POD05

Work-Related Disability and Function in Systemic Lupus Erythematosus (SLE): Outcomes of an Exploratory Study from Different Canadian Centres

Behdin Nowrouzi-Kia (University of Toronto, Toronto); Zahi Touma (Schroeder Arthritis Institute, Krembil Research Institute, Toronto Western Hospital, Toronto); Antonio Avina-Zubieta (University of British Columbia Faculty of Medicine; Arthritis Research Canada, Vancouver); Mary Fox (York University, Toronto); William Shaw (UConn Health, Farmington); Maggie Ho (University Health Network, Toronto); Qixuan Li (University Health Network, Schroeder Arthritis Institute, Krembil Research Institute, Toronto); Catherine Ivory (University of Ottawa, Department of Medicine, Division of Rheumatology, Ottawa); Paul Fortin (Université Laval, CHU de Québec, Quebec); Stephanie Keeling (University of Alberta, Division of Rheumatology, Edmonton); Jennifer Reynolds (University of British Columbia, Department of Medicine, Division of Rheumatology, Vancouver); Derek Haaland (The Waterside Clinic and McMaster University, Hamilton); Janet Pope (Divisions of Rheumatology, Epidemiology, and Biostatistics, Department of Medicine, Western University, London); Lily Lim (Department of Paediatrics, University of Manitoba, Winnipeg); Murray Urowitz (Schroeder Arthritis Institute, Krembil Research Institute, Toronto Western Hospital, Toronto); Laura Whittall Garcia (University Health Network, Toronto); Dafna Gladman (Schroeder Arthritis Institute, Krembil Research Institute, Toronto Western Hospital, University Health Network, University of Toronto, Toronto)

Objectives: Systemic lupus erythematosus (SLE) has a significant and long-lasting impact on work outcomes, is a source of long-lasting work disability, and presents challenges with participation in activities of daily living. This study aimed to create a functional profile for patients with SLE. A functional profile is defined as activities of daily living and those related to work functioning (activities of daily living).

Methods: A cross-sectional investigation was carried out across six Canadian facilities, comprising six academic institutions and one community-based facility. Clinical measurements were obtained, including the SLEDAI-2K and ACR/SLICC Damage Index (SDI) and patients' medications. Patients completed the Work Role Functioning Questionnaire v2.0 (WRFQ), the World Health Organization—Disability (WHO-DAS) Assessment Schedule 2.0 (WHO-DAS), and the Beck Depression Inventory (BDI-II). Descriptive and inferential statistics were computed for the demographic, clinical, and functional outcomes. Univariate and multivariate regression analyses to study the association with WHO-DAS and WRF were performed.

Results: 404 patients were studied; mean age was 47.0±13.71 years and 91.8%% were female (64.7% White, 12.4% Black, 6.7% Chinese and 16.2% other races) with a mean SLE duration of 15.7 ±11.8 years. The total mean score for the WRFQ was 71.51.8±23.5. The WRFQ subscale mean scores were also reported for work scheduling demands (66.8±28.8), work output demands (71.1±25.6), physical demands (67.3±27.9), mental and social demands (74.4±22.8) and flexibility demands (75.0±24.7). [1] Comparison to the general working population). The WHO-DAS 2.0 total mean score was 25.1±9.71, representing approximately the 93.8th population percentile, meaning that only about 6.1% of the population scored higher (more disabled) than our sample. In the multivariate analysis, sex (Female), damage (SDI), prednisone dose, fatigue severity score, Work Role Functioning total scores, presence of fibromyalgia, Role Emotinal SF-36, depression and pain were associated with increased disability. Similarly, fatigue severity score, depression, and pain were associated with decreased WRF total scores.

Conclusion: This Canadian study confirmed that patients with SLE suffers from high level of

disability and functional decline and as measured by WHO-DAS and WRF. Several factors were associated with disability and functional decline including accrued damage, presence of fatigue and fibromyalgia, depression, pain and prednisone dose. Developing the initial functional profile of work disability will facilitate a multidisciplinary approach to enhance the care and management of work disabilities and related functional outcomes. **Supported by a CIORA grant**. **Best Abstract on Quality Care Initiatives in Rheumatology Award**

POD09

Comparative Safety and Effectiveness of Biosimilar and Originator Rituximab for Induction or Maintenance in Anca-Associated Vasculitis: 6-Month Results of a Longitudinal Cohort Study

