches and attitudes against those of others in a collegial atmosphere.

In our experience, these rounds are helpful beyond rheumatology or medical learnings. They give us a chance to brainstorm solutions to our common challenging patient cases and to provide mentorship to the younger staff on the team and provides an opportunity for a quick wellness check for each other. Our stress is reduced as we feel respected, appreciated and connected with each other. We are able to build a learning culture in our office where all staff members are encouraged to engage in knowledge-sharing practices.

Virtual small group CME rounds have been easy to implement and are a very effective way to acquire new knowledge and make practice changes. We will likely continue with a combination of virtual and face-to-face CMEs post-COVID in our office. In these unprecedented times, it is prudent to continue to evolve our work and learning practices to deliver optimal care and increase our well-being.

*Tripti Papneja, MD, FRCPC  
Clinician-Teacher, University of Toronto  
William Osler Hospital  
Brampton, Ontario*

# COVID-19: Innovations in Delivering Science to Rheumatologists and Patients

By Sindhu R. Johnson, MD, PhD

In order to efficiently meet the needs of our patients during the COVID-19 pandemic, innovations in the way we conduct science and disseminate new knowledge have emerged. In my capacity as Chair of the American College of Rheumatology (ACR) Quality of Care Committee, I have had the opportunity to participate in or oversee a few COVID-19 initiatives.



## Global Rheumatology Alliance

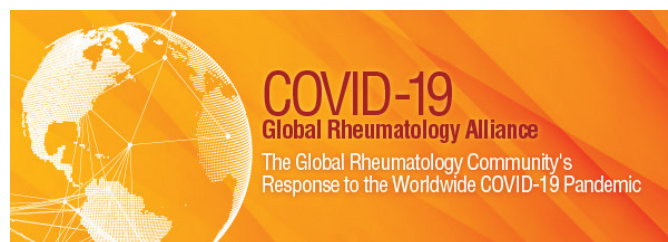
The Global Rheumatology Alliance (GRA) is a grassroots organization with origins in social media and a vision of “bringing together the global rheumatology community to curate and disseminate accurate and comprehensive knowledge to advance rheumatology care in the COVID-19 pandemic.” Many Canadian rheumatologists have been involved in this effort, in conjunction with the Canadian Rheumatology Association (CRA), including Dr. Diane Lacaille, Dr. Marie Hudson, Dr. Carter Thorne, Dr. Evelyn Sutton and Dr. Louis Bessette. To achieve this vision, the GRA has four research arms:

- Provider registries
- Patient experience survey
- Systematic reviews
- Patient telemedicine survey

In a year, this collaboration has been shockingly productive. The ability to leverage social media to bring people together, to collect data, to write collaboratively, and publish needed information in a short time period is remarkable. The GRA is a new model of not only doing business, but of doing science. For a list of COVID-19 related publications from the GRA and ACR, visit [rheum-covid.org/publications/](https://rheum-covid.org/publications/) and [rheumatology.org/Practice-Quality/Clinical-Support/COVID-19-Guidance](https://rheumatology.org/Practice-Quality/Clinical-Support/COVID-19-Guidance).

## ACR COVID-19 Vaccine Clinical Guidance Task Force

In 2019, the ACR Board approved the creation of the Guidance Subcommittee, charged with overseeing the development of guidance documents for clinical areas the membership



wanted guidance on; areas for which the evidence is insufficient or timeline too short for more formal, GRADE-process driven guidelines. The ACR Guidance subcommittee includes Canadian rheumatologists Dr. Shahin Jamal and Dr. Alex Legge.

The ACR convened two task forces to address the needs of rheumatology providers during the COVID 19 pandemic, in which I had leadership roles. First, the COVID-19 Clinical Task Force was charged by ACR leadership to rapidly provide guidance to rheumatology providers relevant to the management of rheumatic disease in adult patients during the pandemic. Clinical guidance generated from this effort was intended to aid in the care of individual patients, but not meant to supplant clinical decision making. Early in the pandemic, this document provided guidance on the use of rheumatic disease treatments including ACE inhibitors, ARBs, NSAIDs, glucocorticoids, and immunosuppressives following known SARS-CoV 2 exposure and in the context of active or presumptive COVID-19.

Second, the ACR COVID-19 Vaccine Clinical Guidance Task Force was struck, consisting of North American rheumatologists, infectious disease specialists and public health experts with current or past employment at the Center for Disease Control and Prevention (CDC). Using a balance of consensus-based methods and largely indirect evidence from the literature, guidance on the use of the COVID-19 vaccine in individuals with rheumatic and musculoskeletal diseases (RMD), and in particular individuals with autoimmune and inflammatory rheumatic disease (AIIRD) was created. Topics included risk of COVID-19 infection and outcomes in RMD patients, vaccine immunogenicity in the setting of active disease or immunosuppressive therapy and vaccine safety. No evidence was found to support a concern regarding the use or timing of immunomodulatory therapies in relation to mRNA vaccine safety. Therefore, guidance regarding immunomodulatory medication and vaccination timing was given considering the intent to optimize vaccine response. Highlights from the ACR COVID-19 Vaccine Clinical Guidance are summarized in Tables 1 and 2. The draft summary was approved by the ACR Board of Directors on February 8, 2021; and a full manuscript is pending journal peer review.

## Dissemination of rapidly changing information

Given that information regarding the intersection of RMD, risk of COVID-19 infection and outcomes, and immunogenicity/safety of the COVID-19 vaccine is rapidly emerging,



**Table 1. Selected Guidance Statements from the ACR COVID-19 Vaccine Guidance Summary for Patients with Rheumatic and Musculoskeletal Diseases**

Guidance Statement	Level of Consensus
The rheumatology healthcare provider is responsible for engaging the RMD patient in a discussion to assess COVID-19 vaccination status and engage in a shared decision-making process to discuss receiving the COVID-19 vaccine.	Strong-Moderate
Acknowledging heterogeneity due to disease- and treatment-related factors, and after considering the influence of age and sex, AIIRD patients are at higher risk for hospitalized COVID-19 and worse outcomes compared to the general population.	Moderate
Based on their risk for COVID-19, AIIRD patients should be prioritized for vaccination before the non-prioritized general population of similar age and sex.	Moderate
The expected response to COVID-19 vaccination for many AIIRD patients on systemic immunomodulatory therapies is likely to be blunted in its magnitude and duration compared to the general population.	Moderate
Household members and other frequent, close contacts of AIIRD patients should undergo COVID-19 vaccination when available to them to facilitate a 'cocooning effect' that may help protect the AIIRD patient. No priority for early vaccination is recommended for household members.	Moderate

Adapted from: [www.rheumatology.org/Portals/0/Files/COVID-19-Vaccine-Clinical-Guidance-Rheumatic-Diseases-Summary.pdf](http://www.rheumatology.org/Portals/0/Files/COVID-19-Vaccine-Clinical-Guidance-Rheumatic-Diseases-Summary.pdf)

**Table 2. Guidance on Timing of Immunosuppressive Therapy and COVID-19 Vaccination**

Medication	Timing of Treatment and COVID-19 Vaccination	Level of Consensus
Hydroxychloroquine; IVIG; glucocorticoids, prednisone-equivalent dose < 20mg/day	No modifications	Strong-Moderate
Sulfasalazine; Leflunomide; Mycophenolate; Azathioprine; Cyclophosphamide (oral); TNFi; IL-6R; IL-1; IL-17; IL-12/23; IL-23; Belimumab; oral calcineurin inhibitors; Glucocorticoids, prednisone-equivalent dose ≥ 20mg/day	No modifications	Moderate
Methotrexate	Hold MTX 1 week after each vaccine dose, for those with well-controlled disease	Moderate
JAKi	Hold JAKi for 1 week after each vaccine dose	Moderate
Abatacept SQ	Hold SQ abatacept both one week prior to and one week after the first COVID-19 vaccine dose (only); no interruption around the second vaccine dose	Moderate
Abatacept IV	Time vaccine administration so that the first vaccination will occur four weeks after abatacept infusion (i.e., the entire dosing interval), and postpone the subsequent abatacept infusion by one week (i.e., a 5-week gap in total); no medication adjustment for the second vaccine dose	Moderate
Cyclophosphamide IV	Time CYC administration so that it will occur approximately 1 week after each vaccine dose, when feasible	Moderate
Rituximab	Assuming that patient's COVID-19 risk is low or is able to be mitigated by preventive health measures (e.g., self-isolation), schedule vaccination so that the vaccine series is initiated approximately 4 weeks prior to next scheduled rituximab cycle; after vaccination, delay RTX 2-4 weeks after 2nd vaccine dose, if disease activity allows	Moderate

Adapted from: [www.rheumatology.org/Portals/0/Files/COVID-19-Vaccine-Clinical-Guidance-Rheumatic-Diseases-Summary.pdf](http://www.rheumatology.org/Portals/0/Files/COVID-19-Vaccine-Clinical-Guidance-Rheumatic-Diseases-Summary.pdf)

mechanisms to update and release new information needed to be developed. In his capacity as Associate Editor at the journal *Arthritis and Rheumatology*, Dr. Brian Feldman has been integral to the rapid review and dissemination of COVID-related manuscripts from the ACR Quality of Care Committee. Using a new model, the ACR COVID-19 Guidance documents are considered “living documents.” As new information is published, the guidance documents are updated.

In short, Canadian rheumatologists have been active participants in a variety of facets related to the conduct

and dissemination of science during the COVID-19 pandemic. We will continue to work together for the betterment of the patients we serve.

*Sindhu R. Johnson, MD, PhD*  
Associate Professor of Medicine, University of Toronto  
Clinician-Scientist, Toronto Western Hospital, Mount Sinai Hospital  
Associate Director,  
Clinical Epidemiology & Health Care Research Program,  
Institute of Health Policy, Management and Evaluation  
Toronto, Ontario

# Physician Well-being in the Midst of a Pandemic: From Individual Well-being to Compassion Culture

By Allison Crawford, MD, PhD, FRCPC

There is an inter-relationship between our own wellness as health providers, and our ability to deliver quality healthcare to patients and families.<sup>1</sup> Further, given that we invest so much in caring for others, we should also ensure that we thrive, individually and within our families and communities. And yet, even prior to the pandemic, physician well-being was a concern.



