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Best Rheumatologist or Best-rated Rheumatologist?

By Philip A. Baer, MDCM, FRCPC, FACR

"I think people make way too much of ratings."

– Walter Cronkite

I've been mulling this topic for awhile. When RateMDs first appeared, I paid little attention, but my children did research it and offered to write me favourable reviews. What was more interesting was to see what was already there, without letting this external validation of sorts influence one's mood too much, either positively or negatively. Overall, my ratings were good, reflecting (I think) that I see one patient at a time, try to run on time, emphasize to my office staff that we are running a customer service business, and try to be what the mindfulness gurus call "present" or "in the moment." When I first started with an EMR, I had a negative comment about interacting too much with the computer. We solved that, at the cost of worse spinal posture, by rearranging my desk and computer monitors to better face the patient across my desk; no complaints since.

Another patient left enough clues in a negative review that I felt fairly confident I knew who had posted the entry. The main issue seemed to be that I had not found a diagnosable rheumatic disease. I carefully reviewed the information provided in the referral request, as well as the test results and my consult note, not uncovering any concerns. Validation came when the patient saw another rheumatologist, who ordered more investigations and copied me on their letter, also having found no significant disorder.

Dr. James Rosenbaum, an American rheumatologist and ophthalmologist, highlighted the importance of factors external to the physician's competence in a doctor's ratings.[1] He practices in two clinics, one where he is highly-rated (rheumatology) and one where he is not (ophthalmology). Dr. Rosenbaum explored factors known to produce negative physician ratings in American hospital settings: being seen by a resident versus an attending physician; being seen at a teaching hospital; and the patient's diagnosis, with fibromyalgia patients being less satisfied than those with other diagnoses. Patients who received tests and prescriptions which they wanted, even if those were medically inappropriate, were also more satisfied. With many American physicians having a portion of their pay based on patient satisfaction, these issues have become top of mind.

A study published recently in *JAMA Internal Medicine* confirmed this reality. This was a cross-sectional study of 1,141 adults making 1,319 office visits to 56 family physicians. Compared with fulfillment of the respective request type, denials of requests for referral, pain medication, other new medication, and laboratory tests were associated with worse patient satisfaction with the clinician.

In Canada, a recent CBC TV story[3] and a lead from a concerned Ontario rheumatology colleague led me to revisit RATEMDs.com. Amongst the interesting information online, I found out that the website is owned by Vertical-Scope Inc., which in turn is now owned by Torstar Corp., the parent of *The Toronto Star* newspaper, widely known to be no friend of physicians. The CBC story discussed what physicians with negative ratings could do to restore their reputations. This involved paying online "reputation management" firms, one of which is RATEMDs itself, a monthly fee to generate favourable reviews and hide unfavourable ones, or to push them lower onscreen and out of sight. The quoted RATEMDs fees for hiding up to three unfavourable comments range from $179 to $359 US per month. If you stopped paying the fees, the negative reviews would reappear. So this appears to be a smokescreen service, rather than a scrubbing service, with numerous ethical questions arising.

Meanwhile, back at my office, a rare patient mentions that they noted I had good online reviews, or that they wrote one about me. Most are oblivious, or at least not talking about the matter. Last time I looked, I was holding steady as either the #2 or #3 top-rated rheumatologist in Scarborough, for whatever that's worth. As the #1 rated rheumatologist is sadly deceased, and likely not going to accumulate any negative reviews in future, the only direction my rating can realistically go is down.

1. Rosenbaum JT. A Tale of 2 Physicians. The Rheumatologist, May 2014:8-9.
2. Jerant A et al. Association of Clinician Denial of Patient Requests With Patient Satisfaction. JAMA Intern Med 2018; 178(1):85-91. doi:10.1001/jamainternmed.2017.6611
3. Who's rating doctors on RateMDs? The invisible hand of 'reputation management.' Available at *https://www.cbc.ca/news/health/ratemds-privacy-reputation-management-1.4880831*. Accessed Oct. 31, 2018.

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Dr. Dafna Gladman – *American College of Rheumatology (ACR) Distinguished Clinical Investigator Award*

It is indeed an honour to have received the *Distinguished Clinical Investigator Award* from the ACR during the 2018 Annual Meeting. This award is given to a clinical scientist making outstanding contributions to the field of rheumatology. To be recognized by the ACR, which includes a large number of clinician-scientists, is humbling. This award was particularly impressive since Dr. Murray Urowitz received the same award last year, and the year before Dr. Claire Bombardier received the *Distinguished Clinician Scholar Award*. Thus, in these three consecutive years, Canadian rheumatologists received major awards from the ACR. Moreover, we are all from the same rheumatology division, the University Health Network/Mount Sinai Hospital.

AWARDS, APPOINTMENTS, AND ACCOLADES

The *CRAJ* would like to recognize the contributions of its readers to the medical field and their local communities. To have any such awards, appointments, or accolades announced in an upcoming issue, please send recipient names, pertinent details, and a brief account of these honours to *jyotip@sta.ca*. Picture submissions are greatly encouraged.

WELCOME TO THE RHEUM

Welcome to the following new members:

Ghaydaa Aldabie - Toronto, ON
Sam Aseer - St. John's, NL
Jean Jacques De Bruycker - Montreal, QC
Mayank Jha - Toronto, ON
Shannon Meilleur - Toronto, ON
Maithy Tran - Toronto, ON

CIORA Project Showcase

CANADIAN INITIATIVE FOR OUTCOMES IN RHEUMATOLOGY CARE | INITIATIVE CANADIENNE POUR DES RESULTATS EN SOINS RHUMATOLOGIQUES

By Janet Pope, MD, MPH, FRCPC

At the most recent CRA Annual Scientific Meeting in February, Drs. Barry Koehler, Inés Colmegna, and Regina Taylor-Gjevre presented their CIORA grant reports. In this issue's CIORA column, we'd like to share the three CIORA projects that were highlighted in Montreal. The projects were showcased to provide attendees an opportunity to hear about successful CIORA grants by both community and academic rheumatologists.

Self-assessment Triage in Inflammatory Arthritis: A Pilot Study

Presented by Dr. Barry Koehler

The study performed a comparison of a patient-completed questionnaire vs. a patient-completed tender joint count vs. the two combined, to evaluate whether patients with inflammatory arthritis can be identified from waiting lists. The study group feels that the use of preliminary studies, biostatistical advice before and during the study, and regular communication throughout the study were responsible for obtaining CIORA approval and for successful patient enrollment and data collection. A total of 202 evaluable subjects were enrolled and results are in the process of analysis.

What Do People Living with Rheumatoid Arthritis and Their Health-care Providers Consider Barriers or Facilitators for Influenza Vaccine Uptake?

Presented by Dr. Inés Colmegna

Influenza vaccine is effective. It prevents illnesses, reduces medical visits and hospitalizations, and decreases death rates due to influenza. The goals for influenza vaccine coverage suggested by the Public Health Agency of Canada are 80% for adults older than age 65 years and for those younger than 65 years living with high-risk conditions. However, a CIORA-funded cross-sectional study at McGill University Health Care Center found a 48.5% rate of vaccination coverage in rheumatoid arthritis (RA). Although this is above the reported rate (37%) for Canadian adults ≤ 65 years of age living with chronic medical conditions, there is a clear need and an opportunity to improve vaccination coverage among rheumatic patients.

At the national level, the advice of a health-care provider to people with chronic medical conditions was associated with vaccine uptake. However, 48% of patients with chronic conditions reported that their reason for not getting the influenza vaccine was that it was "not needed or recommended." Similarly, in our study, the MD recommendation was the strongest independent predictor of influenza vaccination among RA patients. This highlights our unique role as rheumatologists in improving vaccine uptake.

What are the barriers and facilitators to optimizing influenza vaccine uptake among RA patients? This is the central question that we addressed through qualitative research (focus groups) with the support of CIORA. Perceived barriers and facilitators of vaccine acceptance were similar in RA patients and their health-care providers. Main barriers included lack of knowledge, understanding, or misinformation regarding the need for the influenza vaccine. What interventions are effective in increasing vaccine acceptance in RA? This was the topic of a systematic review to inform the development of a targeted motivational communication intervention that we will test in the upcoming influenza season.

In summary, thanks to the generous support of CIORA we have defined the existence of a gap in influenza vaccine uptake among RA patients; identified reasons that patients and providers endorse related to that problem, and reviewed the limited existing evidence on interventions to enhance vaccine acceptance. Furthermore, we have developed a novel intervention based on motivational communication that will be tested in the 2019-2020 influenza season. From describing the magnitude of the problem, to proposing approaches to reduce its burden on RA patients, this has been an amazing learning opportunity.

Addressing Rural and Remote Access Disparities for Patients with Inflammatory Arthritis through Telehealth/Videoconferencing and Innovative Inter-professional Care Models

Presented by Dr. Regina Taylor-Gjevre

In Saskatchewan, there is a relatively high proportion of the provincial population who reside in isolated smaller communities. We undertook a study to evaluate whether rheumatoid arthritis patients followed longitudinally for nine months, using videoconferencing and inter-professional support, have comparable disease control to those followed in traditional in-person clinics.

Continued on page 7

What is the CRA Doing For You?

By Kevin Baijnauth, Communications Coordinator, CRA

With another successful Annual Scientific Meeting recently behind us, some members may not know that in addition to an outstanding learning and networking opportunity, this meeting presents a great opportunity for many of the Canadian Rheumatology Association (CRA) committee members to meet in person and discuss their work plans and goals for the year.

We have highlighted just a few initiatives for CRA members to look out for!

Podcast Project

In development by the Communications Committee, a CRA-endorsed podcast is being produced that will be chalk full of content of interest to our members. Stay tuned for more information in the coming months!

Competency-based Medical Education (CBME)

CBME is coming – and the Education Committee is looking to inform and educate CRA members about how to implement it into rheumatology training programs.

Curate, Create and Collaborate

The HR Committee has established a work plan for 2018-2020 which follows a framework of "Curate, Create and Collaborate." Some of their initiatives include a scoping review of workforce-related research, launching a 2020 Stand Up and Be Counted Survey, and exploring interprofessional collaboration opportunities, to name a few.

Guidelines

One of the Guidelines Committee's priorities is to support active groups in the completion of Rheumatoid Arthritis (RA) guidelines and the development of Spondyloarthritis (SpA) guidelines. The Quality Care Committee will also be working with the Guidelines Committee to ensure equity considerations are integrated into the RA and SpA guidelines.

Upcoming Position Statements

The Therapeutics Committee is looking to develop and communicate a position statement on stem-cell therapy, as well as disseminate the Biosimilars Position Statement to membership and industry partners.

And more!

All CRA operational committees are hard at work on their respective work plans for 2019; the above-noted activities highlight only a few of these initiatives. For more information and updates, please visit the News & Updates section on the CRA website at *www.rheum.ca*.

Kevin Baijnauth
Communications Coordinator,
Canadian Rheumatology Association (CRA)

CIORA Project Showcase *(Continued from page 6)*

Of 85 participants, 54 were randomized to the videoconferencing care model and 31 to the traditional clinic. There were no significant between-group differences in DAS28-CRP, RADAI, mHAQ or EQ5D scores at baseline or over the study period. Satisfaction rates were high in both groups.

