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CRAJ SCR

The Journal of the Canadian Rheumatology Association

Spotlight on: Medical Education and Competency by Design

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Apropos of Appropriateness

By Philip A. Baer, MDCM, FRCPC, FACR

"A good surgeon doesn't just concentrate on technical ability, but also on the appropriateness of what you're doing." – Benjamin Carson

Checking into my EMR from home one evening, I spy a new referral in the electronic fax inbox: "Please see this patient with a + ANA, joint pain and a rash." Well that could be systemic lupus erythematosus (SLE) in a young woman, but the patient this time is a 68-year old man with a long history of eczema, hand and knee X-rays showing typical osteoarthritis, and an ANA of 1/160 homogeneous, with negative RF, C3, C4, CH50 and anti-dsDNA having been done as well. Not an uncommon situation, and fertile ground for an e-Consult where those exist, perhaps accompanied by sending back the Centre for Effective Practice OA tool (*www.cfpc.ca/uploadedFiles/CPD/OATOOL_FINAL_Sept14_ENG.pdf*) and other suggestions for management.

Talking shop with other rheumatologists over dinner or at conferences, we are all receiving these types of referrals. While Choosing Wisely Canada has widely promoted the inappropriateness of many serologic tests in rheumatology, we don't seem to be having much impact on the ground. Why? There is extensive literature on the poor sensitivity and specificity of RF and ANA tests.[1,2] Overtesting and overdiagnosis were highlighted in a plenary session at EULAR 2019, with ANA testing prominently featured (poster OP0020). I note that medical labs are marketing certain tests to patients for which they must pay out of pocket, including the JOINTSTAT test for rheumatoid arthritis (RA), but no one is pitching RF and ANA testing to patients or physicians. No academic rheumatologist I have ever met says that their lectures to medical students or family medicine residents advocate for RF or ANA tests in all patients with joint pain, or as a necessary prerequisite to a rheumatology referral. No clinical practice guidelines suggest this behaviour. While some hospitals may allow the ordering of a "rheumatology lab panel," the tests must be ordered individually in outpatient practice. In Ontario, the standard lab requisition does not list any of these tests on the preprinted form. They have to be ordered individually, and manually added to the form. Despite this proven behavioural economics technique designed to reduce test ordering, the flood of RF, ANA, HLA-B27, anti-CCP, anti-ENA and complement component ordering persists, as illustrated in Canadian studies.[3,4]

What can be done to reduce the "stickiness" of this undesirable learned behaviour? Is the cohort of primary care physicians who started practice before Choosing Wisely a lost cause? One hopes not. At the individual level, I have delivered a talk on Rheumatology Lab Testing many times to large audiences at various primary care conferences. It is a popular session, but am I changing behaviour? Hard to know. At one lecture covering a specific health region near Toronto, I was able to find a listing of all the rheumatologists in the area and their requirements for referral requests. Reassuringly, none demanded any of the abused tests as a prerequisite for seeing a patient (*www.mississaugahaltonhealthline.ca/listServices.aspx?id=10981*). The CART referral form on the *rheuminfo.com* website also focuses primarily on elements of the history and examination (*rheuminfo.com/docs/physician-tools/Canadian-Arthritis-Referral-Tool-CART.pdf*). RF, ANA, ESR and CRP are mentioned, but not mandated.

If the carrot does not work, maybe the stick will. After six years without a contract and with progressive fee cuts, Ontario physicians including rheumatologists now have an arbitrated settlement with the Ontario Ministry of Health as of early 2019. As part of the deal, an Appropriateness Working Group has been established to find savings of $460 million over the next few years by tightening fee code definitions or delisting certain services. Dr. Julie Kovacs and I have submitted proposals in the rheumatology sphere, and dealing with inappropriate lab testing is a prominent component. The costs incurred are not just the few dollars for each test, but the downstream consequences related to patient anxiety over positive tests, and the generation of inappropriate referrals which are expensive, and also impede access to rheumatology consultations for patients who most need us. No decisions have been made to date, but we remain hopeful.

As they say, every dog has his day. Despite my feelings about inappropriate ANA testing, I was interested to find a poster at EULAR 2019 showing that a negative ANA test, which I might never have ordered myself in a patient with RA, could be useful. The study showed that RA patients who had a negative baseline ANA never developed anti-drug antibodies when treated with infliximab or adali-

Continued on page 5

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Apropos of Appropriateness

(Continued from page 3)

mumab (poster SAT0155). As I have no access to anti-drug antibody testing, the negative ANA test ordered by someone else before referring me an RA patient might actually be helpful in deciding what to do if that patient experiences a secondary failure of one of these two anti-TNF therapies.

Meanwhile, checking back in at the office, there is a new referral: "A 53-year old man with numerous work injuries and chronic pain has a slightly high ESR of 28, a weakly + RF of 15 IU, and an ANA + at 1/40 homogeneous pattern. Please assess for rheumatologic causes of pain." I am accustomed to this, but I hope rheumatologists of the future will be spared this type of consult request, if our educational efforts are successful.

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

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1. Abeles AM, Abeles M. The clinical utility of a positive antinuclear antibody test result. Am J Med 2013; 126(4): 342-8.
2. Miller A, Mahtani KR, Waterfield MA, et al. Is rheumatoid factor useful in primary care? A retrospective cross-sectional study. Clin Rheumatol 2013; 32(7):1089-93.
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Glossary:
ANA: anti-nuclear antibodies
RF: rheumatoid factor
C3: complement component 3
C4: complement component 4
CH50: total hemolytic complement 50
anti-dsDNA: anti-double-stranded DNA
HLA-B27: human leukocyte antigen B27
Anti-CCP: anti-cyclic citrullinated peptide
Anti-ENA: anti-extractable nuclear antigen
CART: Comprehensive Arthritis Referral tool
ESR: erythrocyte sedimentation rate
CRP: C reactive protein
anti-TNF: anti tumor necrosis factor

Learning From Teaching: CRA ASM Peer Feedback and Workshop Audits

By Raheem B. Kherani, BSc (Pharm), MD, FRCPC, MHPE; Gregory Choy, MD, FRCPC; Roberta Berard, MD, FRCPC; and Tom Appleton, MD, PhD, FRCPC

Have you been a speaker? Have you been a speaker at the CRA Annual Scientific Meeting (ASM)? Have you wondered how you did? Would you like feedback? We know that peer feedback is valued by all of us. Trying to improve our takeaway messages, collaboration and interaction with our teaching can be extremely helpful. Feedback from colleagues can enable us to assess our impact.[1]

The CRA is a Royal College-accredited provider of Continuing Professional Development (CPD) and has continued to improve the rigour of the delivery of education.[2] CPD is largely delivered to our membership through the Annual Scientific Meeting, and the CRA has taken key steps in providing peer observation, and developing workshop audits for our members and external speakers who present to our membership at the ASM since 2017. This year, our CPD offering has expanded considerably, with new additions to CRA programming including the CRA Review Course and Arthritis Society – CRA Research Day.

ASM speakers and workshop presenters have had an opportunity to receive feedback on their presentations, helping them identify both their strengths and areas in which they may want to make some changes. Examples of feedback provided related to the opening of the session, presentation quality, use of presentation tools, conclusions, engagement, balance and bias, as well as specific comments for the presenter. Independent workshop audits are required for accreditation and help to ensure that interactivity standards are achieved.

At the 2019 CRA ASM in Montreal, physician volunteers from the Education Committee and the Annual Scientific Meeting Program Committee, provided peer-to-peer assessment. There were 22 reviews of speakers and 14 reviews of workshops. These consistently demonstrated that the speakers and workshops were achieving a high level of excellence. Our esteemed 2019 Dunlop-Dottridge Lecturer, Dr. Gilles Boire, commented that he was certainly looking forward to this peer observation. In follow-up, he stated that "it is very good to receive feedback, as we do not know the audience's thoughts. In a way, it may be frustrating without good feedback. Supportive feedback helps with the next presentation."

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Given the significant positive feedback from presenters, peer observers and workshop auditors, the CRA Education Committee and Annual Scientific Meeting continue to plan to have these available, including during the upcoming 2020 meeting in Victoria. Thank you to all of our volunteers and staff who facilitate these programs. The CRA has an ongoing commitment to providing high quality professional education. If you have questions or would like more information about participating in this activity, please contact Claire McGowan at *cmcgowan@rheum.ca.*

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1. The Evolution of a Culture Shift in Continuing Professional Development. Available at *https://csim.ca/wp-content/uploads/documents/meeting2014/presentations/Oct%202%200835%20Evolution%20of%20Cultural%20Shift.pdf*. Accessed 28 August, 2019.
2. Houlden RL, Collier CP. Evaluation of Continuing Professional Development Group Activities. Available at *http://www.royalcollege.ca/rcsite/documents/continuing-professional-development/evaluation-of-continuing-professional-development-group-activities-e* . Accessed 28 August, 2019.

Attendees of the CRA Annual Scientific Meeting (ASM) 2019 watch a presentation at the Fairmont Hotel in Montreal.

The 2019 CIORA Grant Awards

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

By Janet Pope, MD, MPH, FRCPC

The Canadian Initiative for Outcomes in Rheumatology Care (CIORA) held its 12th grant competition in March, receiving 34 letters of intent and 24 grant applications.

Congratulations to the 2019 grant recipients! CIORA funded three one-year grants and three two-year grants for a total of $493,518. This year's grants include three in Awareness/Advocacy/Education, two in Multi-Disciplinary Care Teams and one in Early Access for Rheumatic Disease Patients. CIORA has funded 98 projects and provided $6,869,500 in research funding since 2006.

A special thanks to our sponsors for their continued support.

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

Pillar	Title	Principal Investigator	Award
Awareness/Advocacy/ Education	Making medication decisions for family planning and pregnancy among women with rheumatoid arthritis (MOTHERS)	De Vera, M.	$58,238
Awareness/Advocacy/ Education	Optimizing early treatment strategies in early RA through shared decision-making	Barber, C. Hazlewood, G.	$119,700
Awareness/Advocacy/ Education	Promoting engagement in physical activity among adolescents with juvenile idiopathic arthritis: Development of a social network-based intervention	Cavallo, S. Stinson, J. Duffy, C.	$70,000
Early Access for Rheumatic Disease Patients	Perspectives on the implementation of a multidisciplinary conference fee code for community-based patients with rheumatic disease in BC (RHEUM-NURSE)	Harrison, M.	$66,665
Multi-Disciplinary Care Teams	Keeping Stable Inflammatory Arthritis Patients in their Communities with the Advanced Clinician Practitioner in Arthritis Care (ACPAC)	Bell, M.	$107,675
Multi-Disciplinary Care Teams	Physical activity in axial spondyloarthritis: development and implementation of an evidence-based health technology approach to improve adherence to recommended guidelines	Passalent, L.	$71,240

CIORA: Call for Grants

CIORA is issuing Another Call for Grants in 2020

- The CIORA Online Grant Application System opens January 27, 2020.
- Letter of intent must be submitted by February 21, 2020.
- The CIORA Online Grant Application submission deadline is March 27, 2020, at 17:00 (Pacific time).

Please visit *rheum.ca/research/ciora/* for more information. Any questions can be directed to Virginia Hopkins at *vhopkins@rheum.ca.*

Perspectives on Recent Changes in Medical Education in Rheumatology

By Trudy Taylor, MD, FRCPC

As I reflect on my experiences in medical education, I am struck by the incredibly supportive community of teachers and educators we have in our specialty. Rheumatologists, for the most part, have a natural affinity for teaching and never seem to shy away from sharing our knowledge and passion for our field.