A recent review summarizes the alarming statistics that up to 42% of physicians in the U.S. report experiences consistent with burnout, with 14% experiencing thoughts of suicide.<sup>1,2</sup> Compounding this, even in the most severe instances, only a third seek treatment.<sup>1</sup> In a 2018 national survey by the Canadian Medical Association, similar findings showed that 30% of Canadian physicians reported high levels of burnout, 34% had symptoms consistent with depression, and 8% had thoughts of suicide in the preceding 12 months.<sup>3</sup>

The COVID-19 pandemic has added additional strain for all, and for those health providers already struggling, well-being and resilience may be further eroded. During the pandemic, health providers have shown higher rates of distress, insomnia, anxiety, and depression, particularly for those engaged directly in the treatment of patients with COVID-19.<sup>4</sup> Additional stressors contributed by the pandemic include: uncertainty and anxiety for the well-being of self and loved ones; increased workflows and demands at work; increased isolation and decreased opportunities for protective activities, such as social connection; and, for many, losses, including losses of patients.<sup>5</sup> In addition to the direct impact of increased demands and exhaustion, many have also identified the psychological toll of moral distress, or the distress that ensues when one's values and beliefs come into conflict with existing circumstances.<sup>6</sup>

## What are the warning signs of burnout?

- Feeling down, sad, depressed
- Feelings of anger, impatience, irritability
- Thoughts of death or suicide
- Decreased feelings of satisfaction and meaning from work
- Increased absenteeism from work; or conversely, trying to work more/harder
- Decreased feelings of compassion for patients
- Increased medical errors

There are also self-report measures that can be used to assess symptoms of burnout. The most commonly used is the Maslach Burnout Inventory.<sup>5</sup> Recent work by Trockel and colleagues also looks at a continuum of experience from burnout to satisfaction.<sup>7</sup>

## How can we ensure that we sustain our own well-being?

Polizzi, Lynn and Perry (2020) offer a useful framework for considering useful interventions, focusing on control, coherence, and connectedness.<sup>8</sup>

*Control* includes activities that shore up our personal resources by engaging in protective practices such as establishing routines, sleep hygiene, and exercise. We can draw upon our self-awareness of coping practices that have helped in times of previous adversity, and can use tracking tools such as mood, sleep, and activity journals to look for areas that require attention.

*Coherence* emphasizes the importance of the meaning that we make out of adversity. Asking ourselves what our narrative is of the current pandemic, and of ourselves, as well as reflecting on our own values can help us gain new perspective on current events, and our own role within them. They suggest reflective questions, including, for example, "What is important to you?" "What makes you feel good, even when confronted with a situation you can't fully control?" Reflection can be complemented with practices such as mindfulness that can also nurture more acceptance of our emotional reactions, and also of situations over which we have little control.

*Connectedness* emphasizes our need for others and for support, and the known benefits of social connection to

mitigate adversity. They encourage finding ways to maintain meaningful connection, even in the midst of public health measures that can intensify isolation.

However, the effectiveness of interventions to reduce burnout and boost resilience requires more research. A recent Cochrane review demonstrates the limited evidence for interventions to support health providers during a pandemic.<sup>9</sup> Factors that were associated with effective implementation of interventions included adapting interventions for local needs; effective communication in organizations; and ensuring that learning environments are safe and supportive. Corollary barriers to supporting health providers during a pandemic included both individuals and organizations being unaware of supports that are needed, as well as a lack of equipment, staff time, and skills needed to support interventions.

The findings of this review suggest the importance of a fourth "C" which may be called Culture, or perhaps Compassion Culture. Organizational culture and support is critical to the well-being of health providers. In the Canadian Medical Association survey, one of the most notable findings was that even personally resilient physicians were not immune to experiencing burnout.<sup>3</sup> An overemphasis on individual coping and resilience will likely only compound burnout. It is up to organizations to prioritize the well-being of all providers and to create a culture of compassion in which well-being is modelled and supported at all levels of the organization, and time and resources are devoted not only to ensuring the resilience of individuals, but also the resilience of teams.

#### References:

1. Yates SW. Physician Stress and Burnout. *Am J Med.* 2020; 133(2):160-164. doi: 10.1016/j.amjmed.2019.08.034. Epub 2019 Sep 11.
2. Rotenstein LS, Torre M, Ramos MA, et al. Prevalence of Burnout Among Physicians: A Systematic Review. *JAMA.* 2018; 320(11):1131-1150.
3. Vogel, L. Even resilient doctors report high levels of burnout, finds CMAA survey. *CMAJ.* 2018; 190(43): E1293.
4. Lai J, Ma S, Wang Y, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Netw Open.* 2020; 3(3):e203976.
5. Norful AA, Rosenfeld A, Schroeder K, et al. Primary drivers and psychological manifestations of stress in frontline healthcare workforce during the initial COVID-19 outbreak in the United States. *Gen Hosp Psychiatry.* 2021; 69:20-26. doi: 10.1016/j.genhosppsych.2021.01.001. Epub ahead of print.
6. Anderson-Shaw LK, Zar FA. COVID-19, Moral Conflict, Distress, and Dying Alone. *J Bioeth Inq.* 2020; 17(4):777-782. doi: 10.1007/s11673-020-10040-9. Epub 2020 Nov 9. PMID: 33169271; PMCID: PMC7652046.
7. Trockel M, Bohman B, Lesure E, et al. A Brief Instrument to Assess Both Burnout and Professional Fulfillment in Physicians: Reliability and Validity, Including Correlation with Self-Reported Medical Errors, in a Sample of Resident and Practicing Physicians. *Acad Psychiatry.* 2018; 42(1):11-24.
8. Polizzi C, Lynn SJ, Perry, A. Stress and Coping in the Time of COVID-19: Pathways to Resilience and Recovery. *Clinical Neuropsychiatry.* 2020; 17(2): 59-62.
9. Pollock A, Campbell P, Cheyne J, et al. Interventions to support the resilience and mental health of frontline health and social care professionals during and after a disease outbreak, epidemic or pandemic: a mixed methods systematic review. *Cochrane Database Syst Rev.* 2020;11:CD013779.

Allison Crawford, MD, PhD, FRCPC  
Psychiatrist,  
Centre for Addiction and Mental Health  
Associate Chief, Virtual Mental Health  
Associate Professor,  
Department of Psychiatry,  
University of Toronto  
Chief Medical Officer,  
Canada Suicide Prevention Service  
Toronto, Ontario

#### Resources

**If you are experiencing any of the signs of burnout listed above, please reach out to a trusted colleague. Most organizations have an employee wellness or occupational health program.**

- Canadian Medical Association Physician Wellness Hub: [www.cma.ca/physician-wellness-hub](http://www.cma.ca/physician-wellness-hub)
- Centre for Addiction and Mental Health, Mental health and Covid-19 resources for health care workers: [www.camh.ca/en/health-info/mental-health-and-covid-19/information-for-professionals](http://www.camh.ca/en/health-info/mental-health-and-covid-19/information-for-professionals)
- Canada Suicide Prevention Service crisis phone number: Available 24/7/365 **1-833-456-4566**



# MIS-C and PIMS:

## The Alphabet Soup of COVID-associated Hyperinflammation in Children

By Tala El Tal, MD; and Rae S. M. Yeung, MD, FRCPC, PhD

### Patient Case:

An eight-year-old previously healthy South Asian boy presented to the emergency department (ED) with four days of persistent fever, abdominal pain, vomiting and diarrhea, associated with bilateral non-purulent conjunctivitis, rash over his chest, lower limbs and palms, and red swollen cracked lips. Four weeks prior to presentation, his father tested positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on nasopharyngeal swab. At the time, the patient was asymptomatic and was not tested. On arrival to ED, he was hypotensive with a blood pressure of 78/47 mm Hg and heart rate of 150 beats/min despite receiving 40 mL/kg of fluid. Peripherally, he was cool to touch and had prolonged capillary refill.

Laboratory results on admission were significant for markedly elevated C-reactive protein (CRP), thrombocytopenia, lymphopenia, hyperferritinemia, hypoalbuminemia, hypertriglyceridemia, elevated liver enzymes, coagulopathy, and markedly elevated troponin I and N-terminal-pro-brain natriuretic peptide (NT-proBNP). An echocardiogram (ECHO) showed reduced left ventricular systolic function and dilated left anterior descending artery. An electrocardiography (ECG) showed diffuse non-specific T-wave abnormalities. The patient's nasopharyngeal swab for SARS-CoV-2 was indeterminate on repeated polymerase chain reaction (PCR) testing, but serology testing for COVID-19 IgG antibody was reactive. He was diagnosed with multisystem inflammatory system in children (MIS-C), also known as pediatric inflammatory multisystem syndrome (PIMS) temporally associated with SARS-CoV-2 and admitted to the intensive care unit (ICU) where he required inotropic support for his cardiac dysfunction. He was given IVIG and steroids as immunosuppressive agents to control his hyperinflammation together with anti-platelet doses of ASA. He improved dramatically requiring only a 4-day hospital stay with the first two in the ICU. He was discharged on a three-week course of weaning steroids with full recovery and no long-term adverse cardiovascular consequences.

At the start of the COVID-19 pandemic, it was thought that most children were either asymptomatic or had mild disease manifestations. Beginning in April 2020, clinicians at COVID-19 epicenters observed the emergence of clusters of school-aged children with fever and features of Kawasaki Disease (KD) and toxic shock syndrome (TSS) following COVID-19 in their communities. Alerts were issued to the medical community and various different names and case definitions were proposed (visit [cps.ca/en/documents/position/pims](https://cps.ca/en/documents/position/pims) for more information).<sup>1</sup> For the purpose of this article, the term MIS-C will be used. This brief update will focus on three practical questions:

1. When to suspect MIS-C?
2. How to approach the diagnostic evaluation of MIS-C?
3. How to treat MIS-C?

### When to suspect MIS-C?

The signs and symptoms of MIS-C can largely overlap with Kawasaki Disease and toxic shock syndrome (TSS). KD is a hyperinflammatory syndrome presenting as acute multi-

system vasculitis affecting young children. The principal features include: (1) bilateral conjunctival injection; (2) polymorphous skin rash; (3) erythema and edema of the hands and/or feet; (4) cervical lymphadenopathy; and (5) oral mucosal changes, in the presence of at least 5 days of fever. KD is known to have a predilection for the coronary arteries, leading to aneurysm formation in 25% of untreated cases.<sup>2</sup>

Similarly, children with MIS-C present with persistent fever and multi-organ dysfunction (cardiac, hematologic, gastrointestinal, neurological, renal, and/or dermatologic) usually 3-6 weeks following prior SARS-CoV-2 exposure,<sup>3,4</sup> suggesting post-infectious hyperinflammation underlying the pathobiology.<sup>5</sup> Like KD, MIS-C is a syndrome complex with a wide spectrum of clinical phenotypes. A spectrum of COVID-19 associated hyperinflammation syndromes has been proposed<sup>6,7</sup> with three clinical patterns along the hyperinflammation spectrum in MIS-C: Shock, KD, and fever with inflammation, reflecting the continuum of disease severity. Early reports were notable for myocarditis,

Table 1.

**Typical Laboratory and Clinical Features in MIS-C**

	Organ involvement	Reported Findings in MIS-C
Clinical features	Gastrointestinal	Abdominal pain Nausea/Vomiting Diarrhea
	Cardiovascular	Shock/Hypotension Myocarditis Pericardial Effusion Valvular dysfunction
	Neurologic	Headache Altered Mental Status/ Confusion
	Dermatologic	Rash Oral mucosal changes (erythema and strawberry tongue) Conjunctivitis Red swollen hands and feet
	Renal	Acute Kidney injury
Laboratory measures	Respiratory (rare)	Sore throat, congestion, cough, shortness of breath, chest pain, pleural effusion
	C-reactive protein	↑↑↑
	WBC	↑↑
	Lymphocytes	↓↓
	Neutrophils	↑↑
	Platelets	↓
	Ferritin	↑↑
	Albumin	↓
	Alanine Transaminase (ALT)	↑
	Aspartate Transaminase (AST)	↑
	Sodium	↓
	INR	↑
	PTT	↑
	Fibrinogen	↑
	D-Dimer	↑↑
	Triglycerides	↑
	Troponin	↑
	NT-pro-BNP	↑
Cardiac investigations	Echocardiography	Cardiac dysfunction and coronary artery lesions
	Electrocardiogram	Conduction abnormalities

myocardial dysfunction and overt shock requiring inotropic support as prominent clinical features. Some patients developed coronary aneurysms, as well as macrophage activation syndrome (MAS). It was also observed that MIS-C typically affects healthy children and disproportionately affects non-Caucasian children, with children from African, Hispanic and South Asian ethnicity being more affected. It remains unclear the contribution of environment versus genetics, with higher rates of COVID-19 noted in affected communities.