At study completion, we found no difference in effectiveness between inter-professional videoconferencing care and a traditional rheumatology clinic. High drop-out rates reinforced the need for consideration of patients' needs and preferences. While use of videoconferencing/telehealth technologies may be a distinct advantage for some, there may be a loss of travel-related auxiliary benefits for others. The report on this study is currently published in the *Journal of Musculoskeletal Care*.

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Update on CanVasc Initiatives and the Consolidated Place of Canada in the International Vasculitis Research Field

By Christian Pagnoux, MD, MSc, MPH

The objectives of the Canadian Vasculitis network (CanVasc), when it was founded in 2010, were to optimize the care of patients with vasculitis in Canada by identifying centres with expertise and interest in vasculitis; to develop recommendations, educational and awareness programs for health care providers; promote and develop studies on vasculitis; and increase Canadian participation and recognition in the international vasculitis world.

Nineteen centres across Canada are now affiliated with CanVasc, with the recent addition of the Victoria, BC centre (Dr. C. Baldwin). More collaborators from various specialties have joined the CanVasc centres, including Dr. J.W. Cohen-Tervaert, an internationally renowned rheumatologist and immunologist, who has conducted and participated in many seminal studies of vasculitis and moved a couple of years ago from The Netherlands to Edmonton.

Results of several cohort studies or series from a few CanVasc centres have been published and involved Canadian or international vasculitis fellows (*e.g.*, L. McGeoch, M. Soowamber, M. Rhéaume), rheumatology or internal medicine residents, or medical students (*e.g.*, B. Russell). Other study projects are ongoing, and ideas for new ones are welcome.

Collaborations with the Vasculitis Clinical Research Consortium (VCRC), led by Dr. P.A. Merkel in the United States, have grown further. Toronto (Dr. S. Carette) and Hamilton (Dr. N. Khalidi) were the first centres, in 2006, to participate in this huge U.S. National Institutes of Health-funded network. A few other CanVasc centres, including Montreal, Ottawa, London, Calgary and Vancouver recently joined for some specific sub-studies, and others will. Of note, a few CanVasc core members are now leading some VCRC sub-studies. Dr. N. Milman (Ottawa) leads the newly launched VCRC longitudinal cohort study for isolated aortitis. Dr. C. Pagnoux (Toronto) leads the ongoing ARAMIS study, the second ever-conducted randomized trial for isolated skin vasculitis.

Many Canadian centres participated in the recently completed PEXIVAS study (assessing plasma exchange and steroid dosing in severe ANCA-associated vasculitis), led by Drs. M. Walsh, nephrologist and associated CanVasc core member in Hamilton, P.A. Merkel (VCRC) and D. Jayne (EUVAS). Several Canadian centres also took part in the pharma-sponsored studies on giant cell arteritis (GiACTA; study of tocilizumab) or EGPA (MIRRA; study of mepolizumab).

In parallel, CanVasc core members achieved important national, practice-oriented or educational projects. The first CanVasc recommendations, for the diagnosis and management of ANCA-associated vasculitis, were published in 2016, and the process of updating them has just begun, with Dr. A. Mendel, current vasculitis fellow in Toronto and future staff rheumatologist in Montreal. Several systematic reviews of various aspects of the management of Takayasu arteritis have been published by the groups of Dr. L. Barra (London, ON) and Dr. E. Yacyshyn (Edmonton), and others are ongoing, including on giant cell arteritis (Dr. P. Liang's group, Sherbrooke).

In total, 400 books of the first edition of CaVALI (Canadian VAsculitis Learning Initiative) were distributed, free-of-charge, across Canada, to CanVasc members, fellows and residents. This unique tool includes real-life case-scenarios, with practical questions and answers. A second edition, entirely updated, is in press; 800 books will be printed, for core members to distribute in their centres. The electronic version will be available in fall 2019 on the CanVasc website, where various teaching or conference presentations by core members are already available.

Hence, core members can be proud of what they have accomplished or participated in. Several new projects are ongoing, and collaborations will be expanding. There are

persistent challenges, some with no clear solution yet, such as assuring the funding of future CanVasc activities, or the need to develop more original, multicentre, institution-driven studies, especially when a nation-wide, centralized process for ethics approvals is still lacking. All hands on deck!

References:

1. Baldwin C, Carette S, Pagnoux C. Linking classification and therapeutic management of vasculitides. Arthritis Res Ther 2015; 17:138.
2. Barra L, Kanji T, Malette J, Pagnoux C, CanVasc. Imaging modalities for the diagnosis and disease activity assessment of Takayasu's arteritis: A systematic review and meta-analysis. Autoimmun Rev 2018; 17:175-87.
3. Barra L, Liang P, Benseler SM, et al. Variations in the clinical practice of physicians managing Takayasu arteritis: a nationwide survey. Open Access Rheumatol 2017; 9:91-9.
4. Barra L, Yang G, Pagnoux C, CanVasc. Non-glucocorticoid drugs for the treatment of Takayasu's arteritis: A systematic review and meta-analysis. Autoimmun Rev 2018; 17:683-93.
5. Barra L, Borchin RL, Burroughs C, et al. Impact of vasculitis on employment and income. Clin Exp Rheumatol 2018; 36 Suppl 111:58-64.
6. McGeoch L, Twilt M, Famorca L, et al. CanVasc Recommendations for the Management of Antineutrophil Cytoplasm Antibody-associated Vasculitides. J Rheumatol 2016; 43:97-120.
7. McGeoch L, Carette S, Cuthbertson D, et al. Cardiac involvement in granulomatosis with polyangiitis J Rheumatol 2015; 42:1209-12.
8. Osman M, Pagnoux C, Dryden DM, et al. The role of biological agents in the management of large vessel vasculitis (LVV): a systematic review and meta-analysis PLoS One 2014; 9:e115026.
9. Pagnoux C, Nair P, Xi Y, et al. Serum cytokine and chemokine levels in patients with eosinophilic granulomatosis with polyangiitis, hypereosinophilic syndrome, or eosinophilic asthma. Clin Exp Rheumatol 2019.
10. Rheaume M, Rebello R, Pagnoux C, et al. High-resolution magnetic resonance imaging of scalp arteries for the diagnosis of giant cell arteritis: Results of a prospective cohort study. Arthritis Rheumatol 2017; 69:161-8.
11. Russell BA, Mohan S, Chahal R, Carette S, Pagnoux C, CanVasc. Prognostic significance of cavitary lung nodules in granulomatosis with polyangiitis – A clinical and imaging study of 225 patients. Arthritis Care Res (Hoboken) 2017.
12. Stone JH, Tuckwell K, Dimonaco S, et al. Trial of Tocilizumab in Giant-Cell Arteritis. N Engl J Med 2017; 377:317-28.
13. Soowamber M, Weizman AV, Pagnoux C. Gastrointestinal aspects of vasculitides. Nat Rev Gastroenterol Hepatol 2017; 14:185-94.
14. Walsh M, Merkel PA, Peh CA, et al. Plasma exchange and glucocorticoid dosing in the treatment of anti-neutrophil cytoplasm antibody associated vasculitis (PEXIVAS): protocol for a randomized controlled trial. Trials 2013; 14:73.
15. Wechsler ME, Akuthota P, Jayne D, et al. Mepolizumab or placebo for eosinophilic granulomatosis with polyangiitis. N Engl J Med 2017; 376:1921-32.

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What is the Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus (CaNIOS)?

By Christine Peschken, MD, MSc, FRCPC

The Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus (CaNIOS) is a group of investigators from across Canada who come together to do lupus research. Not all members participate in every project, and projects include collaborations with international researchers or other investigators outside the network.

The core of CaNIOS is our National Lupus Registry. With generous support from Lupus Canada we have developed a sophisticated, user friendly web-based platform, to replace the earlier 1000 Faces platform. As of December 2018, the registry included 650 lupus patients, and is growing rapidly. More than one quarter of these patients are newly diagnosed patients; these afford us the best opportunity for long-term follow-up with high quality data. We have also been working with an analyst to amalgamate the data from the previous registry with the new CaNIOS registry. This will increase the number of patients in the registry to more than 2,000 with exciting new possibilities for answering research questions. We review summary data at the annual investigators meeting, which allows us to examine trends in lupus manifestations, demographics and disease activity, and generates new research questions.

We recently published a paper outlining longitudinal disease activity in our CaNIOS lupus patients ("Persistent Disease Activity Remains a Burden for Patients with Systemic Lupus Erythematosus; *Journal of Rheumatology* 2018"). In this paper we showed that even after many years of disease, 35% of lupus patients still had active lupus, and a very high proportion of patients were taking glucocorticoids at significant doses to maintain disease control. This highlights the ongoing burden of lupus and the need for better treatment.

CaNIOS members are part of the MyLupusGuide, led by Dr. Paul Fortin, a project developed to provide up-to-date information and access to appropriate resources for persons with lupus and their healthcare providers. CaNIOS sites were and are involved in the development and testing of the application, and will be part of the disseminating process as well. It is funded by the Canadian Institutes of Health Research (CIHR) with support from Lupus Canada.

This project demonstrated the ability to reach many patients through CaNIOS; more than 1,500 patients were approached through CaNIOS investigators to participate in various stages of the project. This project is set to launch at the Lupus Canada Gala in May 2019 in Toronto.

CaNIOS sites are participating in Dr. Ann Clarke's economic analyses of the cost of systemic lupus erythematosus (SLE). This project is a large international collaboration to examine the cost of lost productivity in lupus patients. Dr. Clarke's healthcare utilization questionnaire is now also included in the CaNIOS registry.

The CaNIOS registry data, both the old and the new data sets, are being used to better understand the risk of eye toxicity associated with hydroxychloroquine, and understand the risks of lupus flare if hydroxychloroquine is stopped. This information will then be linked to an ongoing project to better understand patient preferences in decision-making with respect to hydroxychloroquine. This project is led by Drs. Sacha Bernatsky and Glen Hazelwood, and is funded by the CIHR.

In summary, we have lots on the go, and welcome new members and new sites!

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The Canadian Inflammatory Myopathy Study (CIMS)

By Valérie Leclair, MD, FRCPC; Océane Landon-Cardinal, MD, FRCPC; and Marie Hudson, MD, FRCPC

Map of CIMS sites

Recruiting MDs
Vancouver, BC
Dr. Antonio Avina-Zubieta
Dr. Kun Huang

Recruiting MDs
Edmonton, AB
Dr. Stephanie Keeling
Dr. Cecile Phan

Biorepository
Calgary, AB
Dr. Marvin Fritzler

Recruiting MDs
Winnipeg, MB
Dr. Annaliese Tisseverasinghe

Recruiting MDs
London, ON
Dr. Pari Basharat
Dr. Shannon Venance

Ottawa, ON
Dr. Ines Midzic

Hamilton, ON
Dr. Maggie Larché

Recruiting MDs
Montreal, QC
Drs. Marie Hudson and Valérie Leclair (JGH)
Dr. Evelyne Vinet (MUHC)
Drs. Josiane Bourrée Tessier,
Océane Landon-Cardinal and Sabrina Hoa (CHUM)

Sherbrooke, QC
Dr. Ariel Masetto

Quebec City, QC
Dr. Alexandra Albert
Dr. Paul Fortin

Our understanding and management of autoimmune myopathies (AIM) appears to be at a crossroad. Significant progress has been made, but much more is yet to be achieved. However, the rarity and heterogeneity of AIM makes research in this field challenging. Building on Canada's strong history of collaborative research in rheumatology, we created the Canadian Inflammatory Myopathy Study (CIMS) to overcome these challenges and make meaningful contributions to this fascinating field.