I have been fortunate enough to have strong medical education mentors within the rheumatology community, locally and nationally, who have helped shape my teaching philosophy and given me opportunities to get involved in medical education at all levels of training. These days, I am most heavily involved with postgraduate medical education, first as a recently retired program director, and now as the newly minted chair of the Royal College Specialty Committee for Rheumatology.

The biggest change in medical education in my career has been the advent of competency-based medical education (CBME). On July 1 of this year, rheumatology residency training programs across the country made the switch from the traditional time-based approach to medical education to a focus on demonstrating competence in the core tasks of our discipline. Although this change may seem abrupt, rest assured that there were many years of learning and planning that led to this change. Members of the rheumatology specialty committee at the Royal College, including all rheumatology program directors as well as voting members from each region, spent many hours learning about Competency by Design (CBD), culminating in three three-day workshops over one year to hash out the competencies that are core to our specialty.

What will this change mean to you as a rheumatologist who may have residents join you in your clinical practice? You may be asked to assess a particular activity that is core to the practice of rheumatology, an "Entrustable Professional Activity" (EPA) in CBD lingo. The assessments are short and meant to occur in real clinical settings. They are a great way to help us, as teachers and educators, to focus our assessment and feedback.

As with any change, there will be growing pains with the implementation of CBD. However, I can attest that now is an exciting time to be a medical teacher, when we have tools that enable us to focus our feedback and provide valuable teaching to the future leaders of our great discipline.

Trudy Taylor, MD, FRCPC
Associate Professor, Division of Rheumatology,
Department of Medicine,
Division of Medical Education,
Dalhousie University
Halifax, Nova Scotia

Members of the Royal College Rheumatology Specialty Committee as they leave the Royal College building in Ottawa in May 2019. Pictured from left to right: Dr. Carrie Ye, Dr. Edith Villeneuve, Ahmad Zbib (CEO of the CRA), Dr. Sarah Campillo, Dr. Raheem Kherani, Dr. Rosie Scuccimarri, Dr. Trudy Taylor, and Dr. Elana Murphy.

Diary of a Program Director

By Dana Jerome, MD, MEd, FRCPC

It is my non-patient day and, like all program directors I am sure, I have a pile of things sitting on my to-do list, much more than can be accomplished in a single "non-patient day." But that is not what is causing me anxiety today. As I write this, it is now almost three weeks since rheumatology programs across the country launched their Competency by Design (CBD) curriculum. We program directors and other members of the Royal College Specialty Committee have been thinking about this for years. Others, probably some of you, heard about this new curriculum at the last CRA meeting, where it was the topic of the CRA Great Debate. For some of you, it was probably a new concept at the time.

I must say that it has been my deepest fear that even now, three weeks into July, after CBD has already launched, it would still be a "new concept" for some of our rheumatology faculty. I have spent months preparing the documentation, travelling to all of our hospital sites to present faculty development sessions, and coaching our trainees on how to "ask" for an entrustable professional activity (EPA) assessment to be completed.

Has any of this information actually been absorbed or remembered? Are faculty going to participate in what has been viewed to be a more labour-intensive evaluation process?

So with some trepidation, I clicked through to the website where all of our evaluation data is held. Is anyone actually doing this? I wondered. I was eager to check. I opened the file of "Trainee Number 1". Phew – there is at least one evaluation complete! Nowhere near enough, but at least it wasn't zero. I clicked through to Trainee Number 2… and 3… and 4… and I was pleasantly surprised. Each had a handful of evaluations completed! These students were well on their way, and the faculty were participating. I felt a wave of relief and, in that moment, felt confident that the curriculum launch was going to be okay.

Such has been the stress of a program director working toward the launch of the new CBD curriculum.

What makes we wake up in a cold sweat at night, though, is the thought that maybe we won't get it right. That we won't work out the growing pains. I feel like I could use some of the feedback and coaching I have been trying so hard to provide to our faculty and trainees. Wouldn't it be nice if someone could tell me, "You should consider doing it this way" or "Next time, try asking for that differently"? But there are no colleagues with years of experience in CBD. As program directors and educators, we are orienteering, trying to find the way forward. So far, a few weeks in, it seems to be working.

So, tonight, I will sleep better and worry a little less about whether or not I can be "entrusted" to roll out this new curriculum.

Dana Jerome, MD, MEd, FRCPC
Program Director,
Rheumatology Training Program
Assistant Professor of Medicine,
University of Toronto
Toronto, Ontario

Launching CBD in Pediatric Rheumatology: Keeping Your Head Above the Water

By Shirley Tse, MD, FRCPC

It is a transformative time for all rheumatology programs with the launch of Competency by Design (CBD) this summer in July. For some, the change may bring some unnecessary heat and stress above and beyond the sunny skies of summer. CBD aims to move away from a time-based approach, as residents are expected to acquire key competencies in knowledge, skills and abilities as they progress along the developmental stages of their rheumatology training program. At each stage, there will be specific tasks or entrustable professional activities (EPAs) that residents must be able to demonstrate independently. Each EPA is broken down into multiple smaller tasks or milestones that residents can work on and develop to make life more manageable, get coaching feedback, but also progress according to their proficiency. Consequently, this will require teachers and assessors to understand the concepts of CBD and to increase direct observation of specific clinical activities and skills of residents, and to personalize their support and expectations according to each resident's stage of training, development, progress and proficiency.

There are only three pediatric rheumatology training programs across Canada. With fewer faculty and resources compared to some of our adult rheumatology programs, CBD implementation can be challenging. Change can be difficult but in contrast to the motto of the Borg from Star Trek that "Resistance is futile," I will share 10 survival tips from our training program at SickKids, University of Toronto, that have helped make the transition to CBD easier, more manageable and kept our heads above the water.

1. Inform but do not overwhelm people with CBD. Keep it brief, meaningful and fun! This can be via tip sheets, email blast and videos. For example, we have created an introduction video to understand EPAs. Check it out at *www.youtube.com/watch?v=VW69qxd5H6k&feature=youtu.be*.
2. Set individual tasks to be specific and simple. Some may not want to know the history and theory of CBD and prefer to focus on just what they need to do. Examples include:
   - Assessors: 1) Observe; 2) Provide coaching feedback; 3) Document.
   - Trainees: 1) Pick EPA ahead of time; 2) Ask for Observation; 3) Ask for feedback.
   - Competence committee member: 1) Summarize performance; 2) Assess progress and stage of training; 3) Make recommendations
3. Try to keep all assessments uniform. Many different assessment tools excluding EPAs are used by the training program and contribute to the overall evaluation of trainees. By revising the scoring system for all non-EPA tools to the CBD entrustment scale, this allows consistency and avoids confusion for both assessors and learners.
4. Yes, there are many EPAs and it is hard to keep track of them sometimes. We have made it more manageable by:
   - Having a scheduled "EPA of the week" for trainees to focus on as one of their EPAs to attempt (Photo 1). We have created a map that, if followed, the residents will have completed the minimum targets for all EPAs required by the Royal College standards by the end of their training.
   - A reference poster that maps relevant EPAs to specific clinical experiences, which is displayed in clinical areas (Photo 2). Faculty and residents can quickly choose EPAs from the designated list that are relevant to the clinical experience according to the residents' stage of training (*e.g.* general rheumatology clinic, subspecialty clinic such as lupus clinic, longitudinal clinic, ward/consults *etc.*). The process is effective and efficient as we have many different subspecialty clinics, and highlighting relevant EPAs avoids unnecessary stress in scrolling through an exhaustive EPA list.
5. Complete EPAs and provide coaching feedback in real time. There is truth to the saying "out of sight, out of mind." Trying to complete an assessment one week after the encounter can be difficult, and the teachable moment may be lost.
6. Clinics are busy. Try to observe the resident with the first or last patient of the day to avoid bias in selecting patient encounters, but also to minimize disruptions to clinic flow.

7. Use simple and standardized templates for tasks if possible. This helps to ensure tasks are completed accurately, consistently and efficiently. Some templates we have used include:
   - Standardized form and script for presentation of resident performance at competence committee (CC)
   - Standardized CC report and recommendations to residents for faculty advisors
8. Faculty and trainees are both busy. CBD requires many meetings and feedback sessions. Be flexible with scheduling but consider:
   - Bundling CC meetings adjacent to residency program committee (RPC) meetings.
   - Ensuring CC meetings are multiplatform so people can attend in person, by teleconference or by videoconference.
   - Scheduling regular faculty advisor feedback sessions into the protected academic half-day. As such, residents have a designated time free from clinical duties to meet with their individual faculty advisors.
9. Within the climate of coaching feedback, learners need to acclimatize to receiving constructive feedback, with areas of improvements being discussed each time. This is not a high stakes pass/fail moment, but a framework to continue their development to the standards of the discipline, as well as striving towards their personal best.
10. Check in with assessors and trainees regularly to monitor their initiated EPA assessments. Send them a scorecard. Most importantly celebrate and acknowledge their efforts. We have monthly rewards for the faculty or trainees who complete the most EPA assessments (Photo 3).

There is no doubt that CBD requires time and effort from both faculty and trainees. However, in line with quality improvement initiatives, we can make the transition to CBD smoother and seamless by collaboratively sharing CBD resources and survival tips. The ultimate goal is worthwhile, and strives to ensure that graduating residents are competent and have the skills and behaviours to meet the evolving patient needs in addition to optimizing patient outcomes.

Shirley Tse, MD, FRCPC
Associate Professor,
Department of Pediatrics,
University of Toronto
Staff Rheumatologist,
Program Director,
The Hospital for Sick Children (SickKids)
Toronto, Ontario

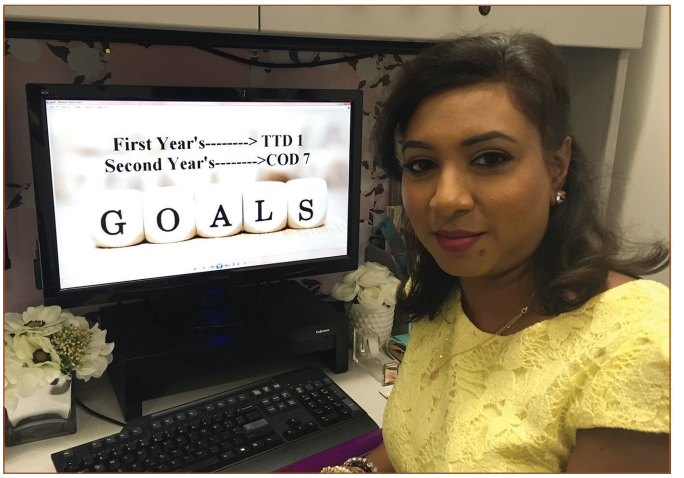


Photo 1: Kamela Ramlackhan (program administrative assistant) creating and sending out the "EPA of the week."