**How to approach the diagnostic evaluation of MIS-C?**

A high-index of suspicion for the diagnosis of MIS-C is needed in children living in COVID-19 hotspots, who present with prolonged fever and clinical and laboratory features of inflammation. MIS-C is usually preceded by known SARS-CoV-2 infection in the child or a family member several weeks before presentation. Children may present with features of KD and/or TSS, and often abdominal pain and other gastrointestinal features are prominent. Of note, MIS-C is a diagnosis of exclusion and other causes of febrile illness in children, including other infectious and non-infectious etiologies need to be pursued. Table 1 summarizes the typical laboratory and clinical findings reported in MIS-C. Patients have evidence of a hyperinflammatory state, manifested in laboratory findings of markedly elevated CRP, and measures compatible with viral infection (lymphopenia) and MAS including thrombocytopenia and elevated serum ferritin,<sup>6</sup> which together with hyponatremia, elevated troponin and NT-pro-BNP, are among the worrisome laboratory findings suggestive of a more severe disease phenotype.<sup>8</sup>

**How to treat MIS-C?**

Although there is rapidly growing literature on MIS-C, management has been largely based on extrapolated knowledge from KD treatment. Several groups have convened expert panels to develop guidance including the American College of Rheumatology (ACR), which developed guidelines for the evaluation and treatment of MIS-C.<sup>8</sup> Children admitted to hospital with MIS-C should be managed by a multi-disciplinary team including rheumatology, cardiology and other subspecialties as needed. The cornerstone of therapy is immunomodulation. Treatment recommended for all children requiring hospitalization for MIS-C involves step-wise progression of immunosuppression, starting with high-dose IVIG (2 g per kg per dose) as first-line therapy. Adjunctive therapy with low-moderate dose glucocorticoid therapy (prednisone 1-2 mg/kg/d) is recommended in patients with severe disease, at high-risk for poor coronary outcome, or as therapy for IVIG failure. In patients who present with critical organ involvement requiring inotropic support, or those who are recalcitrant to IVIG and low-moderate dose steroids, high-dose, pulse glucocorticoids (10-30 mg/kg/d) are recommended. IL-1 blockers, such as Anakinra (> 4 mg/kg/d), may be considered in those with disease refractory to IVIG and steroid therapy, as well as those with features of MAS. Close follow-up with serial laboratory and cardiac assessment will help guide duration and tapering of immunosuppression, with a typical steroid wean over a minimum of 2-3 weeks, and often longer given the high rate of rebound inflammation with quicker tapers.<sup>8</sup> Other immunomodulatory treatments have been used and reported in the literature in-

## CONVENIENT ONCE-DAILY FORMULATION IN RA | 11 mg QD<sup>1</sup>



XELJANZ XR is  
not indicated in  
PsA and UC.

### RHEUMATOID ARTHRITIS

<sup>Pr</sup>XELJANZ<sup>®</sup>/<sup>Pr</sup>XELJANZ<sup>®</sup> XR (tofacitinib) in combination with methotrexate (MTX), is indicated for reducing the signs and symptoms of rheumatoid arthritis (RA), in adult patients with moderately to severely active RA who have had an inadequate response to MTX. In cases of intolerance to MTX, physicians may consider the use of XELJANZ/XELJANZ XR (tofacitinib) as monotherapy.

Use of XELJANZ/XELJANZ XR in combination with biological disease-modifying anti-rheumatic drugs (bDMARDs) or potent immunosuppressants such as azathioprine and cyclosporine is not recommended.

### PSORIATIC ARTHRITIS

<sup>Pr</sup>XELJANZ<sup>®</sup> (tofacitinib) in combination with methotrexate (MTX) or another conventional synthetic disease-modifying anti-rheumatic drug (DMARD), is indicated for reducing the signs and symptoms of psoriatic arthritis (PsA) in adult patients with active PsA when the response to previous DMARD therapy has been inadequate.

Use of XELJANZ in combination with biological disease-modifying anti-rheumatic drugs (bDMARDs) or potent immunosuppressants such as azathioprine and cyclosporine is not recommended.

### ULCERATIVE COLITIS

<sup>Pr</sup>XELJANZ<sup>®</sup> (tofacitinib) is indicated for the treatment of adult patients with moderately to severely active ulcerative colitis (UC) with an inadequate response, loss of response or intolerance to either conventional UC therapy or a TNF $\alpha$  inhibitor.

Use of XELJANZ in combination with biological UC therapies or with potent immunosuppressants such as azathioprine and cyclosporine is not recommended.



XELJANZ<sup>®</sup> / XELJANZ<sup>®</sup> XR PF Prism C.V., owner/Pfizer Canada ULC, Licensee  
PFIZERFLEX<sup>TM</sup> Pfizer Inc., owner/Pfizer Canada ULC, Licensee  
© 2021 Pfizer Canada ULC, Kirkland, Quebec H9J 2M5

<sup>Pr</sup>**XELJANZ<sup>®</sup>**   
[tofacitinib citrate]  
5 mg tablets

<sup>Pr</sup>**XELJANZ<sup>®</sup> XR**   
[tofacitinib citrate]  
extended release • 11 mg tablets



**XELJANZ is the  
#1 dispensed JAK inhibitor in Canada<sup>2\*</sup>**

## VAST GLOBAL EXPERIENCE COMBINED ACROSS ALL 3 INDICATIONS

RA  
2014

•

PsA  
2018

•

UC  
2018



**>15,000 CANADIANS**  
have enrolled into  
XELJANZ's support  
program<sup>2†</sup>



**>1,000 CANADIAN  
PHYSICIANS**  
have prescribed XELJANZ  
through its patient support program  
(79% repeat prescribers)<sup>2‡</sup>



**>260,000 PATIENTS  
WORLDWIDE**  
have been prescribed  
XELJANZ, in over  
80 countries<sup>2</sup>

Consult the **XELJANZ/XELJANZ XR** Product Monograph at <http://pfizer.ca/pm/en/XELJANZ.pdf> for important information about:

- Contraindications during pregnancy and breastfeeding, and in patients with severe hepatic impairment.
- Most serious warnings and precautions regarding risk of serious infections, malignancies and thrombosis.
- Other relevant warnings and precautions regarding risk of infection and immunosuppression when co-administered with potent immunosuppressants, women of reproductive potential, hypersensitivity reactions, risk of viral reactivation, being up to date with all immunizations in accordance with current vaccination guidelines, live zoster vaccine, risk of malignancies, lymphoproliferative disorder, and nonmelanoma skin cancer, risk of lymphopenia, neutropenia, anemia, and lipid elevations, patients with hepatic and/or renal impairment, patients undergoing hemodialysis, liver enzyme elevations, patients with pre-existing severe gastrointestinal narrowing that are administered XELJANZ XR, patients with a risk or history of interstitial lung disease (ILD), pediatric patients, the elderly and patients with diabetes, patients with a history of chronic lung disease, lymphocyte counts, Asian patients, patients with risk of gastrointestinal perforation, increases in creatine kinase, decrease in heart rate and prolongation of the PR interval, patients that may be at an increased risk of thrombosis, patients with symptoms of thrombosis and dosing considerations in patients with ulcerative colitis (use XELJANZ at the lowest effective dose and for the shortest duration needed to achieve/maintain therapeutic response).
- Conditions of clinical use, adverse reactions, drug interactions and dosing instructions.

The Product Monograph is also available through our medical information department. Call 1-800-463-6001.

JAK = Janus kinase; PsA = Psoriatic arthritis; QD = Once daily; RA = Rheumatoid arthritis; UC = Ulcerative colitis

\* Comparative clinical significance is unknown

† XELJANZ's patient support program was formerly known as the eXel™ patient support program. While the eXel™ program was for patients prescribed either XELJANZ or XELJANZ XR, the enrollment numbers presented are exclusive to patients taking XELJANZ, and not XELJANZ XR. The eXel™ program has now been replaced with PfizerFlex.

‡ Prescription and physician data were obtained from eXel™ support program enrollment forms collected from June 2014 to November 2018 and from the PfizerFlex Patient Support Program which replaced the eXel™ program from 2018 onwards.

#### References:

1. Pfizer Canada ULC.  
XELJANZ/XELJANZ XR  
Product Monograph.
2. Pfizer Inc. Data on file. 2021.



## MIS-C and PIMS (continued from page 15)

cluding tocilizumab (IL-6 inhibitor) and infliximab (TNF inhibitor)<sup>9,10</sup> but insufficient data exists for clear recommendations. Similar to KD, MIS-C patients are treated with anti-platelet low dose aspirin (ASA) (3–5 mg per kg per day) as thromboprophylaxis. Anticoagulation with enoxaparin should be considered in MIS-C patients with coronary artery aneurysms as per KD management guidelines and in those with moderate-severe left ventricular dysfunction (Ejection Fraction < 35%).<sup>8</sup>

Serial monitoring of clinical and laboratory parameters, including ECG and ECHO, are recommended as part of the comprehensive follow up post-discharge.

In summary, MIS-C is a post-infectious hyperinflammatory syndrome temporally associated with SARS-CoV-2 infections affecting children. There is a wide spectrum of disease with many sharing features with KD and the most severely affected children presenting with cardiogenic shock and MAS. Immunomodulation is the foundation of therapeutic management, with most children responding rapidly to treatment. MIS-C remains a rare complication of SARS-CoV-2 infection.