The strengths of this study include: 1) a prospective, longitudinal and multi-centered inception cohort; 2) a multi-disciplinary team with highly qualified junior faculty members who have completed myositis fellowship training in the U.S. and Europe, as well as expertise in a wide variety of disciplines, including pathology, respirology, and radiology; 3) the participation of basic scientists to pursue translational opportunities; and 4) well-developed relationships with professional and patient organizations to disseminate knowledge.

The data collection protocol includes a number of forms developed by the International Myositis Assessment and Clinical Studies (IMACS) at the NIH to facilitate international collaborations. Serum is collected at baseline and annually, and stored in Calgary. Muscle biopsies are read centrally in Montreal. CIMS currently has 11 sites (Figure 1) and more than 140 subjects, some with up to five years of follow-up. To date, several research projects have been undertaken relating to health-related quality of life, use of intravenous immunoglobulin (IVIG), myositis-associated-interstitial lung disease, nailfold videocapillaroscopy, screening for malignancy and novel antibodies. Funded by a CIORA grant, CIMS is also developing capacity to participate in randomized clinical trials of myositis.

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The Canadian Scleroderma Research Group (CSRG)

By Murray Baron, MD, FRCPC

The Canadian Scleroderma Research Group (CSRG) was founded in 2004 and has now recruited over 1,600 patients and published about 150 articles. These papers have included studies of antibodies, which have depended on performing analyses on sera that have been stored at Dr. Marvin Fritzler's lab in Calgary. We have also used our biospecimens to collaborate on work done in other laboratories in Canada and the United States, including participating in a large genome-wide association study (GWAS).

In recent years we have expanded to collaborate with other countries on our papers. We have published several articles with the Australian group, including assessing mortality in an inception cohort with short disease duration. This has been under-studied because of the rare nature of the disease. In fact, this led to the creation of the International Systemic Sclerosis Inception Cohort (INSYNC), which we created with collaborators in Australia, the U.S., Holland, Sweden, Germany and Spain. This will allow us to study early disease and will fill an important gap as the mean disease duration of the larger cohorts in the world is about 10-12 years.

Our data were important to the development of the 2013 Classification Criteria for Systemic Sclerosis and was needed to generate these new criteria. Our data were also recently used to develop the American College of Rheumatology Provisional Composite Response Index for Clinical Trials in Early Diffuse Cutaneous Systemic Sclerosis (CRISS), which may become an important primary outcome measure for new trials in scleroderma.

Recently, because we expect a rise in demand for autologous hematopoietic stem-cell transplants for scleroderma, we have convened a large group of interested rheumatologists, hematologists, patients and other researchers to plan how to proceed in Canada with these transplants. We had a meeting with more than 40 interested participants in the spring of 2018, and another is planned for this spring. We will develop details of the transplant regimens to be used and a new set of inclusion/exclusion criteria. We have brought the Australian Scleroderma Interest Group on board for this project, and the development of these new criteria is well underway. In fact, we will use the CSRG/INSYNC database to record patient data before and after the transplants in Canada, Australia and several of the INSYNC countries, and will thus be able to collect prospective data on the results of the transplants.

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The Canadian Inflammatory Myopathy Study (CIMS) *(Continued from page 10)*

Myositis research registries like CIMS have the potential to greatly improve our understanding of AIM and to facilitate discovery research. In addition, there are exciting opportunities to practice precision medicine in the field of AIM. By contributing to and sharing new knowledge, CIMS will promote world-class care for Canadian AIM patients.

If you would like to know more about CIMS, refer patients or even consider participating, please contact Dr. Marie Hudson at *marie.hudson@mcgill.ca.*

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Update from CRUS

By Michael Stein, MD, FRCPC

The Canadian Rheumatology Ultrasound Society (CRUS) began ten years ago in response to the emergence of the worldwide influence of sonography in rheumatic diseases. Since 2010, CRUS has functioned as a not-for-profit institution with the central mandate of educating Canadian rheumatologists in all aspects of clinical sonography as well as focusing on research and certification.

The CRUS yearly basic sonography course has introduced sonography to more than 250 learners since 2010. This unique course, held over two weekends, has been taught by Canadian and international experts, combining cadaveric anatomy instruction with hands-on sonography and instructor-reviewed homework. The course has been held in Hamilton until this year, when it moved to Toronto.

CRUS also hosts a successful yearly cadaver injection course (taking place after the CRA meeting), as well as several one-day sonography updates held across the country. Our sonographers have participated in national and international workshops, courses and studies for all levels of Canadian trainees and have been involved with the Outcome Measures in RheumAtology Clinical Trials (OMERACT), the American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR). CRUS members have had many podium and poster presentations and have influenced sonography worldwide. CRUS holds a yearly research competition with a $10,000 award. We are in the process of obtaining a diploma certificate from the Royal College of Physicians and Surgeons of Canada with the intent of establishing a one-year sonography fellowship.

CRUS is made up of rheumatologists from across Canada who are passionate about sonography. Many people have contributed to the initiation and ongoing success of CRUS including (in no particular order) Abe Chaiton, Johannes Roth, Maggie Larché, Diane Wilson, Chris Lyddell, David Collins, Alessandra Bruns, Maria Bagovich, Chris Penney, Susan Barr, Lihi Eder and Shirley Lake. We would not function without the excellent administrative skills of Ms. Alyssa Long and our webmaster, Mr. Kevin Firko. We are indebted to AbbVie as a founding and continuing sponsor as well as Amgen, BMS, Esaote, Janssen, General Electric, Lilly, Merck, MiSource, Novartis, Pfizer and Siemens for their ongoing support.

The mighty CRUS executive.

Sonography guided injection course.

CRUS has accomplished a lot in its first 10 years. Though we are small, we have a large footprint. CRUS members have had a significant contribution to the academic literature, especially in the domains of pediatric and entheseal sonography. In the upcoming years, we believe that CRUS will continue to be a leading innovator in education and clinical research and participate in a big way on the national and international stage. Our newly designed website, *crus-surc.ca*, has lots of information regarding our activities and upcoming events. Check it out and join! Membership is free!

Michael Stein, MD, FRCPC
Assistant Professor of Medicine,
McGill University
CRUS President,
Montreal, Quebec

The Spondyloarthritis Research Consortium of Canada: Year in Review

By Sherry Rohekar, MD, FRCPC

The Spondyloarthritis Research Consortium of Canada (SPARCC) is continuing its mission to improve the health of spondyloarthritis (SpA) patients in Canada. SPARCC is a trans-disciplinary national research program that continues to foster innovation in SpA research. In 2018, SPARCC had three core investigative sites and 11 collaborating sites, and the dataset reached an impressive 5,656 patients who are being followed annually.

SPARCC is currently involved in several exciting genetic studies. Current investigations include identification of pharmacogenomics in psoriatic arthritis (PsA), identification of rare variants for extreme phenotypes, and single nucleotide polymorphism (SNP)-based algorithms to identify individuals who are at high risk of developing PsA or axial SpA.

Investigators in Toronto are examining the gut-joint interface in AS, as well as defining the risks and benefits of interrupting tumor necrosis factor (TNF) inhibition in patients with non-radiographic axial SpA. The SPARCC team is also achieving high profile for the application of cutting-edge imaging and bioinformatics to understand the origins of chronic pain in ankylosing spondylitis (AS). Excitement is also building in research regarding the innate immune cytokine MIF (macrophage migration inhibitory factor) which has the potential to be a new biomarker for radiographic progression in AS.

In PsA, investigators are working to define axial disease, examine mortality, remission, and malignancy rates.

SPARCC, in conjunction with the Canadian Rheumatology Association, is also in the process of updating Canadian treatment recommendations for the management of SpA. The last recommendations were written five years ago, and the treatment landscape in SpA has changed rapidly in that time.

In keeping with its mandate to foster innovation in SpA research, SPARCC funded four projects through its research pilot program in 2018 (see table below).

SPARCC also continues to work with the Canadian Spondyloarthritis Association (CSA) to improve patient education. A live patient forum in AS was held November 13, 2018, and was also videotaped and livestreamed on YouTube. More than 150 participants attended talks regarding therapy, the impact of chronic illness on mental health, and concepts in pain management.

The year 2019 also promises to be exciting for SPARCC. Fellows and early-career clinicians are encouraged to attend the SPARCC Research Fellows Training Day in Toronto on May 3, 2019. If you are interested in attending, please email Maria Morales at *maria.morales@uhnresearch.ca* – space is limited!

We will also have another call for pilot projects, which will allow us to fund three-to-four research proposals for up to $25 000 each. Important dates include:

- Application deadline: April 30, 2019
- Notice of decision: May 10, 2019
- Funding start date: July 1, 2019

The full details of this initiative and application guidelines may be found by visiting the following link: *www.sparcc.ca/grants*. Applications may be sent to Maria Morales at *maria.morales@uhnresearch.ca* or via fax (416-603-9387) or telephone (416-603-5800 ext. 5093). For further details, visit *www.sparcc.ca*.

We welcome anyone with an interest in SpA research to collaborate with our team. Please contact us if you would like more information. Together, we can improve outcomes for our SpA patients.

Sherry Rohekar, MD, FRCPC
President, Spondyloarthritis Research Consortium of Canada
Associate Professor, Western University
London, Ontario

Investigator/Affiliation	Project Title
Dr. Ejaz Mohammed Ishaq Pathan, Spondylitis Program, University Health Network Co-Investigators: Drs. N. Haroon and V. Chandran Award: $25,000	Macrophage Migration Inhibitory Factor as a Prognostic Biomarker of Radiographic Progression in Psoriatic Arthritis
Dr. Lihi Eder, Women's College Research Institute Co-Investigator: Dr. P. Rahman Award: $24,500	Genetic Testing and Musculoskeletal Ultrasound to Improve Early Detection of Psoriatic Arthritis in Patients with Psoriasis
Dr. Sibel Zehra Aydin, University of Ottawa Co-Investigators: Drs. D. Solmaz and J. Karsh Award: $24,600	Accuracy of Physical Examination to Detect Synovial and Extra Synovial Pathologies in Psoriatic Arthritis in Comparison to Ultrasonography as the Gold Standard
Dr. Jonathan Chan, University of British Columbia Co-Investigators: Drs. A. C. L. So and A. Avina-Zubieta Award: $10,000	Validation of Administrative Billing Codes for the Diagnosis of Axial Spondyloarthritis

The Scleroderma Patient-centred Intervention Network (SPIN): An Innovative Cohort-Based Initiative for Scleroderma

By Claire Fedoruk; Marie-Eve Carrier; Linda Kwakkenbos; and Brett D. Thombs

Scleroderma is a rare autoimmune disease characterized by the hardening of connective tissues, which can substantially damage the skin, blood vessels, muscles, and internal organs. Common problems include limitations in hand function and mobility, pain, fatigue, and emotional distress from disfiguring aspects of the disease, among other challenges.