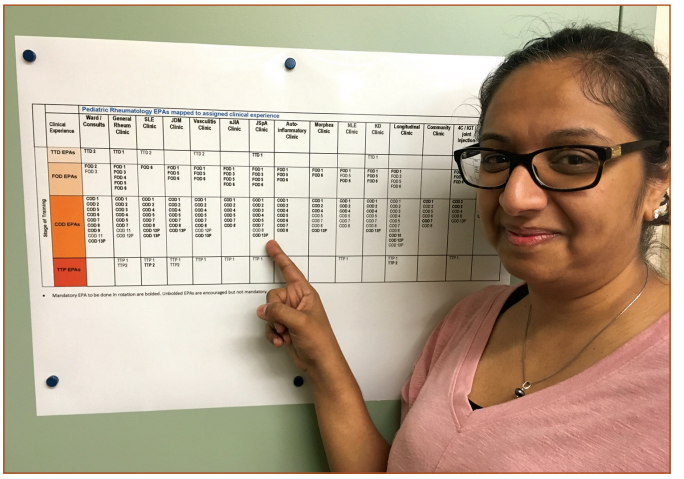


Photo 2: Dr. Piya Lahiry (pediatric rheumatology resident) reviewing and choosing EPAs that can be done during her clinical assignment to juvenile spondyloarthritis clinic.

Photo 3: Dr. Deborah Levy and Dr. Herman Tam celebrate being the first faculty and trainee award recipients for completing the most EPA assessments in July.

Running Your First Chart Audit

By Henry Averns, MD, ChB, FRCP (UK), FRCPC

So you want to run a chart audit; maybe because your regulatory college requires it, or maybe because you have a genuine interest in examining aspects of your practice to achieve long-term improvements. Whatever the reason this is a guide for those of you who are new to the process.

What is a chart audit?

It is a tool for quality improvement to improve processes and outcomes. It is a clinical tool and not a regulatory tool, with the overall aim to review one's own practice to improve patient safety, effectiveness of treatment, and the patient experience. Areas to examine include:

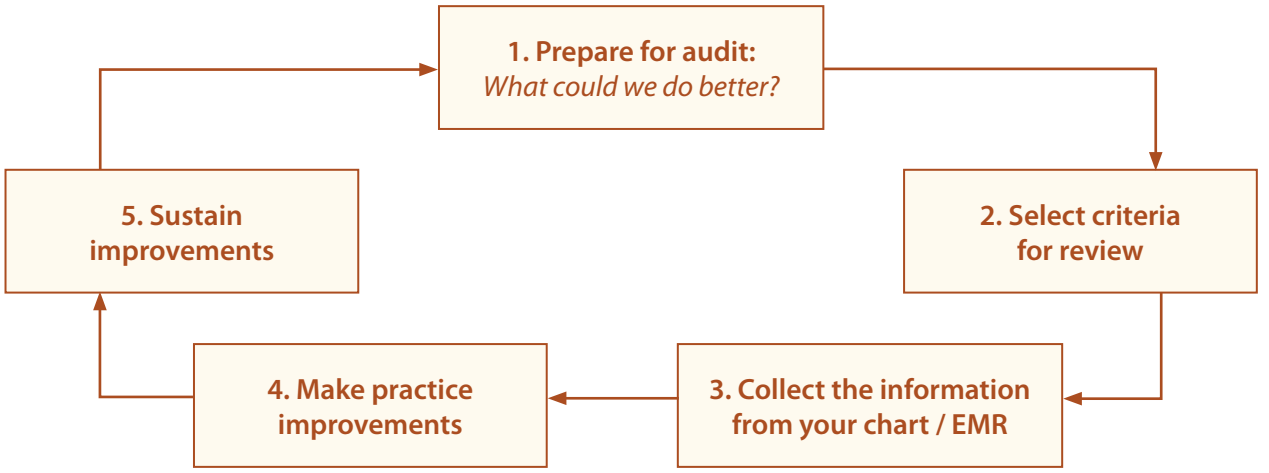
- **The structure of care:** *e.g.* Resources: availability of a therapist, information available for patients.
- **The process of care:** *e.g.* Wait times for potential new RA patients to be seen in clinic.
- **The outcome of care:** *e.g.* Are patients on NSAIDs assessed for gastroprotection?

Generally the audit compares aspects of one's medical practice to defined standards. Importantly, this is an iterative process and NOT simply a one-time survey. A properly conducted chart audit will include an intervention, and then a repeat of the cycle. Be warned, this is addictive and once you get the bug you will be doing this annually – we have performed annual audits in our office since 1996!

Step by step (refer to Figure 1: The Audit Cycle):

1. Identify an area to be audited – are you aware of areas in your practice which may need review? Don't just choose something you know you do well! Find something where you suspect there is a deficiency.
2. Try to find something that will easily incorporate into your current practice – this should not take more than a minute or two per encounter.
3. Derive the standards from high quality guidelines *e.g* those on the CRA website.
4. Define the audit criteria (to compare against the standards). Try to do this in one all-encompassing sentence.
5. Collect the data – I find a simple one-sided form with a VERY limited dataset is easiest. You do not want this to eat into your clinical time too much. Another option is to run a query from an electronic medical record (EMR) – that will depend on your confidence in writing queries, and your data discipline. Hence the one side of paper!
6. Reflect on the results. Are you achieving the standard? Is there a problem which you need to address?
7. Develop action plans to address any deficiencies and institute them. This is the stage most clinicians fail to achieve.
8. Repeat the same audit a few months on to find out whether the changes made have improved the process or outcomes.

Figure 1
The Audit Cycle



9. Develop a system by which to monitor and maintain the improvements once the audit cycle has been completed. Nowadays with EMRs, structural changes to practice are usually very straightforward.

FAQs

How do I choose something to audit?

Often clinical guidelines are a good source for inspiration. Choosing Wisely Canada defines some hot topics. Another wonderful resource is the "versus arthritis" site which has a large number of audit topics with all of the resources you could need to define the audit standard and get cracking quickly.

Visit the folliwng site for more information: *www.versusarthritis.org/about-arthritis/healthcare-professionals/musculoskeletal-impact-toolkit/clinical-audit/*.

How do I define the criteria?

Generally you will come up with a statement, for example:

- 100% of patients going on to biologics will have had hepatitis B/C screening.
- 80% of my patients over the age of 60 will be asked about osteoporosis risk factors and the answers clearly recorded in the EMR.

Do I need ethics approval?

A chart audit does not require ethics approval.

How many charts do I need to audit?

Just enough to answer your question! So if ten out of ten times you have failed to record data which you feel should be in the chart, then after only a few charts you will have identified the intervention required.

How good do I need to be at statistics?

You can be as bad as you like. This does not require complex statistics. Generally you are looking at a percentage of charts where you achieve your defined standard.

Henry Averns, MB, ChB, FRCP (UK), FRCPC
Consultant Rheumatologist
Former President,
Ontario Rheumatology Association
Kingston, Ontario

CBD and You

By Lori Albert, MD, FRCPC

Many physicians are feeling overwhelmed by the changes that are taking place in medical education across the country. New frameworks have been developed, accompanied by new terminology, and seasoned clinicians don't understand what was "wrong" with the way that they were trained as doctors. Wasn't the introduction of CanMEDS enough? After all, the goals have not changed. Medical education systems aim to develop physicians who are competent, knowledgeable, caring, open-minded, patient-centred, and collaborative clinicians to whom we would entrust the care of our loved ones. But the CanMEDS initiative began in the 1990s, and just as our treatment of clinical conditions has evolved over time based on best evidence, the ways in which medical students and residents are educated also needs to evolve, based on evidence from research in the education sciences.

So, competency-based medical education (CBME) has arrived, and it is important that we ask ourselves how we can best engage with it. There are many aspects to CBME, but one of the key underpinnings is an emphasis on coaching.

The promotion of the concept of "coaching" in medical education is meant to stimulate a transition away from a system in which feedback was either not provided at all, or given in a way that was not particularly helpful. Statements like "you did a good job" and "you need to read more," or the assignment of a numerical score out of 5, do not inform trainees of what they are doing right, and don't give them specific suggestions for how to improve. "Coaching feedback" is the same thing that kids get when they take violin lessons or participate on the swim team. It is expected that the teacher or coach will watch them and tell them how to get better in a "teacherly" or coaching kind of way. Coaching feedback for medical trainees is no different. Observation of trainee performance is the key to coaching.

All assessment tools should have some consistency throughout the medical education continuum, and new models of education will emphasize "alignment" of these coaching principles as learners move from student to resident to fellow (and beyond). Undergraduate students are more likely to be receptive to coaching than residents who have established particular patterns of practice, and will benefit from coaching feedback as much or more than senior learners, although the coaching suggestions may be less complex at this level. Observation and coaching help to create links between current and future performance, and assist us in providing more meaningful and standardized ways of assessing trainees.

Longitudinal, consistent emphasis on coaching will improve the effectiveness of our interactions with all trainees, and will lead to a shift in the culture of the clinical environment. In fact, the benefits of effective coaching do not end when one becomes an independent practitioner. An extension of the "alignment" concept supports coaching in the continuing education phase. This idea has been effectively articulated by Atul Gawande. Gawande, himself an experienced surgeon, took on a coach and saw significant improvements in his performance and a drop in his complication rates. He reminds us that we all stand to benefit from a little coaching ourselves. As Gawande says, no matter how well-trained people are, it is difficult to sustain one's best performance on one's own. You can view the excellent TED talk by Gawande at *www.ted.com/talks* or read his article from *the New Yorker* at *www.newyorker.com/magazine/2011/10/03/personal-best*.

As established clinicians benefit from coaching and internally appreciate its value, our effectiveness as coaches will improve, and trainees will benefit as we share our coaching experiences with them. We can also model effective coaching techniques as trainees observe us in our day-to-day interactions. A discussion with a nurse, physiotherapist or assistant about a problem in the office might be much more productive when specific suggestions for improvement are made in a coaching style, based on specific observations.

I recently chatted with a younger friend, who works in the business world. She saw her supervisor as a bully, who called out people for mistakes in front of the whole group and offered no feedback, but only some loaded statements about how things should be done. The medical profession can be a leader in workplace-based training. The promotion of the value of coaching as a key concept in CBME is a welcome development that will help our trainees, and improve our own performance and professional relationships.

Lori Albert, MD, FRCPC
Professor of Medicine,
University of Toronto
Staff Rheumatologist,
Toronto Western Hospital
Toronto, Ontario

EULAR 2019 – Report From Madrid

By Philip A. Baer, MDCM, FRCPC, FACR

EULAR returned to Madrid for the third time in seven years in 2019. I attended in 2013 but missed the 2017 version. The conference was again at the IFEMA *Feria de Madrid*, close to the airport but far from downtown, though both metro and taxis were efficient ways to travel. A direct flight from Toronto was a bonus this time around. The weather was slightly cooler than many expected, but ideal for sightseeing and navigating the conference centre, with its combination of indoor and outdoor areas.

Attendance was over 14,000, with 4,900 submitted abstracts covering all aspects of basic and clinical topics in adult and pediatric rheumatology. The abstract acceptance rate was 45% for presentation and 30% for publication, with 350 oral presentations, 2,226 poster displays and 10 late-breaking posters. More than 500 speakers were involved in the conference.

Canadian content is always high at these meetings. Satellite symposia-featured speakers included Drs. Dafna Gladman, Janet Pope and Carter Thorne, the latter of course discussing the virtues of subcutaneous methotrexate in rheumatoid arthritis (RA). One Canadian, Remy Pollock, PhD, of the Krembil Research Institute in Toronto, received a EULAR basic science abstract award for leading a study on the epigenomic landscape of patients with psoriasis who will develop psoriatic arthritis (Abstract OP0203). Numerous Canadians presented posters and podium sessions; our count would be even higher, but for Johannes Roth being listed as representing Germany and Vivian Bykerk as representing the U.S.