## References and Suggested Readings:

1. Berard RA, Scuccimarri R, Haddad EM, et al. Paediatric inflammatory multisystem syndrome temporally associated with COVID-19. Ottawa: Canadian Paediatric Society; 2020 July 6. Available at [www.cps.ca/en/documents/position/pims](http://www.cps.ca/en/documents/position/pims). Accessed February 2021.
2. McCrindle BW, Rowley AH, Newburger JW, et al. Diagnosis, treatment, and long-term management of Kawasaki disease: a scientific statement for health professionals from the American Heart Association. *Circulation*. 2017; 135(17):e927–e999.
3. Soma VL, Shust GF, Ratner AJ. Multisystem inflammatory syndrome in children. *Curr Opin Pediatr*. 2021; 33(1):152–158. doi: 10.1097/MOP.0000000000000974. PMID: 33278107.
4. Kabeerdoss J, Pilania RK, Karkhele R, et al. Severe COVID-19, multisystem inflammatory syndrome in children, and Kawasaki disease: immunological mechanisms, clinical manifestations and management. *Rheumatol Int*. 2021; 41:19–32. <https://doi.org/10.1007/s00296-020-04749-4>.
5. Henderson LA, Yeung RSM. MIS-C: early lessons from immune profiling. *Nat Rev Rheumatol*. 2021; 17:75–76. <https://doi.org/10.1038/s41584-020-00566-y>.
6. Ahmed M, Advani S, Moreira A, et al. Multisystem inflammatory syndrome in children: A systematic review. *EClinicalMedicine*. 2020; 26:100527. doi: 10.1016/j.eclinm.2020.100527. Epub 2020 Sep 4. PMID: 32923992; PMCID: PMC7473262.9.
7. Yeung RS, Ferguson PJ. Is multisystem inflammatory syndrome in children on the Kawasaki syndrome spectrum? *J Clin Invest*. 2020; 130(11):5681–5684. doi: 10.1172/JCI141718. PMID: 32730226; PMCID: PMC7598074.
8. Henderson LA, Canna SW, Friedman KG, et al. American College of Rheumatology Clinical Guidance for Multisystem Inflammatory Syndrome in Children Associated With SARS-CoV-2 and Hyperinflammation in Pediatric COVID-19: Version 1. *Arthritis Rheumatol*. 2020; 72(11):1791–1805. doi: 10.1002/art.41454. Epub 2020 Oct 3. PMID: 32705809; PMCID: PMC7405113.
9. Feldstein LR, Rose EB, Horwitz SM, et al. Overcoming COVID-19 Investigators; CDC COVID-19 Response Team. Multisystem Inflammatory Syndrome in U.S. Children and Adolescents. *N Engl J Med*. 2020; 383(4):334–346. doi: 10.1056/NEJMoa2021680. Epub 2020 Jun 29. PMID: 32598831; PMCID: PMC7346765.
10. Whittaker E, Bamford A, Kenny J, et al. Clinical Characteristics of 58 Children With a Pediatric Inflammatory Multisystem Syndrome Temporally Associated With SARS-CoV-2. *JAMA*. 2020; 324(3):259–269. doi:10.1001/jama.2020.10369.

Rae S. M. Yeung, MD, FRCPC, PhD  
Hak-Ming and Deborah Chiu Chair in  
Paediatric Translational Research  
Professor of Paediatrics, Immunology & Medical Science  
University of Toronto  
Senior Scientist and Staff Rheumatologist,  
The Hospital for Sick Children  
Toronto, Ontario

Tala El Tal, MD  
Division of Rheumatology  
The Hospital for Sick Children  
Toronto, Ontario

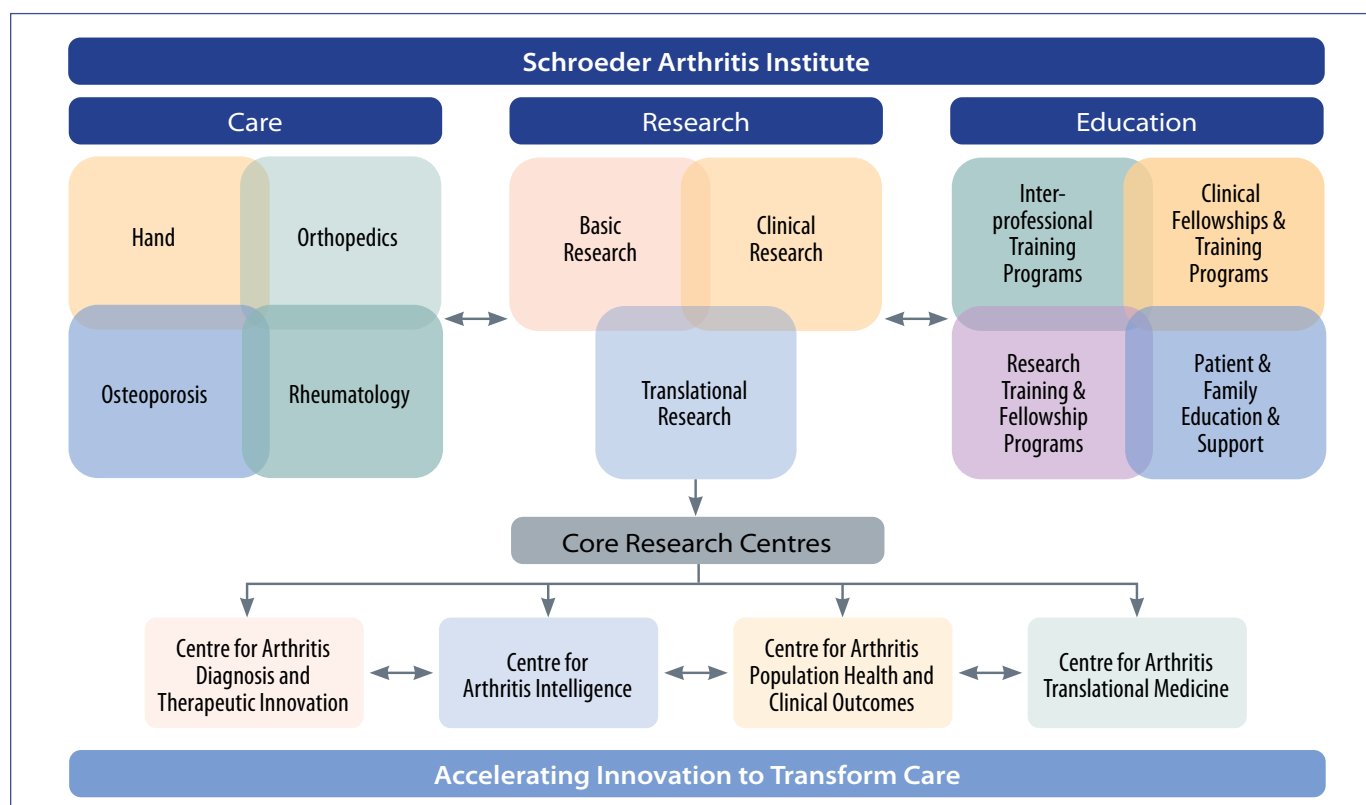
## The Schroeder Arthritis Institute: Transforming Arthritis Care Through Research and Education

By Robert Inman, MD, FRCPC, FACP, FRCP Edin; and Mohit Kapoor, PhD

The Schroeder Arthritis Institute at the University Health Network in Toronto was launched on October 9, 2020, with a \$25 million donation by philanthropists Walter and Maria Schroeder. The Institute is the largest multidisciplinary arthritis hub in Canada and provides a comprehensive approach to the management of bone, joint, spine and connective tissue diseases. The primary goal of the Institute is to provide the best patient care while pursuing a cure, advancing this care across the spectrum of diseases from the clinic to the community.

The Schroeder Arthritis Institute integrates medical, surgical and basic science aspects of four major clinical programs: Hand, orthopedics, osteoporosis and rheumatology. The Institute comprises 46 scientists and clinician-scientists, 113 trainees, and 200 staff. In the past 18 months, investigators at the Institute were supported by over \$12M in peer-reviewed research funding and have published more than 400 research articles in peer-reviewed journals.

Created with an integrated vision, a strategic plan developed with broad input, and a sustainable business mo-



del, the Schroeder Arthritis Institute is home to highly innovative and cross-functional research platforms and technologies to help decode the origins of musculoskeletal and auto-immune diseases. The launch of the Institute builds on the momentum of the progress of our arthritis team in recent years, including innovations in surgical approaches for bone and joint diseases, new diagnostics and prognostics – particularly in lupus, spondyloarthritis, osteoporosis, and osteoarthritis, as well as the development of predictive tools for orthopedic surgery outcomes. This positions the Institute to make a global impact through early diagnosis, innovative treatments and prevention of arthritis and related diseases.

The Arthritis Institute includes four major research platforms:

- i. Centre for Arthritis Diagnostic and Therapeutic Innovation
- ii. Centre for Arthritis Intelligence
- iii. Centre for Arthritis Population Health and Clinical Outcomes
- iv. Centre for Arthritis Translational Medicine

These cross-functional and multidisciplinary centres have been created to enhance basic understanding of the diseases, to create new diagnostic tests, and foster innovative therapies all ultimately focused on improved quality of life for Canadians living with arthritis (see chart above).

The Schroeder Arthritis Institute is also the central hub for training and education, ranging from medical and research training programs including undergraduate, post-graduate and clinical/research fellowships. The extensive education opportunities at the Institute are anchored in the breadth of clinical resources, which include (1) 80,000 patients treated annually; (2) 1,200 joint replacements performed each year; (3) one of the largest arthritis clinical cohorts and tissue biobanks in the world; and (4) high throughput research platforms with cutting-edge technologies such as gene sequencing and metabolomics.

*Robert Inman, MD, FRCPC, FACP, FRCP Edin*  
 Co-Director Schroeder Arthritis Institute,  
 Deputy Physician in Chief Research,  
 University Health Network  
 Professor of Medicine and Immunology,  
 University of Toronto  
 Toronto, Ontario

*Mohit Kapoor, PhD*  
 Co-Director, Schroeder Arthritis Institute  
 Tony and Shari Fell Platinum Chair in Arthritis Research,  
 Canada Research Chair (Tier 1),  
 Professor, University of Toronto  
 Senior Scientist, Krembil Research Institute  
 University Health Network  
 Toronto, Ontario

# ACR Convergence 2020 Review

By Philip A. Baer, MDCM, FRCPC, FACP

The American College of Rheumatology (ACR) pivoted their 2020 meeting wisely in the spring of 2020 to a fully virtual format, retitled ACR Convergence. By the time November rolled around, we were all veterans of virtual meetings, including platforms such as Zoom, GotoMeeting, MS Teams, Webex and others. I had “attended” EULAR 2020 in the first phase of the pandemic. Navigating posters was easy, but the platform had trouble coping with the large number of attendees for live sessions.

Given the absence of opportunities for real vacations, booking off my office from Thursday through Monday for ACR was akin to a busman’s holiday, but a break nevertheless. Registration and the introduction to the ACR Convergence platform went smoothly. As at all such meetings, you derive benefits proportional to the time invested. I spent time working through the agenda, finding interesting posters and plenary abstracts. It was easy to download relevant PDFs and PowerPoint slides, and to listen to short audio summaries of most posters. An interesting pearl for those still accessing the meeting resources, which are available online until mid-March 2021: In individual sessions under the FILE tab, no files may be listed, but the relevant PDF files can often be found by clicking on the individual speaker’s name and looking under their FILE tab.

Once the actual conference started, 16,000-plus attendees from 111 countries joined the platform. A triumph for ACR, but a massive loss for Washington D.C. hotels and restaurants, where the 2020 meeting was originally supposed to take place immediately after the U.S. elections. Most of us were thankful not to be there in the middle of a pandemic. Even with all those people online, I never crashed or failed to access the ACR meeting, but the video quality varied greatly. The feed froze at times, but the chat feature reassured me that I was not alone. The wisdom of ACR having pre-taped many of the lectures became evident, with the presenters available afterwards for live Q&A. Downloading slides in advance and following the lecture using those PDFs while listening to the speakers provided the best experience.

The opening session featured Dr. Eric Rubin, current *New England Journal of Medicine (NEJM)* editor-in-chief, providing an excellent COVID review covering drugs and potential vaccines. Many of these data had recently been published in *NEJM*. This was followed by a succinct *Year in Review* session with Drs. Yazdany and Bucala.

ACR awards included the Presidential Gold Medal conferred on Dr. James O’Dell of RAIN and RACAT fame. This is the highest award that the ACR can bestow, awarded in recognition of outstanding achievements in rheumatology over an entire career. As well, one of our own, Ciarán Duffy, was recognized as a Master of the American College of Rheumatology.