Although rare diseases collectively affect one in 12 Canadians, the small number of patients at any given location is a barrier to developing and testing disease-specific support programs. Thus, people with scleroderma and other rare diseases must often cope without the kind of support programs that are generally available to people with more common diseases.

To develop and rigorously test patient programs in a rare-disease context, SPIN maintains a cohort of more than 1,800 scleroderma patients, who complete quarterly online assessments that help the SPIN team to understand their challenges and support needs. SPIN cohort patients are recruited by rheumatologists and other scleroderma health professionals from 40 clinical centres in seven countries.

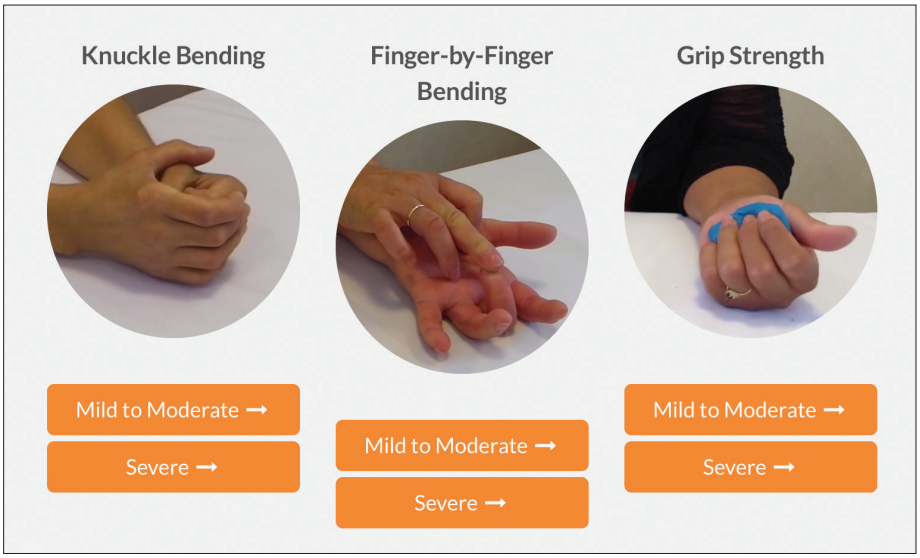
The SPIN cohort also serves as an infrastructure for conducting clinical trials of SPIN's online support programs. Each program addresses a problem that scleroderma patients have identified as important, with programs currently in development to support:
(1) disease self-management;
(2) hand function;
(3) emotional coping and;
(4) body image distress.

The SPIN Cohort

1,807 scleroderma patients

7 countries

40 clinical recruiting sites



SPIN's first online program provides rehabilitation exercises to support hand function in people with scleroderma.

Continued on page 15

The Rheumatoid Arthritis Pharmacovigilance Program and Outcomes Research in Therapeutics (RAPPORT)

By Walter P. Maksymowych, MD, FRCPC

The Rheumatoid Arthritis Pharmacovigilance Program and Outcomes Research in Therapeutics (RAPPORT) Prospective Inception Cohort became operational in 2004 with two primary aims:

A. To enhance the education and care of patients receiving biologics for the treatment of rheumatoid arthritis and;

B. To systematically capture data on the safety, effectiveness, and cost-benefit of treatment with biologics.

The program was launched province-wide with the same database at the Universities of Alberta and Calgary. Since then, the program has accumulated data on almost 3,000 patients from both academic and community-based practices, expanded the scope of patient-care activities to include routine vaccination and management of disease-related comorbidities, and embraced patients receiving an ever-expanding array of complex therapies for rheumatoid arthritis. Efficacy outcomes are those routinely employed in clinical trials while safety has been systematically assessed using the Outcome Measures in RheumAtology Clinical Trials (OMERACT) framework. Cost-benefit analysis has been possible because of a unique linkage between outcomes captured in the clinic and administrative data provided by Alberta Health and Wellness. A major finding of analyses from the RAPPORT database has been the extraordinary health-care expenditures incurred in the management of both RA-related and non-RA-related comorbidities, especially in patients failing treatment with their first biologic. Conversely, this analysis has also shown dramatic reductions in health-care utilization related to surgery, outpatient costs, physiotherapy, and in-patient stays in patients who do respond to treatment.

Two recent enhancements to the program have included direct online data entry on a tablet PC by patients at the time of the clinic visit and provision of real-time outcomes data for the attending rheumatologist to enhance treat-to-target management strategies. The program has been possible and continues to be successful because of the dedication and expertise of our allied health professionals. It will continue to grow because it has clearly been shown to serve a vital need for our patients and health care providers.

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The Scleroderma Patient-centred Intervention Network (SPIN) *(Continued from page 14)*

The first of SPIN's online programs will be available free-of-charge to the public in 2019. SPIN also recently pilot tested a videoconference-based program to provide training and resources for scleroderma peer support group leaders.

For information about getting involved with SPIN Cohort recruitment and/or research, please consult SPIN's website (*www.spinsclero.com*) or email *spin@jgh.mcgill.ca*.

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Montreal, Quebec

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XELJANZ/XELJANZ 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.[1]

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

- Most serious warnings and precautions regarding risk of serious infections and malignancies.
- Other relevant warnings and precautions regarding patients with pre-existing severe gastrointestinal narrowing that are administered XELJANZ XR, risk of gastrointestinal perforation, risk of viral reactivation, risk of malignancies, lymphoproliferative disorder, and nonmelanoma skin cancer, risk of lymphopenia, neutropenia, anemia, and lipid elevations, patients with hepatic and/or renal impairment, caution in patients with a risk or history of interstitial lung disease (ILD), risk of infection and immunosuppression when co-administered with potent immunosuppressants, being up to date with all immunizations, live zoster vaccine, pregnant and nursing women, pediatric and geriatric patients, the elderly and patients with diabetes, patients with a history of chronic lung disease, lymphocyte counts, Asian patients, increases in creatine kinase, decrease in heart rate and prolongation of the PR interval, and liver enzyme elevations.
- Conditions of clinical use, adverse reactions, drug interactions and dosing instructions.

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JAK = Janus kinase;
QD = Once daily
* Comparative clinical significance is unknown
† Prescription and physician data were obtained from eXel™ support program enrollment forms collected from June 2014 to April 2018

References:
1. Pfizer Canada Inc. XELJANZ/XELJANZ XR Product Monograph. December 11, 2017.
2. Health Canada. XELJANZ XR Notice of Compliance information.
3. Pfizer. Data on file. 2018.
4. Health Canada. XELJANZ Notice of Compliance information.

Pr XELJANZ® (tofacitinib citrate) 5 mg tablets

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PP-XEL-CAN-0278-EN

The Ontario Best Practices Research Initiative (OBRI)

By Claire Bombardier, MD, FRCPC, Principal Investigator (OBRI); and Vandana Ahluwalia, MD, FRCPC, Investigator (OBRI)

Who We Are

The Ontario Best Practices Research Initiative (OBRI) *(www.obri.ca)* is a clinical cohort of rheumatoid arthritis (RA) patients in Ontario on whom data has been collected from routine care since 2008. This cohort also serves as an adaptable interdisciplinary collaborative data platform involving rheumatologists, researchers, and patients for current and future research questions.

Objective

Our objective is to collect observational data from usual clinical practice on the use, safety, effectiveness, and delivery of medications and health care processes for RA patients. In partnership with 71 rheumatologists (half community and half academic), 3,800 RA patients have been recruited from across Ontario. In addition to primary data collection at rheumatology practices, RA patients enrolled in the OBRI also consent to data linkage with a health care billing database at the Institute for Clinical Evaluative Sciences (ICES –*www.ices.on.ca*). OBRI-linked data allows comparisons between RA patients, the general population, and those with other inflammatory diseases (see Figure 1).

Impact

Since 2008, the OBRI has grown in size from 500 to 3,800 patients (+688%) and from 18 to 71 investigators (+294%). In the same time period, the OBRI has produced over 200 abstracts and 15 peer-reviewed publications supporting the effective care of RA patients. As a data platform, the OBRI has partnered with ICES administrative data (175,000 RA patients), and looks forward to future collaborations with other national and international cohorts to answer new, innovative research questions concerning RA patients in usual care.

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Former Corporate Chief of Rheumatology,
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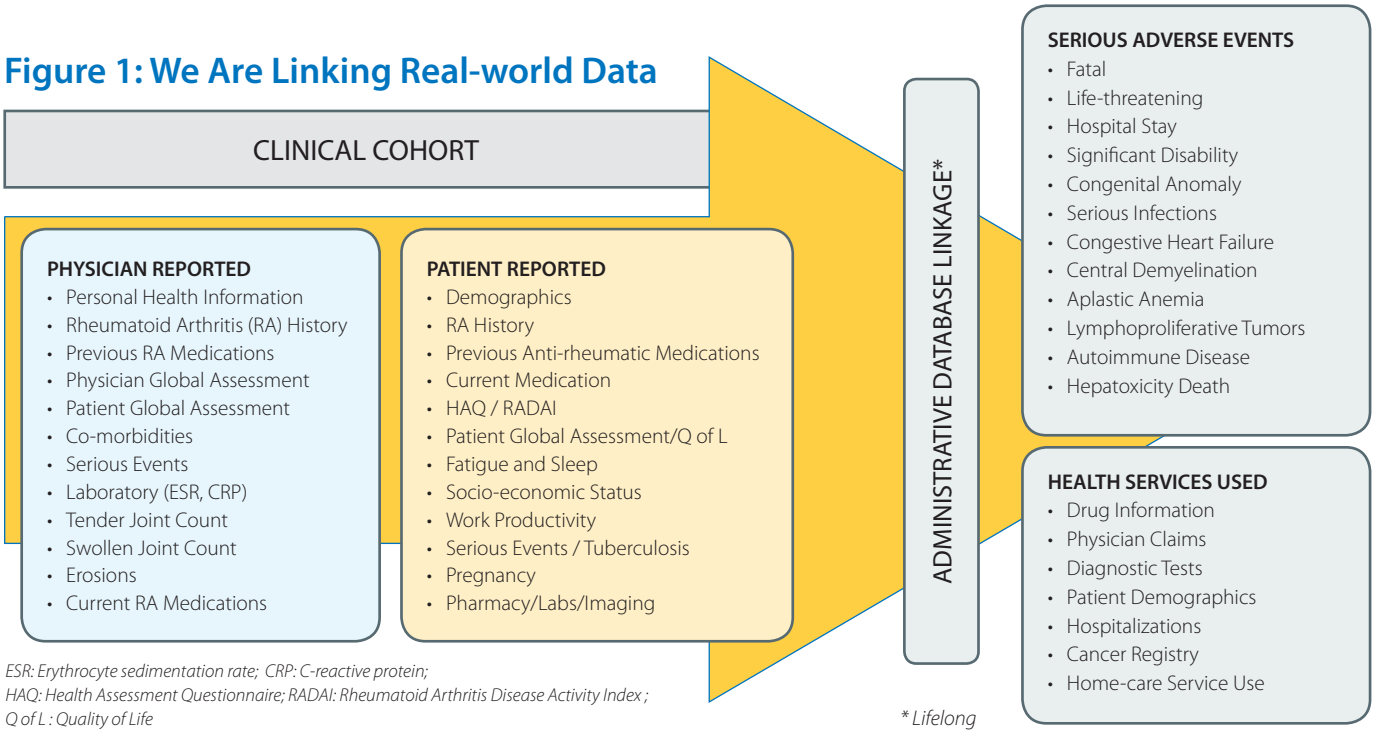
Figure 1: We Are Linking Real-world Data



ESR: Erythrocyte sedimentation rate; CRP: C-reactive protein; HAQ: Health Assessment Questionnaire; RADAI: Rheumatoid Arthritis Disease Activity Index ; Q of L : Quality of Life

** Lifelong*

Rheum4U

By Dianne Mosher, MD, FRCPC

Rheum4U is a bespoke on-line data capture system designed by a research team in the Division of Rheumatology at the University of Calgary, in consultation with clinicians and patients, and developed by the Epidemiology Coordinating and Research (EPICORE) Centre. It was implemented in August 2016 and is now used by patients and clinicians in two Calgary Rheumatology Clinics. Rheum4U tracks and enables measurement of patient, clinic, and system outcomes over time.