I presented one poster (FRI0109) covering the effectiveness and safety of golimumab and infliximab in RA patients from the BioTrac registry. Otherwise, I had the freedom to roam the conference looking for interesting or novel material. Biosimilar studies and those of newer janus kinase (JAK) inhibitors were prominent, including upadacitinib and filgotinib, as well as the less familiar peficitinib and the Bruton's tyrosine kinase (BTK) inhibitor fenebrutinib. Studies of tapering therapy in controlled RA were topical. Long-term extension studies and integrated safety analyses for many currently marketed biologics and targeted synthetic (ts) disease-modifying antirheumatic drugs (DMARDs) were common, as were analyses drawn for registries, including Canadian stalwarts such as RhumaData, OBRI and RAPPORT. Some of these produced conflicting data, such as the importance of methotrexate as a co-therapy with JAK inhibitors (see FRI0163 vs. SAT0120).

Intriguing abstracts looked at the ability of sarilumab to reduce HgbA1c levels in diabetic RA patients (SAT0121), the benefits of continuing rather than withdrawing biologics in patients who had been hospitalized with severe infections (FRI0112), and the association between baseline anti-nuclear antibodies (ANA) positivity and the development of anti-drug antibodies in patients treated with two tumor necrosis factor (TNF) inhibitors (SAT0155).

Key points of emphasis in lectures included the search for treat-to-target (T2T) strategies in spondyloarthropathies (TICOSPA study ongoing, STRIKE study failed to recruit) and systemic lupus erythematosus (SLE) (using measures such as LLDAS and DORIS). The need to reach a level of proteinuria below 700 mg/day in lupus nephritis patients to preserve long-term renal function was also stressed, which will feature in new EULAR SLE treatment guidelines.

Madrid is a wonderful city for tourists, with a compact downtown suited to walking along *Gran Via*, and through *Plaza Mayor, Plaza d'Espana, Puerta del Sol, Retiro* park, *Salamanca* and many other areas. There were many gastronomic pleasures, once one adjusted to eating most dinners after 9 pm.

Next year EULAR moves to Frankfurt for the first time. Bookmark the dates of June 3-6, 2020, if you want to attend.

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

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† Prescription and physician data were obtained from eXel™ support program enrollment forms collected from June 2014 to November 2018

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Survey on the Use of Temporal Artery Biopsy Versus Doppler Ultrasound for the Work-up of Giant Cell Arteritis

By Edsel Ing, MD, FRCSC, MPH; Qinyuan (Alis) Xu, BSc; and Philip Baer, MDCM, FRCPC, FACR

Abstract

To determine whether temporal artery biopsy (TABx) or doppler ultrasound (US) of the temporal artery is the preferred confirmatory test for giant cell arteritis, an online survey of rheumatologists in Ontario, Canada, was conducted in 2019. There were 71 survey respondents with an estimated survey response of 26%. Ninety percent (90%) of rheumatologists preferred TABx, 6% preferred US, and 3% used neither ultrasound nor TABx. One respondent in the latter group preferred MRI of the head.

Introduction

Temporal artery biopsy (TABx) has long been acknowledged as the "gold standard" confirmatory test in patients with suspected giant cell arteritis (GCA).[1,2,3,4,5,6] However, TABx is an invasive test with potential for facial nerve palsy, hemorrhage, infection, untoward scarring and rarely stroke.

In 2018 the European League Against Rheumatism (EULAR) guidelines suggested that at centres with appropriate equipment and sufficient radiologic expertise doppler ultrasound (US) of the temporal artery or magnetic resonance imaging (MRI) may be first line investigations for suspected GCA.[7] However, others do not concur.[8,9,10]

Materials and methods

Research ethics board approval was obtained from Michael Garron Hospital, and the research was compliant with the Declaration of Helsinki. The online survey was conducted in May and June 2019.

The survey instrument was Survey Planet (*surveyplanet.com/*). The survey questions are shown in Appendix A and are available at *s.surveyplanet.com/UJ2kjVmw6*. The survey software prevented double entries from the same computer or internet protocol (IP) address. Rheumatologists who were members of the Ontario Rheumatology Association were targeted by a mass email and invited to participate in the survey. To maximize responses, the survey was kept anonymous and designed to be completed in 25 seconds. Respondents were allowed to freely text additional details, and their email address if they desired.

The survey margin of error (χ) was determined using the calculator from *www.surveysystem.com/sscalc.htm* and reported as $(+/- \chi)^{95\% \text{ CI}}$ with the superscript denoting a 95% confidence interval.

Results

In total, 71 surveys were completed in an average time of 24 seconds +/- 15 seconds. Our estimated survey response rate was 26% (see Appendix B).

Of the 71 rheumatologists surveyed, 64 $(90.1 +/- 6.0\%)^{95\% \text{ CI}}$ preferred TABx, four $(5.6+/- 4.6\%)^{95\% \text{ CI}}$ preferred doppler ultrasound, and three $(4.2+/- 3.9\%)^{95\% \text{ CI}}$ ordered neither. One rheumatologist from the latter group endorsed MRI head as his preferred investigation.

Discussion

Imaging options for the work-up of GCA include doppler ultrasound of the temporal artery +/- axillary arteries, MRI, computed tomographic imaging and positron emission tomography.

As of 2019, the majority of rheumatologists in Ontario prefer TABx to ultrasound in the work-up of GCA. EULAR guidelines notwithstanding, a systematic review comparing imaging and pathology showed that the hypoechoic halo sign on temporal artery doppler ultrasound had 68% (57%, 78%)$^{95\% \text{ CI}}$ sensitivity and 81% (75%,86%)$^{95\% \text{ CI}}$ specificity compared to a positive TABx.[10] Atherosclerosis can cause false positive halo signs on doppler ultrasound.[11] The low 39% sensitivity for TABx reported in the Role of Ultrasound Compared to Biopsy of Temporal Arteries in the Diagnosis and Treatment of Giant Cell Arteritis (TABUL) study[12] was biased by the following: i) 7% of the TABUL biopsies did not retrieve a temporal artery, but instead structures such as veins, fat, muscle or nerve; and ii) 43% of the TABUL TABx specimens were < 1 cm; and iii) The ACR classification non-biopsy criteria were not intended for the diagnosis of GCA. The EULAR task force conceded that TABx "should be performed in all cases, where GCA cannot be confirmed or excluded based on clinical, laboratory and imaging results."[13]

A potential weakness of our survey is the 26% survey response rate. However, our use of 95% confidence intervals accounts for the response rate. Furthermore, the direct correlation between response rate and study validity has been questioned.[14]

The results of this survey elucidate physician specialty trends in the work-up of GCA, and perhaps aid in the development of future preferred practice patterns. In the future the use of clinical prediction rules[15] in conjunction with improved imaging techniques, and perhaps genetic tests may decrease the reliance on TABx.

Declaration of conflicts of interest statement

The authors report no conflicts of interest.

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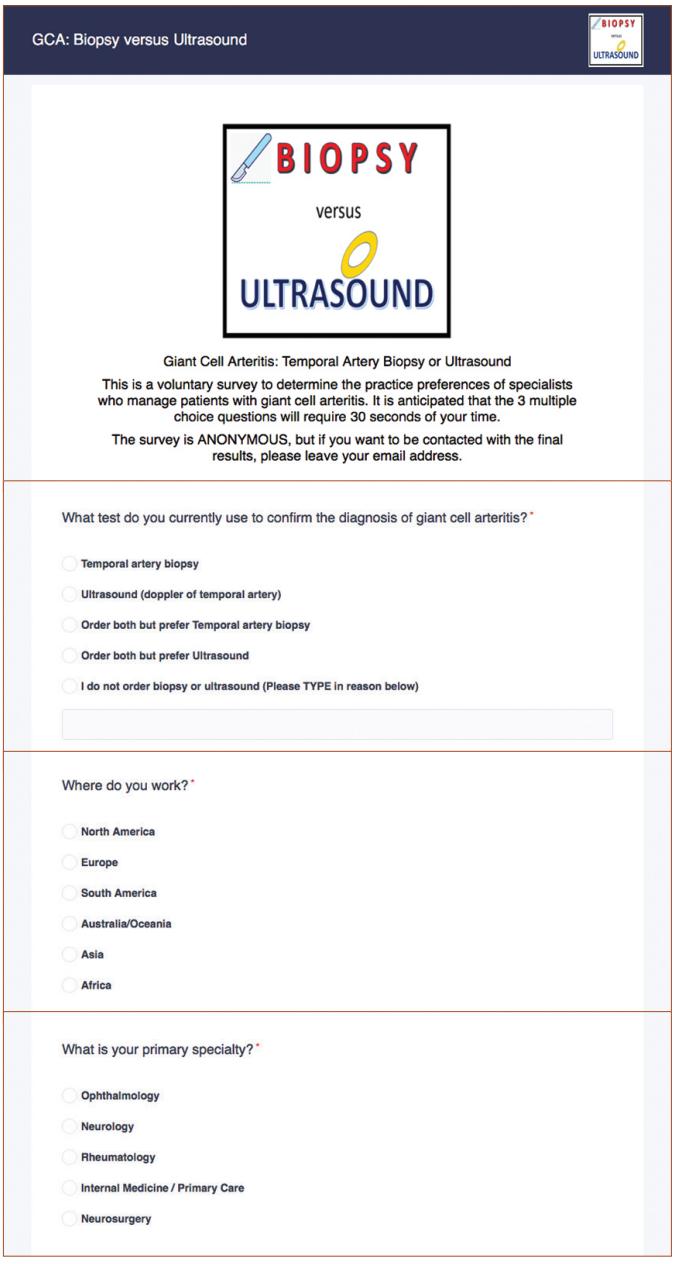
Edsel Ing, MD, FRCSC, MPH
Department of Ophthalmology and Vision Sciences,
University of Toronto
Toronto, Ontario

Qinyuan (Alis) Xu, BSc
Faculty of Medicine, University of British Columbia
Vancouver British Columbia

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

Appendix A: Survey Questions



Appendix B

Estimation of Survey Response Rate:

270 Ontario rheumatologists according to the College of Physicians and Surgeons website.

Calculation of Survey 95% Confidence Intervals:

Available at *www.surveysystem.com/sscalc.htm.*

64/71 rheumatologists in survey prefer TABx.

There are 270 provinically registered rheums. 95% CI is +/- 6.0%.

Assessing Canadian Practice Patterns Regarding Idiopathic Aortitis: A Qualitative Study

By Marissa Keenan, MD, MSc; Nataliya Milman, MD, FRCPC, MSc; and the Canadian Vasculitis Network

Abstract

Objectives – The purpose of this study was to determine current practices of Canadian rheumatologists with respect to two poorly defined conditions: idiopathic aortitis (IA) and isolated aortitis (IsA).

Methods – An online survey was administered to members of the Canadian Rheumatology Association (CRA) using FluidSurveys™ (*www.fluidsurveys.com*) in June 2016.

Results – Sixty-eight of the 420 members of the CRA (16%) took the survey. Most (60%) reported seeing one or fewer cases of IA per year, while 23% (15/66) had never seen a case. Twelve participants (26%) reported making a distinction between IA and IsA. Only 38% of participants routinely performed full imaging of chest and abdominal aortic branches during initial assessments. Approach to management was variable. Participants were more likely to treat (with corticosteroids) aortitis with branch vessel involvement compared to IsA. When faced with an asymptomatic patient with normal inflammatory markers, participants were most likely to treat histologically-confirmed aortitis with branch vessel involvement (61%). Only 2/38 respondents felt "perfectly comfortable" managing patients with these conditions.