The Great Debate featured Vibeke Strand, MD, on the pro side, and Michael Weinblatt, MD, on the con side of the proposition that “Janus Kinase Inhibitors Should/Should Not Be Used Before Biologics After Methotrexate Failure in RA.” Dr. Weinblatt was the clear winner in my view: 22 years of experience with anti-TNFs is a powerful plus, as well as the tapering possibilities for patients in LDA/remission, despite JAK inhibitors having advantages of oral administration, rapid efficacy, better monotherapy data, and some achievement of superior outcomes vs. anti-TNFs. The official poll favoured the con side by 2:1.

One benefit of the virtual format: No problem if you are interested in two sessions running simultaneously – you can switch back and forth or listen to one live and another later. No more rushing between lecture halls at opposite ends of a massive convention centre, though one also loses the benefits of that physical activity. Sitting for hours at the computer is more grueling and more detrimental to one’s physical health than many would have imagined in





# Expanding Our Online Medical Cannabis Resources

By Trish Barbato, President and CEO, Arthritis Society



**L**ike you, it's important to us at the Arthritis Society that people with questions about medical cannabis get their information from a credible source.

It's the reason we continue to develop and expand our resources about medical cannabis to treat arthritis symptoms. From how medical cannabis differs from recreational products to the different forms of medical cannabis, we work to cover all the questions we know people living with arthritis have about this potential treatment. We've recently added to our resources, launching our Medical Cannabis Patient Journey and Talking to Your Doctor about Medical Cannabis resources.

The Arthritis Society is committed to responding to the pressing information needs of people with arthritis in many areas. For example, we're continually updating our information online about COVID-19 and arthritis, including up-to-date information about the vaccines, and we're expanding the ways in which we share information with our audience. We now offer monthly Arthritis Talks webinars with expert speakers on a range of topics, and have launched an engaging podcast, *flourish* – The Podcast, available wherever you listen to podcasts.

Thank you for being among the Canadians helping to diminish the pain of arthritis. We encourage you to share our resources with your patients at [arthritis.ca](https://arthritis.ca).

*Trish Barbato  
President and CEO,  
Arthritis Society*



## ACR Convergence 2020 Review *(continued from page 20)*

the pre-pandemic era. The usual drawbacks of online meetings were also evident: No one-on-one chats with poster presenters, no randomly stumbling upon an interesting poster while strolling the poster hall, and no serendipitous meetings with colleagues.

Another highlight for me was the superb Hench lecture by Dr. Gerd Burmeister on the history of biologic therapies in rheumatology. This was a great reminder of how far we have come in the last twenty years.

At live meetings, there is always a dichotomy between the official program of lectures, posters and symposia and the unofficial program of networking, sharing food and beverages with colleagues, and seeing the sights of the host city. Both provide value and enhance the total meeting experience. At virtual meetings, a similar parallel track exists. I would label this as ACR vs. "meta ACR." The meta ACR featured the CRA's concurrent program of daily up-

dates, tweets, trivia challenges and game changers. Dr. Jack Cush ran a similar excellent *RheumNow* program, including two evening programs during the meeting with Dr. Artie Kavanaugh and a rotating crew of guest experts reviewing key highlights. More informal meta aspects included the chats and Q&A streams accompanying each session. Two colleagues and I maintained a group text chat throughout the meeting, keeping each other engaged and highlighting interesting sessions to attend.

Overall, ACR Convergence 2020 delivered a satisfying experience. The 2021 meeting is scheduled for November in San Francisco, but I expect a virtual component is here to stay.

*Philip A. Baer, MDCM, FRCPC, FACR  
Editor-in-chief, CRAJ  
Scarborough, Ontario*

# Addressing Inequity in Northern Ontario: A Look to the Future

By Sahil Koppikar, MD, FRCPC

Inequity and systemic discrimination have become front page news and part of dinner-time conversations in 2020. In healthcare, we have been discussing the very same topics. Although rheumatology has made great strides in the last few decades improving the health outcomes for our patients, inequity amongst certain groups remains. If we want to address inequity in rheumatology, we need to examine in depth those who are achieving suboptimal outcomes, identify the barriers in that population, and target solutions directly at those barriers.

In Ontario, such an examination turns our eyes northward.

Northern Ontario is a region of the province where health equity is often lacking and needs to be addressed with urgency. Using a rheumatology lens, patients in the north have reduced access to rheumatology care,<sup>1,2</sup> are more likely to have poorer outcomes,<sup>3</sup> experience adverse events<sup>4,5</sup> and are at greater risk of death<sup>6</sup> compared to provincial averages.

There are many causes for these discrepancies, rooted in the broader social determinants of health, that have a large impact on health outcomes. Over the past five years, there has been a big push from government and provincial organizations to systematically study and plan initiatives to mitigate some of these barriers in the short and long term.<sup>7</sup>

While these top-down approaches will impact the system as a whole, as rheumatologists we can narrow the health gap with some bottom-up solutions, focused on health care delivery.

In the CRAJ Winter 2020 issue, Dr. Laurence Rubin eloquently described one such solution. The Timmins Arthritis Clinic, in its current format, has been running since the late 1980s. The success of this clinic was built on decades of commitment from Dr. Rubin, Dr. Carette, and the Arthritis Society Advanced Clinical Practitioners in Arthritis Care, known as ACPACs (Mary Ellen Marcon and Lynn Richards). Importantly, they created a sustainable model of care (MOC) that was not dependent on only one physician. Over the last year, we have added weekly “direct-to-home” virtual visits that have helped to shorten the waitlist, allow for urgent consults, and increase the number of patients who can be assessed. Despite the success of this model in Timmins, similar siloed programs will be increasingly difficult to create and maintain. Instead, we need a holistic and collaborative approach to address gaps and leverage our voice towards creating lasting systemic improvement.

To this end, in the summer of 2020, the Ontario Rheumatology Association (ORA) created a Northern Ontario Committee that comprises rheumatologists, ACPACs and

## Telemedicine model of care: ins and outs

Communities served?	Patient population?	How many patients?	Frequency?
Sturgeon Falls	Inflammatory arthritis, Francophone	Typically 30 minutes per follow-up- 6-8 patients per clinic	Every 2 months for ½-full day
Elliot Lake	Inflammatory arthritis, Over 65 years	Typically 20-30 minutes per follow-up= 6-12 patients per clinic	Every 2 months for ½-full day
Espanola	Inflammatory arthritis, Indigenous	30 minute follow-ups, 6-8 patients per clinic	Every month for ½ day
Mindemoya	Inflammatory arthritis, Indigenous	30 minute follow-ups, 6-8 patients per clinic	Every 2 months for ½-full day



The ORA Northern Ontario committee workshop on northern virtual care. There was a great amount of interest from both new and experienced rheumatologists.

leaders from the Arthritis Society who are involved in northern care. This has been instrumental in bringing people with similar goals and vision together to generate innovative ideas.

In January 2021, the committee hosted two workshops to educate ORA members on the “current state of the north” and to recruit members who are interested in providing virtual care to northern patients in an ACPAC-physician model. This MOC already exists, with the ACPACs based in Sudbury and Thunder Bay. However, with increasing patient needs and upcoming retirements, it is important that we sustain the care that is already provided. We are hoping to leverage new virtual care skills that have been developed over the pandemic and find members who will be willing to offer care to patients in northern Ontario.

In recognition of the higher prevalence of Indigenous populations in northern Ontario, we will be asking all new “recruits” to complete Indigenous Cultural Safety Training.<sup>8</sup> Indigenous populations have faced various discriminatory policies that have created inequalities that continue to affect their health. It is the least we can do to recognize this, enhance self-awareness, and strengthen the skills of those who work with Indigenous people.

Over the last few years, we have also seen increased interest in new graduates setting up practice or travelling to the North. Two early career rheumatologists, Drs. Saa-ra Rawn and Matthew Piche, have established permanent practices in Sault Ste. Marie. Dr. Maysam Khalfan has set up regional clinics in Kapuskasing and Hearst and plans on travelling up four times a year to provide care in these regions. Drs. Elishka Pek and Lauren King are looking to set up a similar visiting model in Thunder Bay. In Timmins, we have recruited Dr. Medha Soowamber, who is fluent in French – a critical requirement in an area where 20% of people are francophone. This interest, and action, by early career rheumatologists is encouraging and I hope it is something that sustains and expands over the coming years.

The long-term vision is to establish a multidisciplinary model that relies on training local ACPAC/extended-role practitioners (ERPs) at each major northern hub who can work alongside rheumatologists that are local, visiting, or using telemedicine. This model could potentially allow for central triaging in the north to optimize wait times and provide an expert local resource to the communities. This will require creative solutions and new MOCs that do not currently exist. Earlier in 2020, Drs. Stephanie Tom (previous chair) and Rachel Shupak met with the Ministry of Health to discuss these issues. The Ministry was engaged and receptive and asked for a proposed business case that outlines what we envision as the ideal MOC. The ORA Northern Ontario Committee has been working on the business plan and is aiming to present it to the Ministry in



Dr. Medha Soowamber (left) and Lynn Richards (right) during our December 2020 trip to Timmins, in classic 2020 style with masks!

the spring/summer of 2021. While we are being pragmatic, we will aim for the stars and see where that gets us!

At the end of the day, a strategy to address health equity will require engagement and commitment of stakeholders and leaders in the North. As Dr. Jennifer Walker (Canada Research Chair in Indigenous Health at Laurentian University) put it, “Solutions cannot simply be imported from the southern part of the province. The landscape – social and cultural as well as geographic – is totally different.” But we can all contribute in different ways to narrow the health equity gap and ensure patients get the care they need, no matter where they live, who they are, or what they have.

*Sahil Koppikar, MD, FRCPC  
Rheumatologist,  
Women's College Hospital, Toronto  
Director, Timmins Arthritis Program  
Chair, Northern Ontario Committee (ORA)*

#### References:

1. Widdifield J, Paterson JM, Bernatsky S, et al. Access to rheumatologists among patients with newly diagnosed rheumatoid arthritis in a Canadian universal public healthcare system. *BMJ Open*. 2014; 4(1):e003888.
2. Badley E, Veinot P, Ansari H, et al. 2007 Survey of Rheumatologists in Ontario. University Health Network; 2008.
3. Nagaraj S, Barnabe C, Schieir O, et al. Early rheumatoid arthritis presentation, treatment, and outcomes in Aboriginal patients in Canada: A Canadian early arthritis cohort study analysis. *Arthritis Care Res (Hoboken)*. 2018; 70(8):1245-50.
4. Widdifield J, Bernatsky S, Paterson JM, et al. Serious infections in a population-based cohort of 86,039 seniors with rheumatoid arthritis. *Arthritis Care Res (Hoboken)*. 2013; 65(3):353-61.
5. Ravi B, Croxford R, Hollands S, et al. Increased risk of complications following total joint arthroplasty in patients with rheumatoid arthritis. *Arthritis Rheumatol*. 2014; 66(2):254-63.
6. Widdifield J, Bernatsky S, Paterson JM, et al. Trends in excess mortality among patients with rheumatoid arthritis in Ontario, Canada. *Arthritis Care Res (Hoboken)*. 2015; 67(8):1047-53.
7. Health Quality Ontario. Northern Ontario Health Equity Strategy 2020. Available at: <https://www.hqontario.ca/What-is-Health-Quality/Health-Equity-and-Quality/Our-Work/Northern-Ontario-Health-Equity-Strategy>. Accessed February 2021.
8. Provincial Health Services Authority Indigenous Health Program. San'yas Indigenous Cultural Safety Training 2020. Available at: <https://www.sanyas.ca/about-us>. Accessed February 2021.