Participating patients use Rheum4U to complete online questionnaires regarding health history, functional assessment, quality of life, and work productivity up to one week prior to each clinic visit. Clinicians use Rheum4U to record patient information including diagnosis, vitals, blood test results (erythrocyte sedimentation rate [ESR] or C-reactive protein [CRP]), physician global, swollen/tender joint counts, and medications. After the visit, patients use Rheum4U to complete a questionnaire regarding their patient experience.

From August 2016 to April 2017, 131 patients with rheumatoid arthritis (RA) contributed data to Rheum4U as part of a successful pilot study.[1] Recruitment and data collection through Rheum4U now continues in support of an ongoing quality improvement research project (> 900 participants). Additionally, Rheum4U has, to date, supported recruitment or data collection for five other studies led by researchers from rheumatology, community health sciences, radiology, and gastroenterology. In Q1 2019, Rheum4U will expand to actively support data collection for the Precision Health Registry for Inflammatory Arthritis.

Critical to the ongoing success of Rheum4U is the recruitment and data collection support provided by dedicated research coordinator staff and its integration within pre-established clinic processes.

Reference

1. Barber CEH, Sandhu N, Rankin JA, MacMullan P, Marshall DA, Barnabe C, Hazlewood GS, Emrick A, Stevenson M, Then KL, Benseler S, Twilt M, Mosher D. Rheum4U: Development and testing of a web-based tool for improving the quality of care for patients with rheumatoid arthritis. Clin Exp Rheumatol 2018; [Epub ahead of print].

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The Drug Safety and Effectiveness Network (DSEN)

By Sasha Bernatsky, MD, PhD

The CAnadian Network for Advanced Interdisciplinary Methods for comparative effectiveness research (CAN-AIM) is a pan-Canadian, highly interdisciplinary network of researchers working together to provide real-world information about drug safety and effectiveness for policymakers. Funding is provided by the Canadian Institute of Health Research (CIHR) through the Drug Safety and Effectiveness Network, which works with Health Canada and other decision-makers to respond to key knowledge gaps regarding comparative drug safety and effectiveness. The CAN-AIM team (PIs S. Bernatsky, M. Abrahamowicz, L. Pilote) responds to queries which arise from Health Canada and other regulatory parties. These focus on drug safety and effectiveness, drug use patterns, as well as patient preferences, prescription patterns and social media.

CAN-AIM was recently funded to build a biologic registry with the intent of providing real-world information comparing the safety and effectiveness of biosimilar drugs versus their originator biologic drugs. Our five-year study includes adults (aged 18 years and older) with inflammatory rheumatic disease or inflammatory bowel disease (primarily rheumatoid arthritis [RA] and ankylosing spondylitis [AS]) who are initiating therapy with a biosimilar or the originator biologic drug. The primary outcome measure is simply maintenance of treatment, but we will also collect information on start/stop/changes in systemic steroids and immunosuppressive drugs, disease control, and adverse effects, particularly infection. Multiple investigators are involved, including D. Choquette, W. Maksymowych, G. Boire, V. Bykerk, R. Inman, C. Bombardier, C. Hitchon and C. Thorne. For more information on our team or the biosimilars registry, please contact Autumn Neville at *autumn.neville@rimuhc.ca* or visit *canaim.ca*.

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Catch Up on the CATCH Cohort's Successes

By Vivian Bykerk, MD, FRCPC; and Janet Pope, MD, MPH, FRCPC

The Canadian Early Arthritis Cohort (CATCH) Study is a national initiative that was established in 2007 by investigators with the aim of improving the lives of patients with new-onset rheumatoid arthritis (RA). This is a prospective longitudinal observational cohort study of participants with incident RA who are followed for outcomes of disease activity, symptoms, and other patient-valued measures. Data are captured systematically at specific expected clinical encounters each year (every three months for the first year, every six months in the second year and then annually). The CATCH investigator group, which rapidly grew to up to 22 investigative sites, has in the last 12 years recruited over 3,500 people, and captured data on over 10,000 patient years of follow-up. More than 400 patients have bio banked samples, scored serial radiographs, and 1,000 patients have more than five years of follow-up. The investigators have published more than 40 manuscripts and presented more than 200 abstracts at Canadian and international meetings. In order to share the knowledge gleaned from this study we developed a website for patients and providers (*www.earlyarthritis.ca*) to learn more about our work.

CATCH rheumatologists aim to meet treatment targets and to increase the number of patients who achieve sustained remission (or, if not possible, low disease activity) by one year (and earlier). Since the Canadian Rheumatology Association (CRA) recommendations in RA were disseminated, we have seen an increase in those who achieve this. Now 60% achieve this target. This, in part, can be attributed to optimized use of medication, and adherence to recommendations. More patients are now using subcutaneous methotrexate or triple therapy as their first therapeutic strategy, which appears to be leading to improved outcomes compared to seven years ago.

CATCH investigators are also focusing their efforts to ensure that more patients have timely access to care. Given the referral process in most provinces it is unusual for patients to be seen before three months of persistent symptoms and the mean persistent symptom duration at study entry is still 5.8 months. Collaborations with external researchers to enhance models of care will include targeting earlier access to care.

Recently the electronic data capture platform has been upgraded allowing easier means to survey patients via mobile devices and to more readily enter clinician-based measures. This has allowed us to integrate the patient voice, capturing RA-related symptoms, mood, adherence, and other quality of life measures at the time of their clinical encounters. For instance, the CATCH patients contributed to validating the flare questionnaire which is now published.

We now have extensive clinical phenotypic data that allows us to examine the patient perspective, perform qualitative studies, and real-world drug evaluation. Investigators have partnered with external research groups including CAN-AIM, a subsidiary of the drug safety and evaluation network (DSEN) of Health Canada (see article in this issue on page 19), the Arthritis Alliance of Canada and the CRA to study the comparative effectiveness and safety and use of medication and models of care. We hope to continue to build partnerships and bridges with other stakeholders to study administrative data and health economics, enabling us to better understand patterns of health and health care in our patients, particularly given the high number of comorbidities in this population. Our goal over time is also to integrate translational studies using collected biological specimens that will allow sequencing studies to look at genetic associations and immunophenotyping.

In the coming year, this valuable national research platform will be the cornerstone of an important Canadian Institutes of Health Research (CIHR)-funded pragmatic trial of treatment tapering guided by both patients and clinicians, with the aim of reducing therapy without causing excessive RA flare. We are also participating in a national initiative to examine the use of biosimilars, and an initiative to study models of care as already mentioned.

In summary, the CATCH study could not be possible without the 3,500 (and growing) patient participants, over 100 rheumatology team members, clinicians, researchers and scientists. This study has been a successful national initiative, funded by multiple stakeholders including pharmaceutical companies and grants, that has grown over 12 years. We anticipate much more can be learned from studying early RA in Canada using the CATCH platform.

Continued on page 28

Power in Numbers – Research Success as a Cluster

By Cheryl Barnabe (CB1), MD, FRCPC, MSc; Glen Hazlewood (GH), MD, FRCPC; Claire Barber(CB2), MD, PhD, FRCPC; May Choi, MD, FRCPC; and Dianne Mosher, MD, FRCPC

The landscape of research funding has evolved in Canada over the last decade with changes in the priorities and suites of funding programs available. Clinician-scientists are faced with increasing competitive pressures with low success rates in funding, while trying to balance clinical and educational duties. Trainees interested in a career in academia are expected to pursue additional advanced fellowship training (*i.e.* 15-18 years or more of training from undergraduate, through medical school, residency, fellowship and MSc or PhD training). All these factors have contributed to a challenging journey for those who have chosen a clinician-scientist path. How do we as a "research cluster" overcome these perils and still pursue our goal of making large impacts in arthritis care while maintaining our sanity, still having fun and keeping our families intact? Here, we describe our made-in-Calgary solution that illustrates key factors for success in rheumatology research.

From left to right: Dr. Glen Hazlewood, Dr. Claire Barber, Dr. Cheryl Barnabe, and Dr. May Choi.

How we got on the Clinician-scientist track:

As clinician-scientist track individuals (CB1, CB2 and GH, and no we are not cannabinoid receptors), we were hired after residency into clinical scholar positions, which provided partial salary funding for a 0.3 FTE clinical position, with the remainder of time protected for our formal graduate-degree training. Unfortunately, these clinical scholar positions are no longer offered, but several post-residency fellowship opportunities exist in the Department of Medicine at the University of Calgary to support individuals to pursue additional training.

Formal and informal mentorship networks are readily available to young investigators, including at the O'Brien Institute for Public Health and the McCaig Institute for Bone and Joint Health at the University of Calgary. Additionally, all current investigators are members of Arthritis Research Canada *(www.arthritisresearch.ca)*. These mentorship networks provide project collaboration opportunities, grant review, career advice and support with a view to establishing collaborations within our Division, university and nationally/internationally for early career research success. This was in the setting of extremely supportive colleagues, who recognized the value of clinician-scientists in leading discovery and initiatives to improve arthritis care, even in the face of local human resource limitations in rheumatology at the time.

Research interest in the Division starts early as trainees are highly encouraged to participate in research. There are dedicated opportunities, time, and funding to support and recognize trainee research activities from the Division and the university.

On the Clinician-scientist track:

Under our salary model, we have real protected research time, including recognition of our roles in the operational committees of the CRA, and other national and international endeavours such as the American College of Rheumatology (ACR) committees, the Outcome Measures in RheumAtology Clinical Trials (OMERACT) group and the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) group. Our Division chief and colleagues remain constant supporters of our work, and Advanced Clinician Practitioner in Arthritis Care (ACPAC)-trained professionals have been engaged in our clinics to optimize patient care. New recruitment to the Division has rounded out clinical service and education portfolio roles to minimize the pressures of filling all the typical academic roles.