Conclusions – IA is rare, resulting in lack of familiarity and variability in practices. Further research is needed to close knowledge gaps and facilitate development of informed recommendations.

Introduction

Aortitis is a broad term used to describe disorders characterized by inflammation in the aorta.[1] Aortitis can be caused by infectious etiologies or a variety of systemic inflammatory conditions.[1] Infectious causes include Salmonella, Staphylococcus, Streptococcus pneumonia, Treponema pallidum, and Mycobacterium tuberculosis.[1] Systemic inflammatory conditions associated with aortitis include giant cell arteritis (GCA), Takayasu's arteritis, Behçet's disease, Cogan's syndrome, granulomatosis with polyangiitis, Kawasaki disease, polyarteritis nodosum, polymyalgia rheumatica, relapsing polychondritis, rheumatoid arthritis, sarcoidosis, Sjogren syndrome, HLA-B27 associated spondyloarthropathies, and systemic lupus erythematosus.[1] Occasionally aortitis is diagnosed in patients without evidence of systemic disease or infectious etiology; this is generally referred to as idiopathic aortitis (IA). In most patients such aortitis is diagnosed radiologically, most often with computed tomography (CT) or magnetic resonance imaging (MRI). In addition, an increasing number of cases are diagnosed when pathologic review of surgical specimens from resected aortic aneurysms shows features of aortitis.[2-4]

IA is not a well-defined condition. No specific pathological or clinical criteria exist for its classification or diagnosis, except for the presence of aortic inflammation and the absence of clinical features of another systemic condition, as described above. Current understanding of IA mostly comes from retrospective studies of patients with aortitis diagnosed pathologically,[2-6] including a recent series from our institution of 47 cases of aortitis, 32 of which were classified as IA.[6]

The term "isolated aortitis" (IsA) refers to a specific type of IA where pathology is confined to the aorta and does not involve aortic branch vessels. The terms "idiopathic" and "isolated" aortitis are often used interchangeably in published literature, and few of the published case reports describe imaging findings beyond the culprit area to allow precise characterization. "Isolated aortitis" was added to the recent 2012 Chapel Hill Consensus Conference Nomenclature of Vasculitides[8] under the category of "Single-organ vasculitis," but no specific definition of this condition was suggested by the Chapel Hill nomenclature. Currently there are no guidelines to direct initial workup, treatment, and subsequent monitoring of patients with either IA or IsA, resulting in great case-to-case variability. A

strong need exists for systematic studies of idiopathic and isolated aortitis, with the ultimate goal of developing guidelines to standardize management of affected patients. The purpose of this study was to determine the current practice patterns of Canadian rheumatologists with respect to patients with IA and IsA.

Methods: Survey design and administration

The study consisted of a survey administered to members of the Canadian Rheumatology Association (CRA) using the online platform FluidSurveys™ (*www.fluidsurveys.com*) between June 13, 2016 and June 24, 2016. The survey was developed by the investigators in consultation with core members of the Canadian Vasculitis Network (CanVasc). The survey was designed to assess how Canadian rheumatologists define, diagnose, monitor, and treat patients with IA and IsA. A copy of the survey is available in the supplementary materials of the online issue of this manuscript. Prior to dissemination, the survey was piloted with a small group (n=4) of rheumatologists at our institution; they provided additional comments and approved the final version.

An e-mail invitation with a link to the survey was sent to members of the CRA by the CRA Communications branch; the survey was offered in English and French. Participants' completion of the online survey constituted implied consent; participation was anonymous. Participants had two weeks to complete the survey; two reminder emails were sent out, at day 7 and on the last day of the survey.

Survey analysis

Data was extracted by the FluidSurveys™ software, and Microsoft Excel software (version 2010) was used for descriptive analysis. Ethics approval was obtained through the Ottawa Hospital Research Institute [(OHRI-RED protocol #4473)].

Results

Seventy-four of the 420 (18%) members of the Canadian Rheumatology Association responded, 68 (16%) took the survey, and 60/68 (88%) completed it.

Demographics

Baseline characteristics of respondents are presented in Table 1. The majority of participants were adult rheumatologists (54/66, 82%) between ages of 35 and 55 (40/66, 61%), practicing at an academic institution (44/64, 69%), with half (33/66)

Table 1: **Baseline Characteristics of Survey Respondents**

Characteristic	No. (%) of respondents out of 66*
Age	
< 35	11 (17)
35-45	21 (32)
46-55	19 (29)
56-65	6 (9)
>65	9 (14)
Province of practice	
Alberta	9 (14)
British Columbia	6 (9)
Manitoba	1 (2)
New Brunswick	1 (2)
Newfoundland	0
Northwest Territories	0
Nova Scotia	3 (5)
Nunavut	0
Ontario	33 (50)
Prince Edward Island	0
Quebec	9 (14)
Saskatchewan	4 (6)
Yukon Territory	0
Specialty	
Trainee	9 (14)
Adult Rheumatology	54 (82)
Pediatric Rheumatology	0
Primary Care	1 (2)
Internal Medicine	2 (3)
Immunology	0
Years in practice	
Trainee	9 (14)
1-5	16 (24)
6-10	6 (9)
11-20	18 (27)
21-29	6 (9)
>30	11 (17)
Practice setting	
Solo community	14 (22)
Group community	2 (3)
Community with academic affiliation	4 (6)
Academic/teaching hospital	44 (69)
Member of CanVasc	
Yes / No	12 (19) / 52 (81)
Number of patients with IA and/or IsA seen over course of practice	
0	15 (23)
1-3	28 (42)
4-9	17 (26)
10-19	4 (6)
>20	2 (3)

* 64 out of 66 participants provided their practice setting (including membership in CanVasc)

Table 2: **Approximate Number of Patients with IA and/or IsA Seen By Participants Per Year**

Number of patients seen per year	No. (%) of participants out of 47
0 to 1	28 (60)
2 to 5	17 (36)
6 to 10	1 (2)
11 to 15	0
16 to 20	1 (2)
> 20	0

of respondents based in Ontario. Twelve participants (19%) were core or associate members of CanVasc. Fifteen of the 66 (23%) participants reported having never seen a patient with IA or IsA over the course of their practice (Table 1); these subjects did not proceed to subsequent parts of the survey.

Definitions

Nearly all participants (46/47) felt excluding a defined systemic inflammatory condition was required for definition of IA. In addition, nearly half of participants (20/44) felt exclusion of radiographic abnormalities in aortic branch vessels was also required. The majority of participants (39/45, 87%) reported that inflammatory markers were irrelevant when diagnosing idiopathic aortitis.

Twelve of 47 participants (26%) reported making a distinction between IA and IsA. Of these participants, most considered exclusion of a defined systemic inflammatory condition (10/12, 83%) and radiographic abnormalities in aortic branch vessels (9/12, 75%) were required for the definition of IsA, and 9/12 (75%) felt that inflammatory markers were irrelevant for this definition.

Referrals

Vascular or cardiac surgery were the most common sources of referrals of patients with IA and IsA, having referred patients to 40/46 (87%) of participants. The majority of participants see one or fewer new patients with IA and/or IsA per year (see Table 2). The most common reason for referrals were the incidental finding of a vascular abnormality suggestive of aortitis on an imaging study (39/47, 83%) and the finding of positive pathology for aortitis post-aneurysm or aortic valve repair (34/47, 72%). Less common reasons for referrals were discovery of a thoracic aortic aneurysm in a patient with systemic symptoms/signs or other features of a systemic inflammatory condition (23/47, 49%), and discovery of a thoracic aortic aneurysm in a patient with past history of a defined systemic inflammatory condition known to be associated with aortitis (13/47, 28%).

Initial workup

Forty-five participants answered questions regarding initial workup of patients with IA; 13/45 (29%) reported they were the referral expert physician for vasculitis at their center (8 were CanVasc members). When assessing patients with suspected IA or IsA, most participants "always" screened for symptoms or signs suggestive of aortic branch vessel involvement (41/45, 91%), symptoms or signs of a defined systemic inflammatory condition (41/45, 91%), and for infectious signs and symptoms (38/45, 84%). With regards to laboratory investigations, all 45 respondents reported regularly testing complete blood count (CBC), renal function, and C-reactive protein (CRP). However, consistent testing to exclude tuberculosis and syphilis is less common, reported by 19 (42%) and 35 (78%) participants, respectively. Performing consistent cross-sectional imaging (CT or MR) of the whole aortic tree and its major branches in chest and abdomen was reported by 17 (38%) participants.

Treatment

Participants were asked to indicate their treatment approach to four hypothetical clinical scenarios (see Figure 1): aortitis diagnosed on imaging with and without aortic branch vessel involvement (scenarios 1A and 1B, respectively), and aortitis diagnosed on pathology (with the involved area of aorta surgically removed) with and without aortic branch vessel involvement (scenarios 2A and 2B, respectively). Irrespective of the mode of diagnosis, participants were more likely to treat (with corticosteroids) aortitis with aortic branch vessel involvement. Participants were least likely to treat isolated aortitis with the involved aorta surgically removed (scenario 2B), with more than a third of participants "never" treating such patients. Notably, we did not find significant differences in treatment approaches of participants by type of practice, including practicing at a vasculitis referral center.

For each of the clinical scenarios, participants were then asked whether they would treat (with corticosteroids) asymptomatic patients in the setting of different levels of systemic inflammatory response (as assessed by inflammatory markers, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP)) (see Table 3). Most participants reported they would treat asymptomatic patients with significantly elevated inflammatory markers irrespective of the clinical scenario. In the setting of normal or mildly elevated inflammatory markers, participants were most likely to treat aortitis diagnosed on pathology with presence of additional aortic and/or branch vessel lesions (scenario 2A).

Figure 1: **Treatment-related Responses Based on Four Hypothetical Clinical Scenarios**

Scenario 1:
Aortitis diagnosed on **imaging**
(*i.e.*, involved aorta is in situ)

Scenario 1A:
Documented involvement of aortic branch vessels
(*i.e.*, idiopathic aortits)

Likelihood of treatment*	No. (%) of participants
Always (or almost always)	20/42 (48)
More often than not	16/42 (38)
About half the time	1/42 (2)
Sometimes	4/42 (10)
Never (or very rarely)	1/42 (2)

Scenario 1B:
No evidence aortic branch vessel involvement
(*i.e.*, isolated aortitis)

Likelihood of treatment*	No. (%) of participants
Always (or almost always)	11/41 (27)
More often than not	17/41 (42)
About half the time	7/41 (17)
Sometimes	6/41 (15)
Never (or very rarely)	0/41 (0)

Scenario 2:
Aortitis diagnosed on **Pathology**
(*i.e.*, involved aorta was surgically removed)

Scenario 2A:
Documented involvement of aortic branch vessels
(*i.e.*, idiopathic aortits)

Likelihood of treatment*	No. (%) of participants
Always (or almost always)	21/38 (55)
More often than not	11/38 (29)
About half the time	1/38 (3)
Sometimes	4/38 (11)
Never (or very rarely)	1/38 (3)

Scenario 2B:
No evidence aortic branch vessel involvement
(*i.e.*, isolated aortitis)

Likelihood of treatment*	No. (%) of participants
Always (or almost always)	7/38 (18)
More often than not	8/38 (21)
About half the time	1/38 (3)
Sometimes	9/38 (24)
Never (or very rarely)	13/38 (34)

*Likelihood is determined as % of participants who chose the specific response option. Treatment was defined as use of glucocorticoid and/or an immunosuppressive agent

Follow up and monitoring

Most respondents reassessed their patients with IA every three months in the first two years after diagnosis (27/38, 71%). More than three quarters of respondents were following these patients with CBC, creatinine, ESR, and CRP at every visit. In addition, the majority of participants were performing CT (angiogram) or MR (angiogram) every 6 to 12 months (28/35, 80%). Notably, 4 respondents (11%) reported never ordering follow-up imaging for IA patients with documented radiographic involvement of

Table 3: **Likelihood of Treating Asymptomatic Patients Based on Inflammatory Markers, Under the Four Scenarios Described Above#**

Mode of diagnosis		Imaging		Pathology	
Branch vessel involvement (scenario*)					
		Yes (1A)	No (1B)	Yes (2A)	No (2B)
Inflammatory markers					
	Normal	30 (16-44)	26 (12-40)	61 (45-77)	23 (9-37)
	Slightly elevated	70 (56-84)	65 (50-80)	83 (71-96)	46 (29-62)
	Significantly elevated	100 (92-100)	98 (93-100)	97 (92-100)	92 (83-100)

#Numbers in the cells represent % of participants (CI) *Scenarios as depicted in Figure 1. 1A, aortitis diagnosed on imaging with branch vessel involvement; 1B, aortitis diagnosed on imaging without branch vessel involvement; 2A, aortitis diagnosed on pathology with branch vessel involvement; 2B, aortitis diagnosed on pathology without branch vessel involvement .

aortic branch vessels at baseline. The monitoring approaches did not differ for aortitis diagnosed on imaging or on pathology.