# How to Get More Buck for Your Bang!

## The Ins and Outs of SR&ED Credits

By Janet Pope, MD, MPH, FRCPC; and Carter Thorne, MD, FRCPC, FACP, MACR, MCRA

### What does SR&ED mean?

Scientific Research and Experimental Development (SR&ED).

### What are SR&ED credits?

This is a Canadian tax credit program (also topped up by some provinces) that provides tax credits for:

1. Experimental development to achieve technological advancement to create new materials, devices, products, or processes, or improve existing ones;
2. Applied research to advance scientific knowledge with a specific practical application; and
3. Basic research to advance scientific knowledge without a specific practical application

### Are SR&ED credits relevant to me?

Maybe. If you do research and are incorporated (note that a medical professional corporation does NOT qualify), you could be eligible to claim SR&ED credits. You have to have expenses and scientific work in your corporation. For instance, if you are in practice and want to join a registry (there are so many in Canada!), you can be eligible to offset some of the personnel resources of enrolling patients, data entry, etc. You need to keep very good records as to expenses and what they were for. You can also pay yourself for your work that is over and above the usual provincial billings for time spent completing forms, and other scientific work. You will need an accountant familiar with these credits as the process is very important.

### What else can I claim for SR&ED credits?

You might be able to claim SR&ED credits if you hire a summer student to help with a chart audit or for your office staff's time when spent on research or to pay for your time. You may NOT claim capital expenses, such as rent, equipment, travel, etc.

### Where do I get money to put into my corporation so I can pay these expenses?

Some registries give start-up costs or some money on a per patient basis. However, other money can be used. For instance, your honoraria for consulting, advisory boards, etc., can be deposited and then used to pay yourself for your scientific work. If you have a CIORA grant and work

in community practice, this grant can go into a corporation to help offset other costs. For instance, your time on a CIORA grant is not reimbursed in the grant but could be with the SR&ED claim. Your corporation does not have to make money, and it can even lose money, but there must be eligible expenses to make a claim.

### What are some of the Canadian research groups/projects that may be SR&ED eligible?

- Phase IV studies – costs beyond what the contract reimburses
- Expenditures such as your time on a CIORA grant if you are in community practice
- The Spondyloarthritis Research Consortium of Canada (SPARCC)
- International Psoriasis & Arthritis Research Team (IPART)
- Canadian Early Arthritis Cohort (CATCH)
- Ontario Best Practices Research Initiative (OBRI) and other provincial registries
- Canadian Research Group of Rheumatology in Immuno-Oncology (CanRIO)
- The Canadian Scleroderma Research Group (CSRG)
- Canadian Inflammatory Myopathy Study (CIMS) group
- Canadian Network for Research on Vasculitides (CanVasc)
- Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus (CaNIOS)

We invite you to get involved in some research in order to challenge your assumptions, have a change of scenery from clinical practice, and to satisfy your curiosity. We have become better rheumatologists due to participation in research. And, if you participate, applying for SR&ED credits may be a model to make this sustainable.

Janet Pope, MD, MPH, FRCPC  
Professor of Medicine,  
Division Head,  
Division of Rheumatology,  
Department of Medicine,  
St. Joseph's Health Care,  
Western University  
London, Ontario

Carter Thorne, MD, FRCPC,  
FACP, MACR, MCRA  
Medical Director,  
The Arthritis Program &  
Chief Division of Rheumatology,  
Southlake Regional  
Health Centre  
Newmarket, Ontario



# Treat to Target in Gout

By Abhijeet Danve, MD, FACP; and Tuhina Neogi, MD, PhD

Gout is the most common inflammatory arthritis affecting 42 million adults worldwide.<sup>1</sup> Despite the well understood pathophysiology and availability of effective medications, gout care remains suboptimal and adherence to therapy is poor. The central strategy in gout management is to reduce serum urate (sUA) to below the saturation threshold (6.8mg/dL= 408 µMol/L) to prevent monosodium urate crystallization, thereby reducing risk of gout flares and tophi. Because of this understanding of the biology of gout, a treat-to-target (T2T) strategy has been advocated by rheumatology societies, though this recommendation has not been accepted by all organizations.<sup>2</sup> A T2T strategy involves management of the index condition with frequent monitoring of disease activity while escalating treatment to achieve a pre-specified quantifiable therapeutic target, in contrast to using symptoms alone as a gauge. A T2T strategy is used in a number of chronic conditions including hypertension, diabetes, and rheumatoid arthritis.<sup>3-5</sup>

A criticism of T2T in gout has been whether sUA is an adequate marker of clinical disease manifestations of flare and tophi, but at least three randomized clinical trials (RCTs) to date have provided insights into the effects of lowering sUA to <6mg/dL (360 µMol/L) on clinically relevant outcomes.<sup>6-8</sup> A UK trial of nurse-led care that involved specific use of a T2T strategy with dose titration compared with usual care by general practitioners demonstrated lower sUA, which was accompanied by decreased severity and frequency of flares, reduction in tophi and improved medication adherence.<sup>8</sup> In a RCT carried out in participants with early gout, there was a greater proportion achieving sUA <6mg/dL (360 µMol/L) along with a greater decrease in overall flare incidence in the febuxostat arm compared with placebo.<sup>7</sup> Similarly, Sundy et al. demonstrated that use of pegloticase resulted in significantly more participants achieving sUA <6mg/dL (360 µMol/L), as well as a greater proportion with reduction in tophi and flares compared with placebo.<sup>6</sup> It is a fair concern that the specific threshold of <6mg/dL (360 µMol/L) has not been directly assessed in a RCT as being better than <6.8mg/dL (408 µMol/L) or <5mg/dL (300 µMol/L), for example. Nonetheless, these trials do provide support for lowering sUA to sufficiently below the saturation threshold to achieve improvements in the clinical outcomes of flares and tophi.

With consideration of these and other data in the comprehensive evidence report, the American College of Rheumatology (ACR) 2020 gout guidelines strongly recom-

mended a T2T strategy with urate-lowering therapy (ULT) dose titration guided by serial sUA levels to achieve a target of <6 mg/dL (360 µMol/L). It also recommended that ULT titration should occur over a reasonable time frame to prevent treatment inertia.<sup>9</sup> The 2016 European League Against Rheumatism (EULAR) recommendations for the management of gout also supported use of a T2T strategy with a goal sUA of <6mg/dL (360 µMol/L).<sup>10</sup>

In summary, there is now high-quality data available combined with good understanding of gout's pathophysiology, and treatment guidelines to support T2T in gout. Thus, rather than practicing "reactive" health care, a proactive T2T approach can mitigate and prevent the long-term sequelae of inadequately managed gout.

*Abhijeet Danve, MD, FACP*  
Assistant Professor of Medicine,  
Yale School of Medicine  
New Haven, Connecticut

*Tuhina Neogi, MD, PhD*  
Professor of Medicine,  
Boston University School of Medicine  
Boston, Massachusetts

## References:

1. Safiri S, Kolahi AA, Cross M, et al. Prevalence, incidence, and years lived with disability due to gout and its attributable risk factors for 195 countries and territories 1990-2017: A systematic analysis of the global burden of disease study 2017. *Arthritis Rheumatol.* 2020; 72(11):1916-27.
2. Qaseem A, Harris RP, Forciea MA, Clinical Guidelines Committee of the American College of Physicians. Management of Acute and Recurrent Gout: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med.* 2017; 166(1):58-68.
3. James PA, Oparil S, Carter BL, et al. 2014 evidence-based guideline for the management of high blood pressure in adults: report from the panel members appointed to the Eighth Joint National Committee (JNC 8). *JAMA.* 2014; 311(5):507-20.
4. Yki-Jarvinen H, Kauppinen M, Kujansuu E, et al. Comparison of insulin regimens in patients with non-insulin-dependent diabetes mellitus. *N Engl J Med.* 1992; 327(20):1426-33.
5. Grigor C, Capell H, Stirling A, et al. Effect of a treatment strategy of tight control for rheumatoid arthritis (the TICORA study): a single-blind randomised controlled trial. *Lancet.* 2004; 364(9430):263-9.
6. Sundy JS, Baraf HS, Yood RA, et al. Efficacy and tolerability of pegloticase for the treatment of chronic gout in patients refractory to conventional treatment: two randomized controlled trials. *JAMA.* 2011; 306(7):711-20.
7. Dalbeth N, Saag KG, Palmer WE, et al. Effects of febuxostat in early gout: a randomized, double-blind, placebo-controlled study. *Arthritis Rheumatol.* 2017; 69(12):2386-95.
8. Doherty M, Jenkins W, Richardson H, et al. Efficacy and cost-effectiveness of nurse-led care involving education and engagement of patients and a treat-to-target urate-lowering strategy versus usual care for gout: a randomised controlled trial. *Lancet.* 2018; 392(10156):1403-12.
9. FitzGerald JD, Dalbeth N, Mikuls, et al. 2020 American College of Rheumatology Guideline for the Management of Gout. *Arthritis Rheumatol.* 2020; 72(6):879-95.
10. Richette P, Doherty M, Pascual E, et al. 2016 updated EULAR evidence-based recommendations for the management of gout. *Ann Rheum Dis.* 2017; 76(1):29-42.

# Survey Results: Telehealth Use in Canada

On behalf of the CRA Telehealth Committee

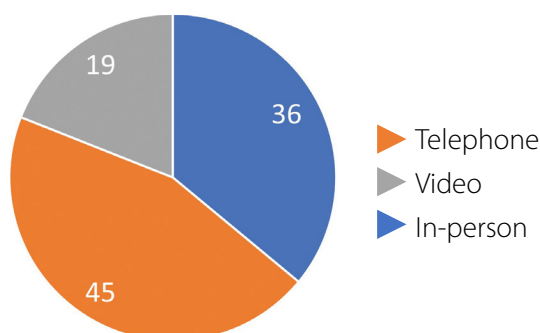
The COVID-19 pandemic has necessitated many changes in healthcare; for patients with rheumatic disease this has primarily translated into how patients are seen by their healthcare providers. While telehealth and e-medicine existed before, the pandemic has led to a dramatic shift in how these formats are used. For this issue's Joint Count survey, in December 2020, we reached out to the CRA membership to ask about their perspectives on telehealth use in Canada. For the purposes of the survey, "telehealth" encompassed telephone and videoconference visits.

The first survey question asked whether video and telephone visits are paid at the same fee as in-person visits in their province. For both video and telephone visits, approximately 70% responded that they are paid the same fee as in-person visits. Further to this, 73% agreed that in the future (post-COVID) telehealth visits should be paid the same fee as in-person appointments.

When asked to estimate what percentage of current patient appointments are conducted via telehealth (e.g., telephone or videoconference) vs. in-person visits, taking the collective average, 36% are in-person visits, 45% via telephone and 19% via video (refer to Chart 1).