We complement each other's research programs and skills, and assist one another with reviewing grant applications, papers, and posters. We collaborate in the activities the others are leading and recruit patients for each other's studies. We can apply each other's methods and knowledge

in our own areas of research to create advancement in quality of care, equity of care and patient-oriented methods.

We truly enjoy working together. We are sounding boards for each other. We are great friends, are flexible in helping each other out whether it be in clinic, on call, or even when there is a security alarm call at each other's homes. We keep each other balanced, positive and moving forward.

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Accelerating Impact: Celebrating Our History, Building for the Future

The Arthritis Society marks its 70th anniversary by embarking on a new five-year strategic plan

By Janet Yale, President and CEO, Arthritis Society

As the Arthritis Society celebrates 70 years of helping Canadians live better with arthritis, let's reflect on our past – and look toward the future.

Celebrating Our History

The Arthritis Society – then the Canadian Arthritis and Rheumatism Society (CARS) – was created by rheumatologist Dr. J. Wallace Graham and his medical peers to address the crippling effects of rheumatic disease. Under the passionate leadership of Executive Director Mary Pack, the group's tireless efforts helped deliver improved care to people who were often confined to wheelchairs or hospital beds by their arthritis.

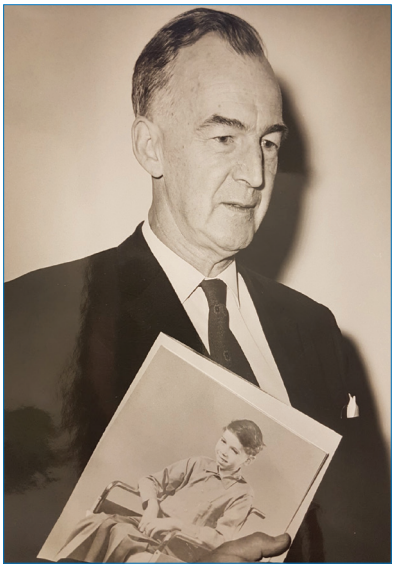
The Society established professional granting programs that have helped spur the growth of the rheumatology profession in Canada – from just four doctors in 1948 to more than 400 clinicians practicing today.

Our donors have funded over $200 million in research investment into arthritis – a legacy unmatched by any other charitable funder in Canada. That research has paid off, as today most people experience dramatically reduced joint damage and improved symptom relief, allowing them to engage fully in their lives in ways that Mary Pack and Dr. Graham could scarcely have imagined.

As health conditions have improved, our service focus has shifted from one-on-one care delivery to scalable information and education programs that allow us to reach more people, arming them with self-management knowledge and tools that are empowering them take control of their health.

And throughout we have continued to advocate, speaking up for the needs and concerns

The distinctive CARS uniform signalled a knowledgeable, compassionate caregiver.



Dr. J. Wallace Graham, one of the founders of CARS.

Mary Pack, the first Executive Director of CARS.

of Canadians living with arthritis, from getting arthritis designated as a chronic disease to advocating for access to and coverage of landmark new treatments.

Seventy years, and so much has changed. But two things have not: our dedication to this cause, and our ongoing partnership with rheumatologists. From the beginning, this close collaboration of medical professionals, patients and volunteers has been essential to our success. And we will continue to lean on the CRA and its members as staunch allies and partners in this struggle. Because we all want to live in a world free from the devastating impacts that arthritis has on lives.

Building for the Future

Impact is what it's all about. We need to exponentially expand the reach of our information and education resources, the research we are able to fund and the scope of advocacy we undertake. We need to heighten public awareness of this disease and the need for urgent action.

Getting there will take more than dedication, more than generosity, more than partnerships. It will take a bold and clear vision of the path forward, and absolute focus on the steps necessary to achieve it. That's why, for the first time in our history, the Arthritis Society is embarking on a five-year strategic plan.

I announced this plan at the recent CRA Annual Scientific Conference. Called "Accelerating Impact," it lays out the work we need to do to expand our reach and impact, to grow awareness and to generate the revenue that fuels our mission growth – because everything we do is made possible through the generous support of our donors and sponsors.

We will continue to engage our valuable partners, the CRA foremost among them, in ongoing dialogue on how best to improve the lives of those with arthritis. For now, the important takeaway is that – like Dr. Graham and Mary Pack before us – we recognize that we cannot afford to be complacent about the challenge that arthritis poses for Canadians. We can do more, therefore we must do more.

We must accelerate our impact, so that 70 years from now we can look back on the day when we eliminated arthritis once and for all.

We look forward to going on that journey with you.

Janet Yale
President and CEO,
Arthritis Society

Online Learning Resources Make Self-management Easier for Arthritis Patients

From the Arthritis Society

Self-management is a critical component of any arthritis treatment plan, but many patients don't know where to start.

Drawing on input from clinicians, educators and patients themselves, the Arthritis Society has dramatically overhauled and expanded our online learning resources to help Canadians living with arthritis learn to take control of their disease.

These free modules allow your patients to learn at their own pace, starting with the subjects that are most important to them, such as:

- Navigating Your Healthcare
- Managing Chronic Pain
- Overcoming Fatigue
- Eating Well

And, being added this Spring:

- Daily Living
- Staying Active
- Mental Health and Well-being
- Joint Matters at Work

"The resources are very informative and enlightening: I will definitely look to alter my daily living strategies and coping mechanisms."

– Feedback from a Module user

Help your patients become more engaged and empowered self-managers. Direct them to these free resources today, at *arthritis.ca/education*.

Facilitating Physical Activity Prescription by Medical Professionals with Open-access Web-based Resources

By Derin Karacabeyli; Kaila Holtz, MD, MSc; and Kam Shojania, MD, FRCPC

Introduction

Physical inactivity is a global public health problem,[1] and regular exercise is one of the most powerful modifiable risk factors for the prevention and management of chronic disease.[2] Regular physical activity has been shown to reduce the incidence of cardiovascular disease, stroke, hypertension, type 2 diabetes, certain cancers, and premature all-cause mortality.[3] In patients with inflammatory arthritis and osteoarthritis, regular physical activity improves function, reported pain, and quality of life.[4,5] Despite the abundant evidence supporting the role of regular physical activity in the prevention and management of chronic disease, inactivity remains the norm. As of 2013, 78% of Canadian adults and 91% of youth were not meeting the guidelines of 150 minutes of moderate intensity exercise and two strength training sessions per week.[6]

While patients are more likely to exercise if physical activity is addressed by their healthcare provider,[7] exercise prescription in the clinical setting has its challenges. Busy clinicians report barriers such as lack of time, knowledge, training, and resources.[8,9] With *www.ExRxMed.com*, we hope to empower all physicians to ask every patient at every visit about physical activity in an individualized, time-efficient manner. An overview of the A.C.E.S. Framework for discussing physical activity is shown below (Figure 1).

1) Ask about physical activity.

Start the conversation about physical activity using non-judgmental language and open-ended questions: "What do you like to do that is physically active?"

An online physical activity vital sign calculator is integrated into the website, and we encourage clinicians to send this to their patients in advance via email. It generates a printable PDF report that can serve as the basis for your conversation about physical activity if time permits.

2) Counsel individuals to reduce sedentary time.

If patients are inactive, the first priority is counseling to reduce sedentary time (Figure 2). If patients are somewhat active and motivated, add balance, strength, or flexibility activities (Figure 3). We have created two resources that illustrate a simple, step-wise, and safe approach to gradually increasing the frequency, intensity, and variety of weekly physical activity.

3) Evaluate for safety.

We have included a link to the "Get Active Questionnaire" [10] to enable physicians to screen for patients who may need further cardiorespiratory investigations prior to engaging in moderate-to-vigorous exercise.

Figure 1
A.C.E.S. Framework of Physical Activity Prescription

©Exercise Prescription for Medical Professionals

Figure 2
ExRxMed Physical Activity Graphic

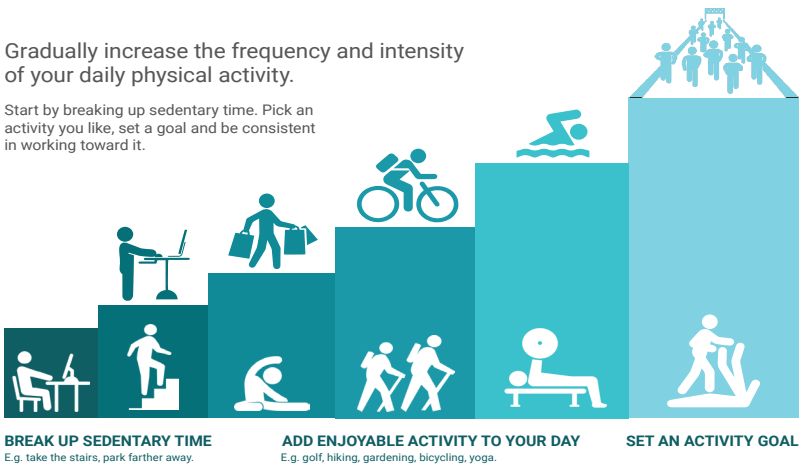
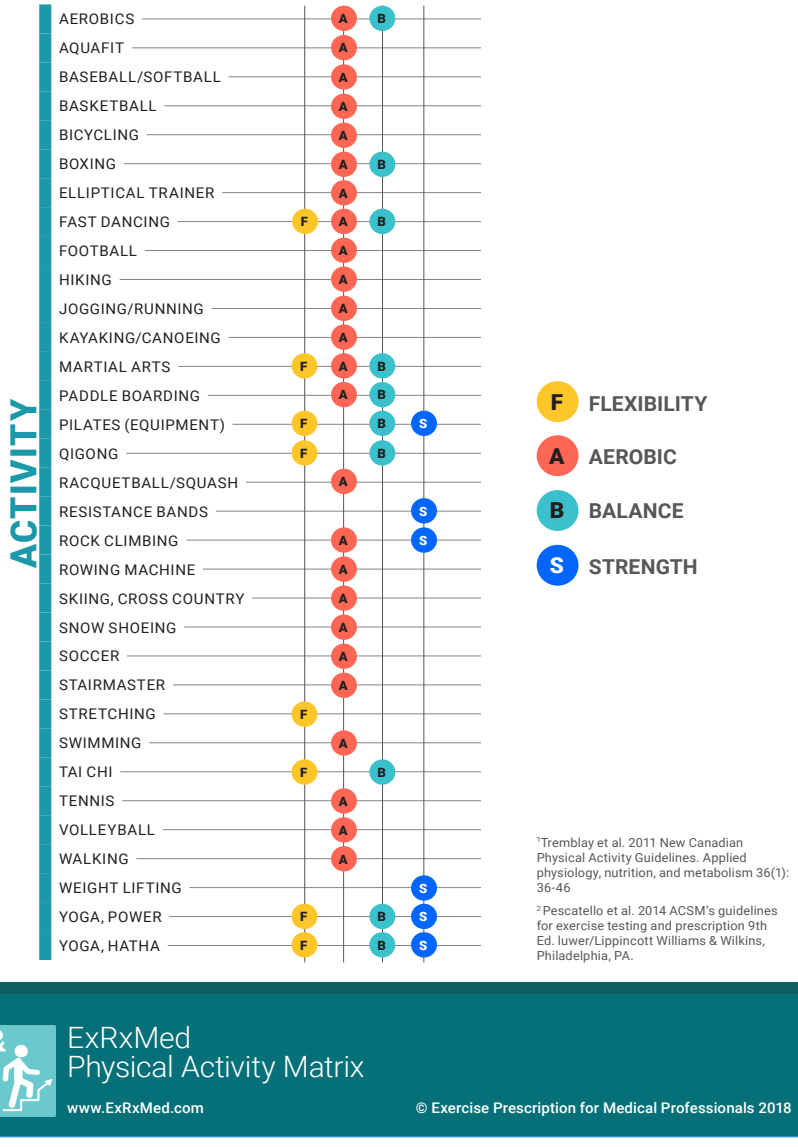


Figure 3
ExRxMed Physical Activity Matrix



[1]Tremblay et al. 2011 New Canadian Physical Activity Guidelines. Applied physiology, nutrition, and metabolism 36(1): 36-46

[2]Pescatello et al. 2014 ACSM's guidelines for exercise testing and prescription 9th Ed. Iuwer/Lippincott Williams & Wilkins, Philadelphia, PA.