When asked about participants' comfort level in managing patients with IA or IsA, the majority of participants responded being "somewhat uncomfortable" 17/38 (45%), followed by "reasonably comfortable" 14/38 (37%), and "very uncomfortable" 5/38 (13%); two participants (5%) reported feeling "perfectly comfortable" managing these patients. Thirty six of 37 participants (97%) felt that the development of recommendations for the management of patients with IA and/or IsA would be beneficial.

Interpretation

Canadian rheumatologists are not familiar with IA and IsA, with nearly a quarter of participants reporting having never seen a patient with these conditions in their practice. The majority of participants reported seeing one or fewer cases per year. Only a small percentage of participants (5%) reported being "perfectly comfortable" managing patients with IA and/or IsA. As a result of insufficient volume of IA patients combined with lack of clinical guidelines, great variability was observed in this study with respect to various aspects of management of IA.

Only a quarter of participants reported making a distinction between IA and IsA. This is not surprising, given that the two terms are frequently used interchangeably in published literature.[1-2,4,9] We consider IA when aortitis is seen in the absence of clinical features sufficient for diagnosis of an underlying systemic condition, most commonly GCA. IsA is a specific subtype of IA that is confined to the aorta. Complete imaging of the aortic branch vessels would be required to exclude branch vessel involvement and allow the diagnosis of IsA; reassuringly, three quarters of participants who made the distinction between IA and IsA considered exclusion of radiographic abnormalities in aortic branch vessels important for definition of IsA. Although the Chapel Hill nomenclature's classification of IsA as a "single organ vasculitis" suggests that significant level of systemic inflammation should not be seen in this condition, this is not the case in our experience,[6] the experience of participants of this study (75% of whom felt the level of inflammatory markers was irrelevant for definition of IsA), and in published literature.[5]

The majority of respondents performed thorough clinical and biochemical assessments of patients with IA and IsA. However, only 38% performed full imaging of chest and abdominal aortic branch vessels. In the case series of IA from the Mayo Clinic,[2] the majority of patients (89%) underwent additional vascular imaging (*i.e.*, CT and MR angiography). Additional vascular abnormalities were frequent, present in 72% of imaged patients. In the recently published case series from our centre, 21 of the 32 patients (66%) identified as having IA had complete imaging of branch vessels at baseline[6]; 15(71%) of them were found to have branch vessel lesions and three (14%) had additional aortic lesions. In our opinion, given the high prevalence of additional vascular lesions, imaging of the whole aortic tree and its branches should be a standard part of the initial workup.

There is currently no standardized approach to medical therapy following diagnosis of IA, resulting in great uncertainty. The reported rates of corticosteroid use for treatment of IA range from 9% to 38% in the published literature[2-4,6-7]. Furthermore, there is a lack of information on how to direct treatment in specific clinical scenarios, such as presence of branch vessel disease or based on the level of inflammatory response. As would be expected, Ca-

nadian rheumatologists are more likely to treat disease with more extensive radiographic involvement or high levels of systemic inflammation. Interestingly, when faced with an asymptomatic patient with normal inflammatory markers, our participants appear to be most likely to treat in the presence of branch vessel abnormalities, and with a histologic as opposed to radiographic diagnosis of aortitis. This likely points to the relatively bigger consensus on histologic definition of aortitis[9] compared to radiographic definition, with the latter being an area of significant controversy.[10]

A significant weakness of our study is the low response rate of 18%. According to the CRA, a typical response rate of surveys of this nature is 20-30%. We suspect this lower than average response rate reflects the rarity of idiopathic aortitis, resulting in many CRA members not participating due to lack of applicability of the survey subject to their individual practice. Supporting this theory is the significant over-representation in the respondents of academic rheumatologists with a primary practice based at a teaching hospital (69% of all participants, 55% excluding trainees), where patients with rare diseases like IA are most likely to be referred; the percentage of all Canadian rheumatologists with a university-based practice was estimated to be 40% in a recently published national survey.[11] Targeting CRA members likely contributed to the overrepresentation of academic rheumatologists in our study, as they are more likely to be members of the CRA than those in solo community practice.[11] Further selection bias was likely introduced by increased likelihood of response from rheumatologists who personally know this study's investigators; this is demonstrated by the overrepresentation of Ontario rheumatologists in this study (50%) compared to national estimates of 38%.[11] The low response rate and the overrepresentation of academic rheumatologists limits the generalizability of our findings to the entire Canadian rheumatology community. However, our results represent the views of the group of rheumatologists who have the most experience in IA, and whose opinions will therefore be most valuable for shaping of future recommendations to guide management of these conditions. Researcher bias in the development of the survey is another potential weakness of this study. As the investigators of the study, we designed the survey based on our personal experiences and knowledge regarding aortitis. The specific questions and the proposed response options likely biased the participants' answers towards our (investigators') views. In an attempt to minimize such bias, the survey was reviewed and modified by the core members of the CanVasc society and piloted with a small group of rheumatologists prior to its dissemination.

In conclusion, great variability is observed amongst Canadian rheumatologists with respect to definitions, work-up, treatment, and monitoring of patients with IA and IsA. Members of the CRA report uncertainty when managing these patients, identifying a strong need for recommendations to guide decisions. Based on our literature review, this study is the first report to evaluate the practice patterns of Canadian rheumatologists (or any group of rheumatologists, as no similar studies in IA have been published) with regards to idiopathic arthritis. Additional high quality (more systematic and/or prospective) research should be the first step to clarifying the best approach to IA, which will ultimately allow development of these much-needed guidelines.

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Marissa Keenan, MD, MSc
Rheumatology Fellow,
Department of Rheumatology,
The Ottawa Hosptial
Ottawa, Ontario

Nataliya Milman, MD, FRCPC, MSc
Rheumatologist,
Department of Rheumatology,
The Ottawa Hosptial
Ottawa, Ontario

The Canadian Vasculitis Network (CanVasc)

Medical Education 2.0 Making Good Residents Better: A Follow Up to the CRA ASM Great Debate 2019

By Heather McDonald-Blumer, MD, FRCPC, MSc (HPTE); Mercedes Chan, MBBS, FRCPC, MHPE; Elizabeth M. Hazel, MD, FRCPC; Marie-Paule Morin, MD, FRCPC, PhD(c); and Raheem B. Kherani, BSc (Pharm), MD, FRCPC, MHPE

Background

Just over 100 years ago, medical education changed dramatically with the publication of the Flexner Report. This resulted in the development of undergraduate and post graduate medical education as we have known these programs for all of our professional lives.

However, given the need to ensure that all physicians graduating from residency training programs are appropriately competent, over the last 10-15 years, medical educators and patient stakeholders have been re-evaluating how medicine is taught. This has resulted in the worldwide movement towards competency-based medical education (CBME). The goal of training is to ensure physicians are able to do what they need to do, so as to practice all aspects of their specialty effectively and safely.

To align with this outcome-based philosophy, the Royal College of Physicians & Surgeons of Canada has been working with our specialty committee and program directors to develop discipline-specific competency-based medical education curricula. The Royal College has labelled their specific CBME guidelines as Competence by Design (CBD).

As of July 1, 2019, PGY-4s in Canadian rheumatology training programs are now participating in the CBD curriculum, part of the third cohort of programs changing to this new format.

Stages of Training and Entrustable Professional Activities (EPAs)

The practice of rheumatology requires the core knowledge and skills to allow accurate assessment and state-of-the-art treatment of patients with complex rheumatologic diseases. As such, what rheumatology residents must learn will not change, other than the need to incorporate into their learning and practice the scientific and therapeutic advancements that are an intrinsic part of practicing medicine today. The mixture of actually seeing patients, attending rounds and formal teaching sessions, giving presentations and going to our discipline-specific meetings will also not change.

What will change is how residents are assessed. There will be greater emphasis on watching and listening more diligently (direct observation) to ensure that residents can actually do what we think they can do. There will be multiple low-stakes or formative assessments rather than a few major evaluations. Also different from the past will be how this assessment is documented – on electronic platforms and, ideally, in real-time.

Stages of Training

Rheumatology training programs, for the foreseeable future, will remain a two-year postgraduate program following internal medicine or pediatric core training. Those two years will be divided into four stages: 1. Transition to Discipline; 2. Foundations of Discipline; 3. Core of Discipline; and 4. Transition to Practice. These stages focus the resident's learning from the key issues they need to know in the first several blocks of their rheumatology training through to the important issues that they should address as formal training nears completion and they move toward independent practice.

As clinical supervisors, our expectations of the resident will change as they move across the stages of training. This is not new, but now there are well-articulated benchmarks which will help supervisors determine what specific level of skill a resident should have at a certain stage (timepoint) in training.

EPAs

Perhaps the biggest change or challenge is to understand the new concept of EPAs. The Royal College defines EPAs as the key tasks of our discipline that a resident (or physician) can be expected or trusted to perform in a given healthcare context, once sufficient competence has been demonstrated. The EPAs cover all of the tasks that we do as rheumatologists. To be "entrusted," the resident must be able to perform the task independently.

There are 24 EPAs for the adult rheumatology residents and 25 for the pediatric rheumatology residents. EPAs are

The 2019 CRA ASM Great Debate Team; Pictured from left to right: Dr. Mercedes Chan, Dr. Marie-Paule Morin, Dr. Raheem B. Kherani (Chair), Dr. Elizabeth M. Hazel, and Dr. Healther McDonald-Blumer.

organized according to the resident's stage of training and increase in complexity over time. Each clinical activity (EPA) is broken down into its key components (known as milestones) which can be used to help supervisors give the resident timely and specific feedback on their performance and identify areas for improvement. Residents will keep track of which EPAs they want a clinical supervisor to review with them each day. In order to determine if a resident is able to complete a specific task independently (autonomously), supervisors will have to directly observe the activity in question.