The next question asked "What percentage of new patients are you seeing via telehealth?" Approximately a third (30%) responded that they are seeing the majority of their new patients (>75%) via telehealth. Another 28% indicated that they saw less than a quarter of their new patients via telehealth, with 20% saying they saw no new patients via telehealth.

**CHART 1:**  
**Format of Current Patient Appointments (%)**  
N = 130 (December 2020)



In terms of being comfortable seeing new patients by telehealth, only 8% said they were very comfortable. Sixteen percent (16%) indicated they were comfortable; 27% said they were somewhat uncomfortable; 13%, neutral; and finally, 35% said they were not at all comfortable.

When asked "which parts of the physical exam do you incorporate into your telehealth visit, when clinically indicated (choose all that apply)?" the most common responses included visual exam for swollen joints (66%); self-exam for tender joints (60%); dermatologic exam – either real time or with photos afterwards (57%); and virtual GALS/pGALS/or other range of motion exam (48%).

As one might expect, there are both benefits and disadvantages to telemedicine. Indeed, one respondent pointed out that "When there is no pre-existing relationship, it is likely harder for patients to have a sense of trust when the visit is only by phone. From the physician side, there are many features that you can miss without visual contact of some sort." Similarly, another physician commented that "...it is also difficult to assess patients whose first language is not English as I am never sure that my questions are understood even when there is a relative involved acting as a translator." Another stated that "Questions and history are easy by telehealth, but not physical exam which is essential to complete the initial rheumatology consultation."

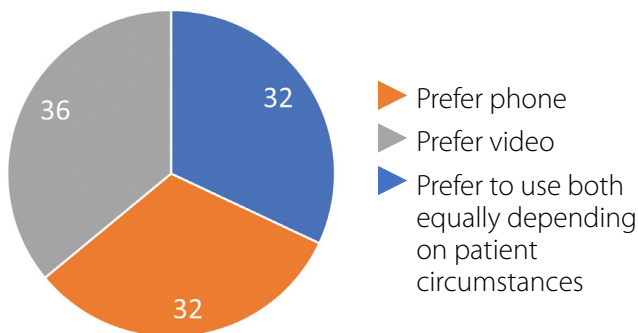
On the other hand, there is also a distinction to be made between a video visit and a telephone call. One physician wrote "I see all new patients by video if possible (over 90%). I find telephone consultations much less reliable." Others suggested that the technical difficulties of setting up video calls with patients who are not familiar with the technology are a significant barrier. Indeed, patient comfort with technology is a limitation, particularly with video calls, and there can also be technical barriers such as an inadequate internet connection. Finally, the lack of a proper setup and even privacy or noise can be concerns, with the presence of other members in a household, both for patients and physicians alike.

Additional barriers mentioned by survey takers included the lack of administrative support. For example, adding new ways that patients can be booked adds more variables to an already taxed system.

Nevertheless, telemedicine can certainly be convenient, particularly for rural patients in the winter months, and many reported that their follow-up patients are very

CHART 2:  
**Preferred Telehealth Platform If No Barriers  
Existed (%)**

N = 130 (December 2020)



happy with virtual visits. The wide variety of responses and comments in this survey confirm that telemedicine has an important role in the future of healthcare, though whether it will be used or not for a specific patient ultimately depends on the patient, their condition and their unique circumstances.

The CRA Telehealth Committee is working on best practice recommendations and looks forward to seeing results from multiple quality improvement and research efforts assessing telehealth models of care being carried out by CRA members.

If you have any additional feedback for the CRA, please contact Sue Ranta at [sranta@rheum.ca](mailto:sranta@rheum.ca).

\*The response rate to the survey was 130 out of a possible 599, equating to 22%. Approximately 44% of respondents were academic rheumatologists and 43% were community rheumatologists, and among these 24% were both; 14% were pediatric rheumatologists.

## Regional News: Update from Manitoba

By Liam O'Neil, MD, FRCPC

The big news from Manitoba (MB) is that the Canadian Institutes of Health Research (CIHR) has provided funding for a team immunology project (nominated principal investigator [NPI]: Dr. Hani El-Gabalawy, recently bestowed ACR Master) that will aim to understand and prevent rheumatoid arthritis autoimmunity in First Nations people. Dr. Liam O'Neil was hired in early 2020 as a clinician-scientist and co-investigator on this team grant.

In other news, we eagerly await the opening of a new Internal Medicine subspecialty outpatient clinic which is being developed by a team led by our very own Dr. David Robinson. Adult rheumatology is also now providing outreach clinics to serve Nunavut (Dr. Robinson) and Hodgson, MB (Dr. Konstantin Jilkine). Sadly, we also must announce the departure of Dr. Kerstin Gerhold from pediatric rheumatology, with Dr. Lilly Lim taking over as section head. Dr. Lim is also funded by CIHR to study lived experience and longitudinal employment in lupus patients.



Several bear statues, known as the "Bears on Broadway," decorate the grounds of Manitoba's Parliament in Winnipeg.

*Liam O'Neil, MD, FRCPC  
Assistant Professor of Medicine,  
University of Manitoba,  
Winnipeg, Manitoba*

# Tribute to Dr. Robert "Bob" McKendry

By Gunnar Kraag, MD, FRCPC

Dr. Bob McKendry passed away on December 26, 2020. He was the driving force in establishing academic rheumatology at the University of Ottawa and also helped establish the Northern Ontario School of Medicine in his role as Assistant Dean of Postgraduate Education in the Faculty of Medicine.

Bob graduated from Queen's University in 1968. He received his Internal Medicine training in Toronto and was the Chief Medical Resident at the Wellesley Hospital. He did his rheumatology training at the Scripps Clinic and Research Foundation in La Jolla, California.

He returned to Ottawa in 1974 and quickly became the Director of the University of Ottawa Rheumatic Disease Unit. He was successful in dramatically raising the profile of rheumatology in Ottawa and started a Royal College Training Program in rheumatology. He was able to attract excellent Fellows, many of whom subsequently joined the Division.

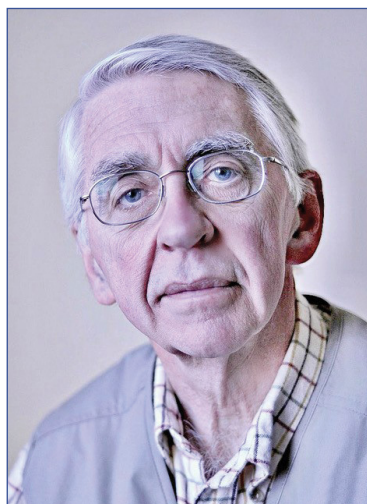
Bob exemplified the excellence of an academic as a clinician, educator and researcher. As a clinician he was an excellent diagnostician and developed superb rapport with his patients, earning their gratitude and respect.

Bob was a superb teacher and mentor to undergraduate and postgraduate trainees.

As a researcher, he authored some 60 peer-reviewed papers. In 2002, he created a private research clinic. He became CEO of Rheumatology Research Associates, where he was the principal investigator for more than 50 industry-sponsored clinical trials.

His many professional accomplishments include his role as Chairman of the Division of Rheumatology at the University of Ottawa, Deputy Chairman and Acting Chairman of the Department of Medicine, Assistant Dean Postgraduate Education, as well as serving on numerous professional associations and international committees.

He was the recipient of many awards throughout his career and was particularly proud of receiving the Commonwealth Medal for the 125th anniversary of the Confederation of Canada, awarded by the Governor General in December of 1992 – "in recognition of significant contribution to compatriots, community and to Canada." He also received an Award of Excellence from the Department of Medicine at the University of Ottawa. He received several awards recogni-



1943–2020

zing his volunteer service to programs of the Arthritis Society in Ontario.

There was much more to Bob than his academic and professional activities. He had a wide array of interests that included running, gardening, skiing and extensive travelling. Flowers were a particular passion, and he added a greenhouse at the back of his house so he could enjoy gardening all year round.

His favourite pastime was undoubtedly putting at his cottage on Calumet Island. Building may be more accurate than putting. The cottage was a true passion.

Bob loved good company, and his wit and wry sense of humour were legendary. We were all privileged to know him.

*Gunnar Kraag MD, FRCPC*

*Professor of Medicine (retired), University of Ottawa  
Ottawa, Ontario*

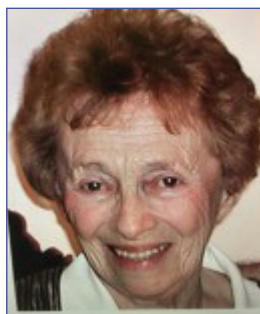




# Testimonial to Dr. Hanna Strawczynski

By Ciarán Duffy, MB, BCh, MSc, FRCPC, FRCPI; Rosie Scuccimarri, MD, FRCPC; and Ronald M. Laxer, MDCM, FRCPC

When Ciarán Duffy commenced his career at the Montreal Children's Hospital and McGill University (MCH/McGill) in 1990, he had the distinct privilege to work with an incredible pediatrician named Dr. Hanna Strawczynski. Hanna was a general pediatrician with tremendous skills in providing care to children with many complex problems, including those with juvenile idiopathic arthritis (JIA). He had been made aware of her by Ron Laxer, who came to know her when he was a resident at MCH/McGill.



1927–2020

Ron recalls: "I did a mandatory rotation in the Home Care Department of the MCH as a first-year resident in 1977. Hanna had set up the department in 1969 to help manage children with two chronic diseases – hemophilia and thalassemia. Because hemophilic arthropathy was so common in those days, Hanna also saw patients with JIA and other rheumatic diseases. It was on that rotation that I first got my taste of pediatric rheumatology. Perhaps, more importantly, I saw the commitment that she made to every patient (and their families), and the compassion with which she cared for them. In those days, there was not much science to our specialty, but there was an art, and she was a master. It was that experience that inspired me to pursue a career in pediatric rheumatology."

Rosie Scuccimarri was also significantly influenced. "I worked with Dr. Strawczynski, as a pediatric resident rotating through pediatric rheumatology, just before her retirement in 1997. She was an incredible woman. Despite her slight physique, she had such a strong aura about her, and it was clear that she had overcome significant hardships throughout her life and career. She was a great role model especially for young women starting their medical careers. I was very fortunate to have had the opportunity to work with and learn from her."

Hanna's influence also extended to her family. Her niece, Ilona Szer, who was Head of Pediatric Rheumatology at Rady

Children's Hospital in San Diego, before her recent retirement, states "I followed a career in pediatrics, and ultimately pediatric rheumatology, because of my aunt Hanna. She had a huge influence on me, personally, and on my career."

And so it was also for Ciarán who worked with Hanna for seven years. "She taught me so much during that time. She was an amazing role model and mentor. Her commitment to the children and families whom she served was simply extraordinary. She was such a caring person and that care was also extended to young faculty. She was an influential presence, but in a non-threatening way. Perhaps for me, her greatest influence was in guiding me towards a career in leadership. She, herself, led by example and always had this innate ability to read situations which endeared her to so many. I also had the opportunity to share many social events with her, including at her home, where I got to sample her exquisite and very special Polish vodka. She was such an engaging host."