4) Send to a qualified exercise professional (QEP), if necessary.

There is a referral form available to encourage patients to find a qualified exercise professional to assist them in achieving their goals. We have listed several Canadian resources and hope to expand this resource in the future.

Finally, there is a link to the Exercise is Medicine Physical Activity Prescription Pad for clinicians who wish to complete a formal prescription for their patients. Our resources are meant to be used in combination. We encourage physicians to incorporate them into clinical practice in a manner that suits their workflow, patient population, and available resources.

Conclusion

Physical activity serves as an invaluable pillar in the prevention and management of many chronic diseases, as well as in the enhancement of quality of life. We have adapted the five A's model of behaviour counseling[11] to develop a web-based tool aimed at minimizing commonly reported barriers to physical activity prescription. Next steps will involve validation of our tool through formal research to evaluate the impact and outcomes of web-based counseling tools on physician and patient behaviours. Please contact us if you are interested in collaborating by visiting *www.ExRxMed.com.*

References available on page 29.

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Choosing Wisely Canada

ANA and ANCA Testing in a Tertiary Health Centre in Sherbrooke: An Assessment of the Adherence to Guidelines and the Impacts on the Diagnosis and Health Care System

By Maria Parfenova, MD, FRCPC; and Patrick Liang, MD, FRCPC

Objectives: To describe antinuclear antibodies (ANA) and subserology ordering practices and to determine if their indications meet the recommendations for ANA testing at the Sherbrooke University Health Centre. To describe antineutrophil cytoplasmic antibodies (ANCA) testing practices and determine if they meet the current recommendations proposed for ANCA testing, at the same centre.

Methods: Patients who had ANA and subserologies (Anti-SSA, anti-SSB, Anti-Jo1, Anti-Scl-70, Anti-Sm, Anti-U1 RNP) between 2012 and 2014 were found by means of a computerized system and their charts were analysed. We identified the indications for the ANA and subserologies panel in the medical notes and compared them to the guidelines for ANA testing and the Choosing Wisely Canada recommendations. Moreover, the indications for ANCA tests were assessed and compared to the current guidelines for the appropriate testing of ANCA and the Choosing Wisely Canada recommendations. Variables included gender, age, ANA titer, subserologies panel, indication of ANA, ANCA > 1:20, subtypes MPO and PR3, indications for ANCA, medical specialty, setting of the order and the final diagnosis.

Results: There were a total of 268 ANA tests included. In 35.8% of cases (n=96), ANA was ordered as per recommendations, versus 63.8% of cases (n=171) without indications. There were 104 subserologies ordered and 55.8% were ordered at the same time as the ANA, against the Choosing Wisely Canada recommendation of 2013. Almost half of the subserologies ordered had no indications of ANA in the first place (48.1%). The three medical specialties that ordered ANA the most were rheumatology, gastroenterology and internal medicine (in descending order). A total of 134 ANCA tests were included. Of these, 51.5% were ordered in line with the recommendations, 20.1% not meeting recommendations, and 28.4% for follow-ups. In fact, 44.4% of those not meeting the recommendations (n=12) were done because of clinical suspicion of inflammatory bowel disease or sclerosing cholangitis. Clinical remission of subjects with ANCA was evident in 100% of cases, even before ordering the ANCA test for follow-up (negative predictive value). Only 20% of ANCAs'results influenced the subsequent management.

Discussion: These results show that the rate of ANA and ANCA tests ordered in line with the recommendations remains low. Many ANA subserologies are ordered at the same time as the ANAs. However, the ANA and ANCA tests that were ordered without stated recommendations can still have reasonable indications to be measured in complicated cases, for example. Moreover, some of the patients that were hospitalized had ANA and serologies done together to save time, which is understandable. ANCA can be found in other non-vasculitic disorders and help the diagnosis for inflammatory bowel disease, primary sclerosing cholangitis and autoimmune hepatitis. Taking that into consideration, indications for these tests should be individualized for a hospitalized versus an ambulatory patient, and clinical presentation. The cost for ANA and serologies tests ordered without suggested indication was more than three thousand dollars in the time period studied and almost two thousand dollars for ANCA tests. These costs don't include indirect costs of more investigations, more medical consultations, visits and patients' anxiety.

Conclusion: In summary, too many ANA subserologies are ordered at the same time as the ANAs. These orders have an important cost for the health care system that can be lowered by providing more education for professionals on avoiding unnecessary tests. Clinical assessment rather than ANCA testing should guide treatment changes especially when patients are in remission.

References:

1. Solomon DH, et al. Evidence-based guidelines for the use of immunologic tests: Antinuclear antibody Testing, Arthritis & Rheumatism. Arthritis Care Res 2002; 47:434-44.
2. Robinson P. and Steele R. Appropriateness of antineutrophil cytoplasmic antibody testing in a tertiary hospital. J Clin Pathol 2009; 62:743-45.
3. Choosing Wisely Canada 2015. Available at *https://choosingwiselycanada.org/rheumatology/*.
4. Davis LA, et al. Applying Choosing Wisely: Antinuclear antibody (ANA) and sub-serology testing in a safe net hospital system. The Open Rheumatology Journal 2015; 9:82-7.
5. McGeoch L. et al. CanVasc recommendations for the management of antineutrophil cytoplasm antibody-associated vasculitides. J Rheumatol 2016; 43:97-120.
6. Savige J, et al. International consensus statement on testing and reporting of antineutrophil cytoplasmic antibodies (ANCA). Am J Clin Pathol 1999; 111:507-13.

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Medical Cannabis: The New Miracle or a Placebo Pandemic?

By Mary-Ann Fitzcharles, MD, FRCPC

He is 57 years old, and one day may commit suicide because of intolerable neuropathic pain in the right knee, following multiple orthopedic procedures and finally a total knee replacement. He was detoxed from opioids at a morphine equivalent of over 500 mg/day, but the pain was so excruciating that a team decision was taken to reintroduce opioids in limited dose to a morphine equivalent of 80 mg/day. He smokes 1.5 g of cannabis daily, obtained from a buddy who grows it illegally. As a Christmas gift he received a "green bottle" labelled "CBD 500 mg in 30ml", costing his friend $100. After one day administration of three drops tid, there has been a miraculous improvement in his pain, but he has not reduced his current opioid dose. He still paces the corridor incessantly when waiting for his appointment. He required a refill of his opioid prescription that has been stable for four years, and the urine drug screen was negative for substances other than opioids and cannabinoids.

Prompted to do some sums, if the label on the "green bottle" is correct, then each ml of liquid contains 16.6 mg of cannabidiol (CBD), and each drop which is 0.02 ml to 0.05 ml contains CBD 0.33 mg to 0.83 mg. Therefore, nine drops of liquid from the "green bottle" amounts to about CBD 3-8 mg/day. As his treating physician, I have some questions. How can this miracle be explained? Does the label on the "green bottle" accurately identify the contents? Is the product in the "green bottle" safe for my patient? Has my patient been fleeced of his meagre income by charlatans? Let us explore some of these questions.

Dosing of cannabis

It is beyond understanding how a seemingly homeopathic dose of CBD oil could give such astounding effects, especially in the setting of moderately high-dose opioids as well as daily smoked cannabis. There is limited information on dosing regimens for cannabis, but gleaning from the literature, doses of CBD in the order of 50-200 mg/day are suggested for some medical conditions; children with Dravet syndrome have received CBD up to 50 mg/kg/day; nabiximols, marketed as the pharmaceutical preparation Sativex, contains CBD 2.5 mg and Δ9-tetrahydrocannabinol (THC) 2.7 mg a puff, with studies reporting 6-8 puffs in a day. Google tells us to "begin with CBD 10 mg, although micro-dosing of 2.5-5 mg is sometimes used." Google further states that some patients may use up to 1,000 mg a day, but in that case it is best to get advice from a "cannabis-savvy" doctor. Google does not define the qualifications or competencies of a "cannabis-savvy" doctor. There must be something truly magic in the "green bottle" that defies my simple understanding.

Is the "green bottle" label accurate?

Testing of medical cannabis products (oils, flowers and edibles) from the U.S. and the Netherlands have shown important inaccuracies in the labelling of over 50% of products, with under-, over- and mis-labelling of CBD and THC.[1-4] Other than a Marketplace study in Canada in 2016 with similar reports of inaccuracy, there has been no study published regarding accuracy of the content of medical cannabis in Canada. There are also currently no universal industry testing standards for identifying molecular content of medical cannabis. Regulations regarding quality control for cannabis in Canada are focused toward ensuring good practices in handling of product, record-keeping and ensuring absence of contaminants, but with little attention paid to ensuring accuracy of the molecular content of cannabis products. Therefore we must question the labeling of molecular content in the "green bottle" and others. This leads to the question of safety of the substance in the "green bottle". The honest response is that we truly do not know what is being sold to our patients, from both the viewpoint of molecular content as well as safety. We can, however, anticipate that patients will increasingly turn to less costly products, obtained from suspect sources that are likely unregulated.

Is there such a thing as a mass placebo effect?

A further thought to ponder is whether we might be in the throes of a population mass placebo effect that has been primed by the media. A placebo effect may be further promoted by patients' perceptions of personal control in choosing a treatment, a practice increasingly prevalent in our patients. The media has powerfully propagated the message of medical cannabis with copious reports attesting mostly to the successes and positive effects. We are bombarded with images of pristine cultivation facilities, staff clad in sterile outfits, and the smiling faces of persons claiming treatment success. The occasional report of ad-

Continued on page 28

Medical Cannabis: The New Miracle or a Placebo Pandemic? *(Continued from page 27)*

missions to emergency rooms for those experiencing adverse effects, especially children, are often tucked away and given less prominence.[5-8] Patients search for a magic potion, and perhaps the medical community has been amiss in failing to recognize the potential benefits of cannabis. Perhaps the effect is not so much on the underlying medical condition, but rather a surreptitious psychoactive effect that gives a sense of relaxation and calm; perhaps not such a poor payoff for many.

Who gives advice about medical cannabis?