Examples of EPAs

For a resident as they start their training, an expected task would include: Performing histories and physical examinations in uncomplicated patients with rheumatologic disease, including documenting and presenting findings.

Later in the year, you would expect the resident would be successful in assessing and providing initial diagnosis and treatment plans for patients with uncomplicated rheumatology presentations.

Our program directors have done a huge amount of work over the last several years to prepare their respective schools for CBD. PGY-4 residents are highly engaged in the process. Combined, their efforts are facilitating change. Faculty and clinical supervisors are being asked to integrate the new system into clinical work. While change can be challenging, the bottom line remains the same: All of us who supervise rheumatology residents in our clinical settings will continue to see patients with them, and help residents learn to provide exemplary care to their patients.

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The 2019 CRA Great Debate Team:

Heather McDonald-Blumer, MD, FRCPC, MSc (HPTE)
Division Director, Rheumatology
Director, CBD Planning and Implementation (Medicine),
University of Toronto
Toronto, Ontario

Mercedes Chan, MBBS, FRCPC, MHPE
Program Director,
Pediatric Rheumatology,
University of British Columbia
Vancouver, British Columbia

Elizabeth M. Hazel, MD, FRCPC
Clinical Associate Professor,
Program Director,
Adult Rheumatology,
McGill University
Montreal, Quebec

Marie-Paule Morin, MD, FRCPC, PhD(c)
Division of Rheumatology and Immunology,
CHU Sainte-Justine Department of Pediatrics,
University of Montreal
Montreal, Quebec

The 2019 CRA Great Debate Chair:

Raheem B. Kherani, BSc (Pharm), MD, FRCPC, MHPE
CRA Education Committee Chair,
Clinical Associate Professor,
University of British Columbia
Vancouver British Columbia

ECHO Rheumatology: Improving Access to Rheumatologic Care in Underserviced Areas Through Capacity Building

By Claire Bombardier, MD, FRCPC; Amanda Steiman, MD, MSc, FRCPC; Rhonda Mostyn, ECHO Project Manager; and Jane Zhao, MSc, ECHO Research Coordinator

Overview

ECHO (Extension for Community Healthcare Outcomes) is a collaborative model of medical education and care management, linking health care providers in far-flung communities with interprofessional specialist teams at urban centers. The ECHO model uses videoconference technology to create a virtual learning group during weekly sessions.

ECHO supports the delivery of the right care at the right time for many complex and common clinical conditions. This model started in New Mexico for Hepatitis C, and has expanded globally, riding on evidence of success for providers and patients. There are now sixteen ECHO programs running in Ontario, with three offered at University Health Network (UHN): Rheumatology, Chronic Pain, and Liver.

Who We Are

In January 2017, UHN in Toronto launched ECHO Rheumatology. Drs. Claire Bombardier and Amanda Steiman co-lead the program with the aim of transferring knowledge, while building confidence and skills to treat rheumatological conditions across the province. The interprofessional specialist team includes three rheumatologists (Claire Bombardier, Amanda Steiman, and Wes Fidler), two ACPAC (or Advanced Clinician Practitioner in Arthritis Care) physiotherapists (Mandy McGlynn and Laura Passalent), one registered nurse (Anne Cymet), one nurse practitioner (Elizabeth Lee), and two pharmacists (Carolyn Whiskin and Jadie Lo).

How ECHO works

ECHO Rheumatology videoconference sessions are on Fridays from 12:00 to 1:30 pm Eastern. Each session is CME-accredited and comprised of a brief didactic presentation on topics related to rheumatology management in primary care, followed by patient case discussions.

All patient cases are real, de-identified and presented by the health care provider participants. The patient cases are where the bulk of the learning occurs. They serve as a springboard for roundtable discussion of differential diagnosis, approaches to workup and treatment, and management.

The interprofessional specialist team and community-based healthcare providers meet for their weekly ECHO session.

The practical consequence is both local and wide-reaching. Locally, the provider learns how to take next steps in a patient's workup and management; more broadly, the other participants take away an approach to similar problems in their respective clinics. Thus, unlike traditional telemedicine, which impacts only the participating provider and their patient, ECHO leverages the sessions to foster a one-to-many community.

ECHO Rheumatology eliminates frustration felt by providers and patients alike, who endure lengthy waiting times to see a rheumatologist. Outcomes from ECHO programs have measured provider improvements in confidence, skills and competence related to rheumatologic management. Providers learn how to initiate workup, formulate a differential diagnosis, manage patients on DMARDs, manage patients with non-pharmacological approaches like exercise, and collaborate effectively with rheumatologists. It reflects a true symbiosis.

After attending ECHO Rheumatology, a family doctor in northern Ontario said, "I feel now that a patient can come into my office and I can make a reasonable estimate about the probability that this person has an inflammatory arthritic condition, maybe even an issue of treatment to make a clear diagnosis, certainly make a much more coherent attempt at diagnosing them."

How do I join ECHO?

1. Register at *uhn.echoontario.ca/register/*.
2. Attend a live, weekly videoconference session.
3. Participate in group discussions, receive fast-track consults from a group of interprofessional specialists.
4. Receive no-cost CME credits.

JOINT COMMUNIQUÉ

New Resources for Managing Arthritis at Work

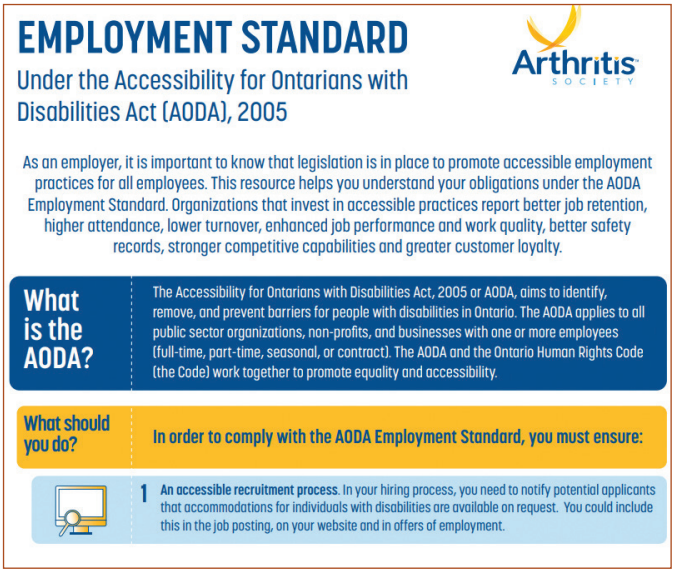
By the Arthritis Society

Many readers will be familiar with the online learning resources (*arthritis.ca/support-education/online-learning*) the Arthritis Society makes available to help your patients better understand and self-manage their condition and symptoms in between rheumatologist appointments.

We have recently added some new resources to our online library to help address another key aspect of living with arthritis: Arthritis and Work (*arthritis.ca/support-education/arthritis-and-work*). Advised by experts from the Institute of Work and Health and supported by the Ontario Ministry of Seniors and Accessibility's EnAbling Change Program, our new resources include:

- **FOR EMPLOYEES:** A video and podcast to help workers understand their rights and how to communicate their needs to their employers.
- **FOR EMPLOYERS:** A PDF guide to Employment Standards, and accompanying video and podcast to help employers better understand their employees' needs and recognize the benefits of accommodating those needs for their shared success.

These resources supplement our existing workplace tools such as our Arthritis and Work learning module, Joint Matters at Work checklists and more to keep your patients healthy and contributing to the success of their families and communities through productive work.


EMPLOYMENT STANDARD

Under the Accessibility for Ontarians with Disabilities Act (AODA), 2005

Arthritis Society

As an employer, it is important to know that legislation is in place to promote accessible employment practices for all employees. This resource helps you understand your obligations under the AODA Employment Standard. Organizations that invest in accessible practices report better job retention, higher attendance, lower turnover, enhanced job performance and work quality, better safety records, stronger competitive capabilities and greater customer loyalty.

What is the AODA?

The Accessibility for Ontarians with Disabilities Act, 2005 or AODA, aims to identify, remove, and prevent barriers for people with disabilities in Ontario. The AODA applies to all public sector organizations, non-profits, and businesses with one or more employees (full-time, part-time, seasonal, or contract). The AODA and the Ontario Human Rights Code (the Code) work together to promote equality and accessibility.

What should you do?

In order to comply with the AODA Employment Standard, you must ensure:

1 **An accessible recruitment process.** In your hiring process, you need to notify potential applicants that accommodations for individuals with disabilities are available on request. You could include this in the job posting, on your website and in offers of employment.

You can find our full suite of workplace resources at *www.arthritis.ca/work*. We encourage you to pass the link along to any of your patients who are of working age.

ECHO Rheumatology

(Continued from page 24)

Claire Bombardier, MD, FRCPC
Professor of Medicine, University of Toronto
Senior Scientist, Toronto General Research Institute, University Health Network
Rheumatologist, Mount Sinai Hospital
Co-Chair, ECHO Rheumatology
Toronto, Ontario

Amanda Steiman, MD, MSc, FRCPC
Assistant Professor of Medicine, University of Toronto
Clinician in Quality and Innovation
Rheumatologist, Sinai Health System/ University Health Network
Co-Chair, ECHO Rheumatology
Toronto, Ontario

Rhonda Mostyn
Project Manager, ECHO at UHN
Toronto Rehabilitation Institute
University Health Network
Toronto, Ontario

Jane Zhao, MSc
Research Coordinator, ECHO at UHN
Toronto Rehabilitation Institute
University Health Network
Toronto, Ontario

Survey Results: Methotrexate Prescribing Patterns in Canada

By Dr. Shirley Lake, on behalf of the CRA Choosing Wisely sub-committee

This issue's Joint count survey focused on methotrexate (MTX) prescribing and monitoring patterns in Canada. The survey results show that there is wide variability in how rheumatologists across Canada use MTX in their patients. A total of 126 responses were received from CRA members out of a possible 548, equating to a 23% response rate. Both community and academic rheumatologists responded, representing 27% and 53% of respondents, respectively. Another 20% of respondents said they worked in both settings.

When asked about what tests are ordered when a patient is started on MTX, it seems there are some tests that all rheumatologists order (CBC, creatinine, and ALT), and some that they don't order (INR), but a great variability in the rest. Recommendation 10 from the CRA guidelines on MTX may provide guidance in this case.[1] They state that "A complete blood count (CBC) (level of evidence II), liver (I) and renal biochemistry (II), and a chest radiograph (II) should be ordered prior to initiating MTX therapy. Screening for hepatitis B and C should be considered (III), and HIV testing is recommended in high-risk patients (IV)."[1]

With respect to the starting dose of MTX, there is much variability here as well. Per recommendation 11 of the CRA guidelines, the starting dose should be individualized to the patient based on clinical response and tolerability.[1]

Regarding the dose of folic acid prescribed with MTX, based on the survey results, more than 55% of respondents prescribe 5 mg per week, and more than one third prescribe 10-30 mg per week; another 7% prescribe > 30 mg per week. While the CRA rheumatoid arthritis (RA) management guidelines allow for variation in MTX dosing and routes, they do not provide evidence-based recommendations on folic acid. However, these survey results are consistent with a multinational evidence-based recommendation that states that "Prescription of at least 5 mg folic acid per week with MTX therapy is strongly recommended." [2]

Regarding monitoring for toxicities, the multinational recommendation says that "When starting methotrexate or increasing the dose, ALT (with or without AST), creatinine and CBC should be performed every 1–1.5 months until a stable dose is reached and every 1–3 months thereafter; clinical assessment for side effects and risk factors should be performed at each visit."[2] The majority of survey respondents followed this guideline to check monthly at first, and then every three months. With that said, only three tests need to be monitored (ALT, creatinine, CBC), but many respondents answered that they also monitor serum albumin.