Dr. Hanna Strawczynski (nee Richter), born in Poland in 1927, was only 12 years old at the commencement of World War 2. She survived the Holocaust, including the Warsaw Ghetto and a slave labour camp. After the war, she completed medical school, trained as a pediatrician, and worked for many years in Warsaw. She ultimately moved to Canada with her husband, the late Oskar Strawczynski, settling in Montreal, where she raised her children, Eva and David. She worked at MCH/McGill for over 30 years, achieving the rank of Associate Professor. Not only was she a survivor of the war, she also survived ovarian cancer. Unfortunately, however, as with many in long-term care facilities in Montreal, and elsewhere throughout Canada, she was unable to survive COVID-19, to which she succumbed on November 26th, 2020.

Hanna left an indelible mark on all of our hearts and we will never forget her. We extend our sincere condolences to Eva and David, and to all of her family. May she forever rest in peace.

*Ciarán Duffy, MB, BCh, MSc, FRCPC  
Chief of Pediatrics,  
Children's Hospital of Eastern Ontario  
Professor and Chair,  
Department of Pediatrics  
Faculty of Medicine  
University of Ottawa,  
Ottawa, Ontario*

*Ronald M. Laxer, MDCM, FRCPC  
Professor,  
Departments of Pediatrics  
and Medicine,  
University of Toronto  
Staff Rheumatologist,  
The Hospital for Sick Children  
Toronto, Ontario*

*Rosie Scuccimarri, MD, FRCPC  
Associate Professor,  
Department of Pediatrics,  
McGill University  
Pediatric Rheumatologist,  
Montreal Children's Hospital  
Montreal, Quebec*

# SIMPONI®

Proven efficacy.  
Proven safety profile.

SINCE 2009



RA

SINCE 2009



PsA

SINCE 2009



AS

**SIMPONI®**, in combination with MTX, is indicated for reducing signs and symptoms and improving physical function in adult patients with moderately to severely active RA; Inhibiting the progression of structural damage in adult patients with moderately to severely active RA who had not previously been treated with MTX.

**SIMPONI® is indicated for:** 1) Reducing signs and symptoms, inhibiting the progression of structural damage and improving physical function in adult patients with moderately to severely active PsA. SIMPONI® can be used in combination with MTX in patients who do not respond adequately to MTX alone; 2) Reducing signs and symptoms in adult patients with active AS who have had an inadequate response to conventional therapies; 3) The treatment of adults with severe active nr-Ax SpA with objective signs of inflammation as indicated by elevated CRP and/or MRI evidence who have had an inadequate response to, or are intolerant to NSAIDs.

#### Most common adverse reactions:

Upper respiratory tract infection: SIMPONI® 7%, placebo 6%; Nasopharyngitis: SIMPONI® 6%, placebo 5%

#### CLINICAL USE:

**Pediatrics:** The safety and efficacy of SIMPONI® in pediatric patients have not been established.

**Geriatrics (65 years of age or older):** Caution should be used in treating the elderly.

#### CONTRAINDICATIONS:

- Severe infections such as sepsis, tuberculosis and opportunistic infections
- Moderate or severe (NYHA class III/IV) congestive heart failure

#### MOST SERIOUS WARNINGS AND PRECAUTIONS:

##### Infections:

- Serious infections leading to hospitalization or death, including sepsis, tuberculosis (TB), invasive fungal, and other opportunistic infections, have been observed with the use of TNF antagonists including

golimumab. Administration of SIMPONI® should be discontinued if a patient develops a serious infection or sepsis. Treatment with SIMPONI® should not be initiated in patients with active infections including chronic or localized infections.

- Physicians should exercise caution when considering the use of SIMPONI® in patients with a history of recurring or latent infections, including TB, or with underlying conditions, which may predispose patients to infections, who have resided in regions where TB and invasive fungal infections such as histoplasmosis, coccidioidomycosis, or blastomycosis are endemic.
- Tuberculosis (frequently disseminated or extrapulmonary at clinical presentation) has been observed in patients receiving TNF-blocking agents, including golimumab. Tuberculosis may be due to reactivation of latent tuberculosis infection or to new infection.

- Before starting treatment with SIMPONI®, all patients should be evaluated for both active and latent tuberculosis.
- If latent tuberculosis is diagnosed, treatment for latent tuberculosis should be started with anti-tuberculosis therapy before initiation of SIMPONI®.
- Physicians should monitor patients receiving SIMPONI® for signs and symptoms of active tuberculosis, including patients who tested negative for latent tuberculosis infection.

##### Malignancy:

- Lymphoma and other malignancies, some fatal, have been reported in children and adolescent patients treated with TNF blockers, of which golimumab is a member.

#### OTHER RELEVANT WARNINGS AND PRECAUTIONS:

- Risk of hepatitis B virus reactivation
- Risk of malignancies

PROVEN  
EFFICACY

monthly  
**Simponi**<sup>®</sup>  
golimumab

10<sup>+</sup> YEARS  
EXPERIENCE

SINCE 2016



**10+ YEARS**  
of Canadian experience behind us.\*

Supporting you and your patients  
in the years to come.

**A SIMPLE  
Once a Month  
DOSING SCHEDULE**

50 mg ONCE A MONTH on the same date each month



- Risk of worsening or new onset of congestive heart failure
- Risk of infection with concurrent use of anakinra, abatacept or other biologics; concurrent use is not recommended
- Risk of hematologic reactions
- Risk of hypersensitivity reactions
- Risk of latex sensitivity
- Risk of clinical infections, including disseminated infections, with live vaccines and therapeutic infectious agents; concurrent use is not recommended
- Risk of autoimmunity
- May cause immunosuppression; may affect host defences against infections and malignancies
- Potential for medication errors
- Risk of new onset or exacerbation of CNS demyelinating disorders
- Risk of infection in peri-operative patients
- Adequate contraception must be used to prevent

pregnancy in women of childbearing potential for at least 6 months after last treatment

- Not to breastfeed during and for at least 6 months after treatment with SIMPONI<sup>®</sup>
- Use with caution in patients with impaired hepatic function
- May have a minor influence on the ability to drive due to dizziness following administration

**FOR MORE INFORMATION:**

Please consult the product monograph at [www.janssen.com/canada/products](http://www.janssen.com/canada/products) for important information relating to adverse reactions, drug interactions, and dosing information which have not been discussed in this piece. The product monograph is also available by calling 1-800-387-8781.

\* across combined indications.

PsA = psoriatic arthritis | AS = ankylosing spondylitis | RA = rheumatoid arthritis | nr-Ax SpA = non-radiographic axial spondyloarthritis | MTX = methotrexate | CRP = C-reactive protein | MRI = magnetic resonance imaging | NSAIDs = nonsteroidal anti-inflammatory drugs

**Reference:**

1. SIMPONI<sup>®</sup> Product Monograph. Janssen Inc. June 20, 2019.

© 2021 Janssen Inc.

All trademarks used under license.

Janssen Inc. | 19 Green Belt Drive | Toronto, ON | M3C 1L9  
[www.janssen.com/canada](http://www.janssen.com/canada) | CP-203649E



MEMBER OF  
INNOVATIVE MEDICINES CANADA



janssen

PHARMACEUTICAL COMPANIES OF  
Johnson & Johnson

**XELJANZ is  
the #1 dispensed  
JAK inhibitor  
in Canada<sup>1\*</sup>**

**XELJANZ<sup>®</sup>**  
[tofacitinib citrate]



## RHEUMATOID ARTHRITIS

<sup>Pr</sup>XELJANZ<sup>®</sup>/<sup>Pr</sup>XELJANZ<sup>®</sup> XR (tofacitinib) in combination with methotrexate (MTX), is indicated for reducing the signs and symptoms of rheumatoid arthritis (RA) in adult patients with moderately to severely active RA who have had an inadequate response to MTX. In cases of intolerance to MTX, physicians may consider the use of XELJANZ/XELJANZ XR (tofacitinib) as monotherapy.

Use of XELJANZ/XELJANZ XR (tofacitinib) in combination with biological disease-modifying anti-rheumatic drugs (bDMARDs) or with potent immunosuppressants such as azathioprine and cyclosporine is not recommended.

## PSORIATIC ARTHRITIS

<sup>Pr</sup>XELJANZ<sup>®</sup> (tofacitinib) in combination with methotrexate (MTX) or another conventional synthetic disease-modifying anti-rheumatic drug (DMARD), is indicated for reducing the signs and symptoms of psoriatic arthritis (PsA) in adult patients with active PsA when the response to previous DMARD therapy has been inadequate.

Use of XELJANZ in combination with biological disease-modifying anti-rheumatic drugs (bDMARDs) or with potent immunosuppressants such as azathioprine and cyclosporine is not recommended.

## ULCERATIVE COLITIS

<sup>Pr</sup>XELJANZ<sup>®</sup> (tofacitinib) is indicated for the treatment of adult patients with moderately to severely active ulcerative colitis (UC) with an inadequate response, loss of response or intolerance to either conventional UC therapy or a TNF $\alpha$  inhibitor.

Use of XELJANZ with biological UC therapies or with potent immunosuppressants such as azathioprine and cyclosporine is not recommended.

Consult the XELJANZ/XELJANZ XR Product Monograph at <http://pfizer.ca/pm/en/XELJANZ.pdf> for important information about:

- Contraindications during pregnancy and breastfeeding, and in patients with severe hepatic impairment.
- Most serious warnings and precautions regarding risk of serious infections, malignancies and thrombosis.
- Other relevant warnings and precautions regarding risk of infection and immunosuppression when co-administered with potent immunosuppressants, women of reproductive potential, hypersensitivity reactions, risk of viral reactivation, being up to date with all immunizations in accordance with current vaccination guidelines, live zoster vaccine, risk of malignancies, lymphoproliferative disorder, and nonmelanoma skin cancer, risk of lymphopenia, neutropenia, anemia, and lipid elevations, patients with hepatic and/or renal impairment, patients undergoing hemodialysis, liver enzyme elevations, patients with pre-existing severe gastrointestinal narrowing that are administered XELJANZ XR, patients with a risk or history of interstitial lung disease (ILD), pediatric patients, the elderly and patients with diabetes, patients with a history of chronic lung disease, lymphocyte counts, Asian patients, patients with risk of gastrointestinal perforation, increases in creatine kinase, decrease in heart rate and prolongation of the PR interval, patients that may be at an increased risk of thrombosis, patients with symptoms of thrombosis and dosing considerations in patients with ulcerative colitis (use XELJANZ at the lowest effective dose and for the shortest duration needed to achieve/maintain therapeutic response).
- Conditions of clinical use, adverse reactions, drug interactions and dosing instructions.

The Product Monograph is also available through our medical information department. Call 1-800-463-6001.

**For more information, contact your Pfizer representative.**

JAK = Janus kinase; PsA = Psoriatic arthritis; RA = Rheumatoid arthritis; UC = Ulcerative colitis  
\* Comparative clinical significance is unknown

References: 1. Pfizer Inc. Data on file. 2020. 2. Pfizer Canada ULC. XELJANZ/XELJANZ XR Product Monograph.



XELJANZ © / XELJANZ © XR PF Prism C.V., owner/Pfizer Canada ULC, Licensee  
© 2021 Pfizer Canada ULC, Kirkland, Quebec H9J 2M5

PP-XEL-CAN-0640-EN