The internet and media are awash with advice, favourable reports and details about medical cannabis. Dispensary staff, with less than 20% reporting any medical training, are freely advising patients in the U.S.[9] In Canada, agents for the producers provide similar advice, but without documentation of the training of these persons. Advice regarding the ideal molecular content, dosing schedules and adjustments for a particular condition to a specific patient represents the ideal of patient-tailored treatment. This notion has echoes of the old-fashioned apothecary, mixing a little of this and that to obtain the perfect mix. This sense of highly personalized medicine is promoted by the salespersons of producers as well as "cannabis-savvy" doctors. It is puzzling to understand how physicians in this day project themselves as experts in the administration of a single substance. Is the ideal of medical care not to address the whole person? Could it be that today's "cannabis clinics" are not dissimilar from the medical "opioid mills" in North America that have been a cause of extreme suffering?

The reality

There is no turning back as cannabis is a legal medical and recreational substance in Canada, with easy access for those who hold hope for medical relief. Who are the winners in this game? The industry is clearly thriving; Canadian politicians are lauded as forward thinking; Canada is proud to be a leader in this field; cannabis news sells well, but what about our patients? Perhaps some patients will truly find a magic treatment, but clearly the financial interests of stakeholders will be substantial. As physicians who practice evidence-based medicine, is it not aberrant that we swivel 180-degrees, and simply embrace anecdotes and popular beliefs, throwing aside rational judgement?

Cannabis, now embedded into clinical care, may be a truly neglected panacea for many ills; or perhaps physicians are on the brink of an epidemic of pseudoscience that is promoted by a handful of "cannabis-savvy" doctors who base their competence on "clinical experience," poor science and vigorous promotion to a vulnerable patient population. How this epic will play out in time remains to be seen. Will cannabis emerge as a truly neglected but welcome addition to the physicians' armamentarium, will the current enthusiasm just blow over, or are we opening a frightening Pandora 's Box? I, however, pity those with limited income who are enticed to spend precious dollars on a possible modern-day snake oil. Are we in the calm before the storm erupts?

The views expressed in this article are those of the author, supported by scientific references and vast clinical experience. They should not be taken to represent an official position of the CRA, CRAJ or STA Communications.

References:
1. Jikomes N, Zoorob M. The cannabinoid content of legal cannabis in Washington State varies systematically across testing facilities and popular consumer products. Sci Rep 2018; 8:4519.
2. Hazekamp A. The trouble with cbd oil. Medical cannabis and cannabinoids 2018; 1:65-72.
3. Vandrey R, Raber JC, Raber ME, et al. Cannabinoid dose and label accuracy in edible medical cannabis products. JAMA 2015; 313:2491-3.
4. Bonn-Miller MO, Loflin MJE, Thomas BF, et al. Labeling accuracy of cannabidiol extracts sold online. JAMA 2017;318:1708-9.
5. Vo KT, Horng H, Li K, et al. Cannabis intoxication case series: The dangers of edibles containing tetrahydrocannabinol. Ann Emerg Med 2018; 71:306-13.
6. Thomas AA, Mazor S. Unintentional marijuana exposure presenting as altered mental status in the pediatric emergency department: A case series. J Emerg Med 2017; 53:e119-e23.
7. Wang GS, Le Lait MC, Deakyne SJ, et al. Unintentional pediatric exposures to marijuana in Colorado, 2009-2015. JAMA Pediatrics 2016; 170:e160971.
8. Rao DP, Abramovici H, Crain J, et al. The lows of getting high: Sentinel surveillance of injuries associated with cannabis and other substance use. Can J Public Health 2018; 109:155-63.
9. Haug N KD, Sottile J, Babson K, et al. Training and practices of cannabis dispensery staff. Cannabis and cannabinoid research 2016; 1:244-51.

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Catch Up on the CATCH Cohort's Successes *(Continued from page 20)*

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Update from Quebec

News from the Division of Rheumatology at Université Laval

We have recruited four new rheumatologists!

- Dr. Myriam Allen and Dr. Sonia Lagacé, currently in medical pedagogy training, were recruited at the *Centre Hospitalier de l'Université Laval (CHU)* in Québec City.
- Dr. Delphine Keyaert began her practice at the regional hospital in Rimouski. Dr. Sophie Ruel-Gagné will join the *Hôtel-Dieu de Lévis* team in the fall.
- Dr. Karen Adams is our new Chief of Service at the *CHU de Québec*.

From left to right: Dr. Delphine Keyaert, Dr. Sophie Ruel-Gagné, Dr. Sonia Lagacé, and Dr. Myriam Allen.

The CHUL Mother and Child Centre offers a rich, interesting and collegial practice in pediatric rheumatology. Our division, which is very dynamic in research, strongly encourages rheumatologists to settle in our beautiful region!

- Laëtitia Michou, MD, PhD
On behalf of the Division of Rheumatology at Université Laval
Québec City, Quebec

Facilitating Physical Activity Prescription by Medical Professionals with Open-access Web-based Resources *(Continued from page 25)*

References:

1. World Health Organization. Global Strategy on Diet, Physical Activity and Health: Physical Activity. Available at *http://www.who.int/dietphysicalactivity/pa/en/*. Accessed November 3, 2018.
2. Naci H, Loannidis JP. Comparative effectiveness of exercise and drug interventions on mortality outcomes: Metaepidemiological study. BMJ 2013; 347:f5577.
3. Warburton DE, Charlesworth S, Ivey A, et al. A systematic review of the evidence for Canada's Physical Activity Guidelines for Adults. Int J Behav Nutr Phys Act 2010; 7:39.
4. Fransen M, McConnell S, Harmer AR, et al. Exercise for osteoarthrtitis of the knee: a Cochrane systematic review B J Sports Med 2015; 49:1554-57.
5. Metsios GS, Stavropoulos-Kalinoglou A, Kitas GD. The role of exercise in the management of rheumatoid arthritis. Expert Rev Clin Immunol 2015; 11:1121-30.
6. Public Health Agency of Canada. How Healthy Are Canadians? A trend analysis of the health of Canadians from a healthy living and chronic disease perspective. Available at *https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/how-healthy-canadians/pub1-eng.pdf*. Published April 11, 2017. Accessed November 3, 2018.
7. Grandes G, Sanchez A, Sanchez-Pinilla RO, et al. Effectiveness of physical activity advice and prescription by physicians in routine primary care: a cluster randomized trial. Arch Intern Med 2009; 169:694-701.
8. Hoffmann TC, Maher CG, Briffa T, et al. Prescribing exercise interventions for patients with chronic conditions. CMAJ 2016; 188:510-18.
9. Hébert ET, Caughy MO, Shuval K. Primary care providers' perceptions of physical activity counselling in a clinical setting: a systematic review. Br J Sports Med 2012; 46:625-31.
10. Canadian Society for Exercise Physiology. Get Active Questionnaire. Available at *http://www.csep.ca/en/publications/get-active-questionnaire*. Accessed November 5, 2018.
11. Whitlock EP, Orleans CT, Pender N, et al. Evaluating primary care behavioral counseling interventions: an evidence-based approach. Am J Prev Med 2002; 22:26-84.

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Reducing signs and symptoms, inhibiting the progression of structural damage and improving physical function in adult patients with moderately to severely active psoriatic arthritis. SIMPONI® can be used in combination with methotrexate (MTX) in patients who do not respond adequately to MTX alone.

Ankylosing Spondylitis (AS)

Reducing signs and symptoms in adult patients with active ankylosing spondylitis who have had an inadequate response to conventional therapies.

Non-radiographic Axial Spondyloarthritis (nr-Ax SpA)

The treatment of adults with severe active non-radiographic axial spondyloarthritis with objective signs of inflammation as indicated by elevated C-reactive protein (CRP) and/or magnetic resonance imaging (MRI) evidence who have had an inadequate response to, or are intolerant to nonsteroidal anti-inflammatory drugs (NSAIDs).

SIMPONI®, in combination with methotrexate (MTX), is indicated for:

Rheumatoid Arthritis (RA)

Reducing signs and symptoms and improving physical function in adult patients with moderately to severely active rheumatoid arthritis.

Inhibiting the progression of structural damage in adult patients with moderately to severely active rheumatoid arthritis who had not previously been treated with MTX.

*The image depicted contains a model and is being used for illustrative purposes only.

Reference: SIMPONI® Product Monograph, Janssen Inc., November 06, 2018.

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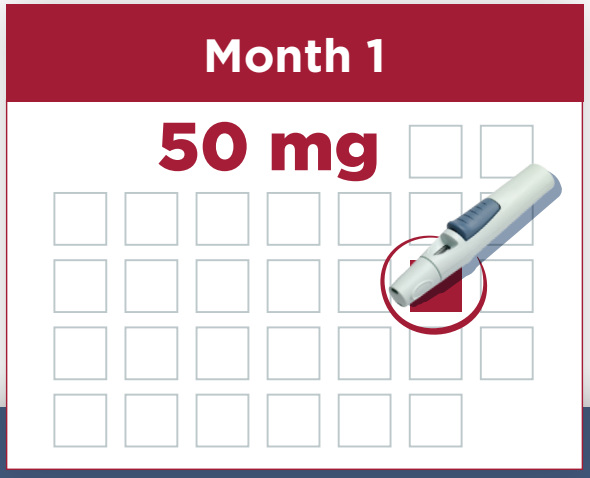

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PrXELJANZ®/PrXELJANZ® XR (tofacitinib) in combination with methotrexate (MTX), is indicated for reducing the signs and symptoms of rheumatoid arthritis (RA), in adult patients with moderately to severely active RA who have had an inadequate response 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 with potent immunosuppressants such as azathioprine and cyclosporine is not recommended.

PSORIATIC ARTHRITIS

PrXELJANZ® (tofacitinib) in combination with methotrexate (MTX) or another conventional synthetic disease-modifying antirheumatic 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.

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

- Contraindications in pregnant women, nursing women and patients with severe hepatic impairment.
- Most serious warnings and precautions regarding risk of serious infections and malignancies.
- Other relevant warnings and precautions regarding patients with pre-existing severe gastrointestinal narrowing that are administered XELJANZ XR, patients with risk of gastrointestinal perforation, risk of viral reactivation, risk of malignancies, lymphoproliferative disorder, and nonmelanoma skin cancer, risk of lymphopenia, neutropenia, anemia, and lipid elevations, patients with hepatic and/or renal impairment, caution in patients with a risk or history of interstitial lung disease (ILD), risk of infection and immunosuppression when co-administered with potent immunosuppressants, being up to date with all immunizations in accordance with current vaccination guidelines, live zoster vaccine, women of reproductive potential, pediatric and geriatric patients, the elderly and patients with diabetes, patients with a history of chronic lung disease, lymphocyte counts, Asian patients, increases in creatine kinase, decrease in heart rate and prolongation of the PR interval, and liver enzyme elevations.
- Conditions of clinical use, adverse reactions, drug interactions and dosing instructions.

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

JAK = Janus kinase
* Comparative clinical significance is unknown

References:
1. Pfizer Inc. Data on file. 2018.
2. Pfizer Canada ULC. XELJANZ/XELJANZ XR Product Monograph. October 3, 2018.
3. Health Canada. XELJANZ PsA Notice of Compliance information.

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