Overall, there seems to be wide variability in how rheumatologists across Canada manage MTX. Physicians who prescribe MTX should be experts in the underlying conditions and in individualizing the dosing and monitoring of MTX; rheumatologists could certainly lead in this area. While the CRA guidelines will be updated, they are still a standard to abide by. The guidelines are available at *rheum.ca/resources/publications/canadian-recommendations-for-management-of-ra/*.

Ultimately, updated guidelines from the CRA regarding MTX monitoring would be very helpful to guide care–particularly if non-rheumatologists are also doing some of the monitoring of patients in some parts of the country.

For any questions or feedback regarding this survey, contact Sue Ranta at *sranta@rheum.ca*.

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Table 1.
What dose do you start your patients on MTX?

Dose of MTX	Percent
6-10 mg	10 %
11-15 mg	31 %
16-20 mg	31 %
21-25 mg	28 %

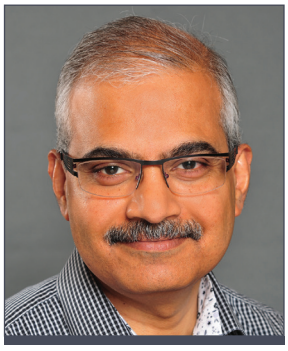
Table 2.
How much folic acid do you use with MTX?

Dose of folic acid	Percent
0 mg	1 %
5 mg/week	57 %
10-30 mg/week	35 %
> 30 mg	7 %

Dr. Sasha Bernatsky – *AAC 2018 Knowledge Translation Practice Award*

Dr. Sasha Bernatsky, Professor of Medicine at McGill University, was the recipient of The Arthritis Alliance of Canada's (AAC) 2018 Knowledge Translation (KT) Practice Award. "Throughout my career, I have always strived to communicate my research results effectively, not only to the scientific community but also to other stakeholders including policy makers, patients, and others. It is truly an honour to receive the AAC's KT award." says Dr. Bernatsky. Her research focuses on outcomes in rheumatic diseases, including morbidity, mortality, environmental factors and the economic impact of conditions such as systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). She has established herself as a leader in research and knowledge translation in the field, publishing an average of 20 papers yearly and has an h-factor of 45.

Dr. Bernatsky is an active member in numerous research networks, leading international initiatives on rheumatic disease research. As co-P(Principal Investigator), she helped develop the CAnadian Network for Advanced Interdisciplinary Methods for comparative effectiveness research (CAN-AIM) to provide new, accurate data on long-term, real-world outcomes for the Drug Safety and Effectiveness Network (DSEN), a joint initiative between the Canadian Institutes for Health Research and Health Canada. She works closely with Health Canada and other knowledge users to respond to queries that highlight priority areas in studying drug therapies, including drugs for RA and ankylosing spondylitis.



Dr. Vinod Chandran – *Elected to the GRAPPA executive committee*

Dr. Vinod Chandran, a rheumatologist and Associate Professor of Medicine at the University of Toronto, was elected to the executive committee of the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) at the recently held annual meeting of the organization in Paris, France. GRAPPA is an international non-profit, educational and scientific organization of rheumatologists, dermatologists, radiologists, geneticists, methodologists, epidemiologists, patient research partners, and industry representatives that aims to increase awareness of psoriatic disease, develop and validate assessment tools for psoriasis and psoriatic arthritis, promote clinical and basic research and foster interdisciplinary collaboration and communication with advocacy organizations, industry, regulatory agencies, and other concerned bodies. The organization currently has more than 900 members.

Dr. Rayfel Schneider – *2019 Council Award*

At its most recent meeting, the College presented its Council Award to Dr. Rayfel Schneider, an international leader in the development of new treatments and standards of care in juvenile arthritis and associated inflammatory diseases. Dr. Schneider is a staff physician at The Hospital for Sick Children (SickKids) in Toronto, and is currently a Professor of Pediatrics and the Associate Chair (Education) in the Department of Pediatrics at the University of Toronto. He previously served as the Chief of the Division of Pediatric Rheumatology at SickKids and as the university's Pediatric Rheumatology Program Director.

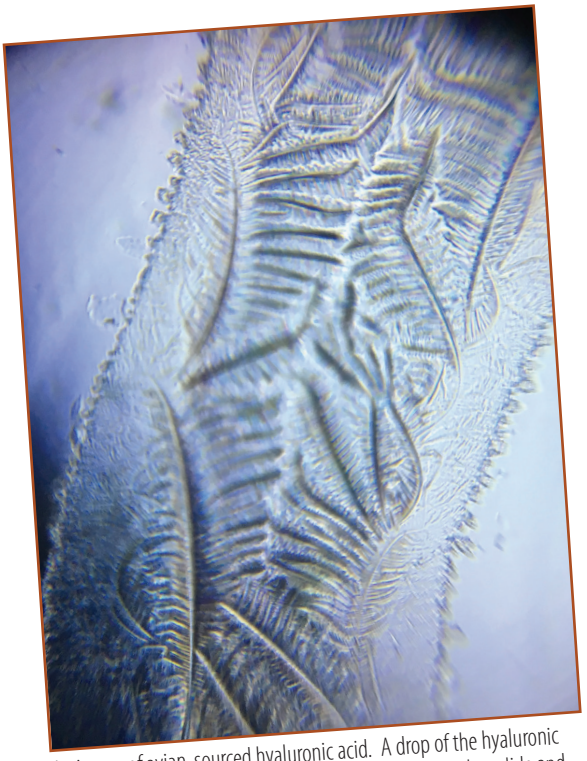
"As a Canadian physician in Ontario, I know full well that I belong to an incredibly privileged group," he told Council, in accepting the award. "We have the opportunity to engage in meaningful work, with intrinsic value and potentially significant impact. We have the opportunity to journey together, with patients and families, on their most intimate and sometimes vulnerable journeys. And we have the opportunity to be inspired by their courage and resilience," he said.

Over the course of his 30-year career, Dr. Schneider has built a solid reputation as a devoted and talented physician, and is viewed by peers, co-workers patients and families as being extremely knowledgeable and caring. He is a key contributor to ground-breaking pediatric rheumatology research and is an internationally recognized expert in systemic juvenile idiopathic arthritis. Dr. Schneider's scientific contributions have led to new biologic therapies to manage juvenile arthritis – changing the trajectory and prognosis for young patients through more effective, less toxic treatments.

Rheumatology Art: Foldscope Images

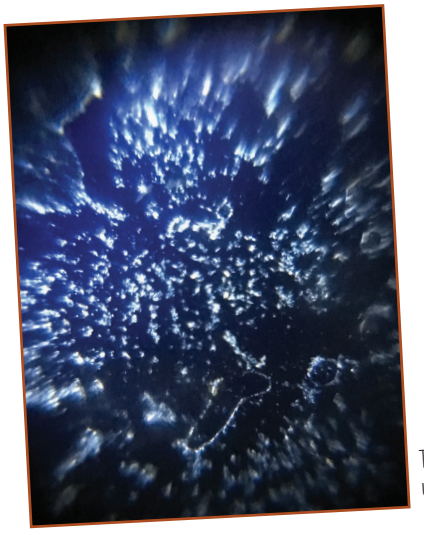
By Raman Joshi, MD, FRCPC

All these unique images were taken using a Foldscope, a paper origami microscope, attached to an iPhone SE.

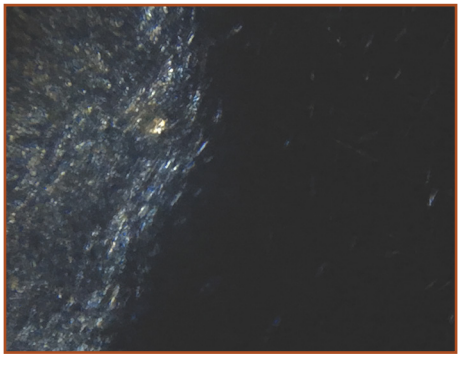


An image of avian-sourced hyaluronic acid. A drop of the hyaluronic acid which was left over after injection was dried on a glass slide and viewed with a foldscope.

An image of etanercept, which had expired. A drop of fluid was dried on a glass slide.



Triamcinolone hexacetonide under polarized light.



This image is of dried synovial fluid from a patient with acute inflammatory arthritis. The image was taken using the iPhone and crossed polarizing plates to reveal the long, thin, negatively birefringent crystals which were also seen by standard compensated polarizing microscopy and are consistent with uric acid crystals.

Update From Nova Scotia

By Dr. Volodko Bakowsky

Dr. Trudy Taylor stepped down after more than five years as our post-graduate residency program director, after having steered the program through a successful Royal College accreditation. Dr. Elana Murphy has ably taken over the new role. Under her stewardship, we are navigating knee-deep through entrustable professional activities (EPAs) and the other changes required of us by Competency by Design (CBD). Any perturbations to our training program from this process are being buffered by the two new outstanding residents who started our program in July, Drs. Alex Legge and Julie Mongeau.

Dr. Janet Roberts has taken a full-time position with us as of last August. She is originally from the east coast and has returned after training in Edmonton. She has been a delightful addition to our division.

We have a need for more rheumatologists working in the community. Please feel free to contact me if you are interested.

Our summer was late arriving, but has been fabulous since. People are out enjoying sunshine, beaches and cool ocean swims.

Enjoy the fall!

New Dalhousie Residents: Dr. Julie Mongeau (left) and Dr. Alex Legge (right).

Dr. Janet Roberts at The Arthritis Centre of Nova Scotia.

monthly Pr Simponi® golimumab

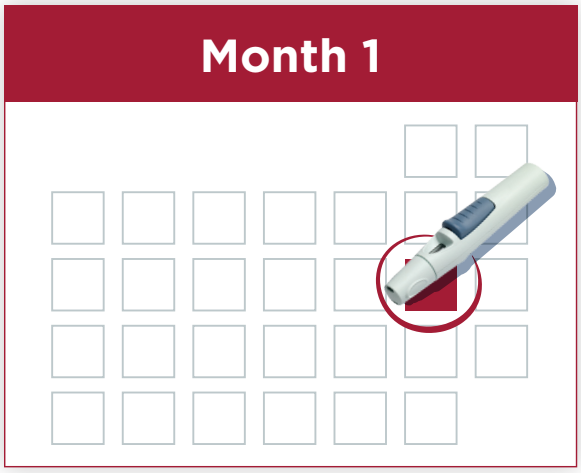
Indicated in

Rheumatoid Arthritis (RA)

Psoriatic Arthritis (PsA)

Ankylosing Spondylitis (AS)

Non-radiographic Axial Spondyloarthritis (nr-Ax SpA)



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50 mg **once a month**, on the same date each month.

SIMPONI®, in combination with methotrexate (MTX), is indicated for 1) reducing signs and symptoms and improving physical function in adult patients with moderately to severely active rheumatoid arthritis; 2) Inhibiting the progression of structural damage in adult patients with moderately to severely active rheumatoid arthritis who had not previously been treated with MTX.

SIMPONI® is indicated for 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.

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Reference: **1.** SIMPONI® Product Monograph, Janssen Inc. June 20, 2019. | Janssen Inc. | 19 Green Belt Drive | Toronto, ON M3C 1L9 |

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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.

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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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