Arielle Mendel (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Montreal); Lillian Barra (Western University/ Lawson Health Research Institute , London); Sasha Bernatsky (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Division of Clinical Epidemiology, Montreal); Alison Clifford (University of Alberta, Edmonton); Mojtaba Dabaghjamanesh (Western University, London); Natasha Dehghan (University of British Columbia, Division of Rheumatology, Vancouver); Aurore Fifi-Mah (University of Calgary, Calgary); Jean-Paul Makhzoum (Vasculitis Clinic, Canadian Network for Research on Vasculitides (CanVasc), Department of Medicine, Hôpital du Sacré-Coeur de Montréal, University of Montreal, Montreal); Rosalie Meunier (Hôpital du Sacré-Coeur de Montréal, Montreal, Montreal); Nataliya Milman (The University of Ottawa, Ottawa); Medha Soowamber (Division of Rheumatology, Department of Medicine, University of Toronto, Toronto); Jan Cohen Tervaert (Edmonton); Elaine Yacyshyn (Division of Rheumatology, University of Alberta, Edmonton); Nader Khalidi (McMaster University, St Joseph's Healthcare Hamilton, Hamilton); Christian Pagnoux (Vasculitis Clinic, Canadian Network for Research on Vasculitides (CanVasc), Division of Rheumatology, Mount Sinai Hospital, University of Toronto, Toronto)

Objectives: To evaluate the effectiveness and safety of rituximab biosimilars compared to the originator in Canadians with granulomatosis with polyangiitis (GPA) and microscopic polyangiitis (MPA), and outcomes following originator to biosimilar switching.

Methods: We recruited adults with GPA or MPA who started rituximab originator or biosimilar for induction or maintenance or switched from originator to biosimilar maintenance between 01/2018-09/2023. Eligible participants either started the index treatment in the prior 6 months or were followed within an existing vasculitis cohort. Six-month outcomes include remission (Birmingham Vasculitis Activity Score [BVAS] v3 of 0), relapse (rise in BVAS after achieving remission, requiring treatment), change in Vasculitis Damage Index (VDI), and serious adverse events (SAEs).

Results: We enrolled 200 participants from 9 centres: 126 who started induction (52 originator, 74 biosimilar), 58 who started maintenance (22 originator, 36 biosimilar), and 16 who switched from originator to biosimilar maintenance (median 2 years [IQR 1.4-2.2] of originator maintenance prior to switching). Mean age was 57.1 (SD 17.4), 53% were female, 79% White, and 69% had GPA. Baseline characteristics across subgroups are reported in Table 1. [1] 190 (95%) participants had follow-up visits at Month 6 or died prior to this visit. Over a mean follow-up 189 days [SD 56], 2 minor relapses occurred in PR3-ANCA+ individuals, one in the biosimilar induction subgroup (10 weeks), and one in the originator maintenance group (at 4 months). Among induction recipients, 48/49 (98%) in the originator group and 66/71 (93%) in the biosimilar group were in remission at Month 6. All in the originator and biosimilar

maintenance subgroups were in remission at Month 6, and all 16 who switched from originator to biosimilar maintenance remained in remission during follow-up. Mean change in VDI was similar between biosimilar and originator subgroups. One or more SAEs occurred in 4/49 (8%) of the originator induction subgroup, 11/71 (15%) of the biosimilar induction subgroup, 2/21 (10%) originator maintenance subgroup, 2/33 (6%) of the biosimilar maintenance group, and 3 (19%) of the 'switch' group. Two deaths occurred in the biosimilar induction subgroup (1 alveolar hemorrhage, 1 COVID-19) and 1 death occurred in the switch group (infection, 5.5 months after switching).
Conclusion: In this cohort, we did not observe differences in remission or relapses at 6 months between RTX originator or biosimilar induction or maintenance. Disease remained stable in those who switched from originator to biosimilar maintenance. **Supported by a CIORA grant.**

WORKSHOP1D_02

Overweight and Obesity Are Key Modifiable Risk Factors for Adverse Outcomes in Systemic Lupus Erythematosus Pregnancies

Évelyne Vinet (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Division of Clinical Epidemiology, Montreal); Jessica Boivin (McGill University, Montreal); Karim Sacre (Université Paris-Cité, Assistance Publique Hopitaux de Paris, Hopital Bichat, Paris); Ann Clarke (University of Calgary, Calgary); Megan Barber (University of Calgary, Calgary); Paul Fortin (Division of Rheumatology, Department of Medicine, CHU de Québec - Université Laval, Québec); John Hanly (Dalhousie University and Nova Scotia Health Authority, Halifax); Alexandra Legge (Dalhousie University, Halifax); Sang-Cheol Bae (Department of Rheumatology, Hanyang University Hospital for Rheumatic Diseases, Seoul); Sasha Bernatsky (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Division of Clinical Epidemiology, Montreal)

Objectives: To determine if overweight (25-29.9 kg/m2) or obese (≥30 kg/m2) baseline body mass index (BMI) conferred higher adverse pregnancy outcomes (APO) risk compared to BMI <25 kg/m2 in a prospective systemic lupus erythematosus (SLE) pregnancy cohort.
Methods: We enrolled pregnant SLE women at <17 weeks gestation at 5 Systemic Lupus International Collaborating Clinics centres in Canada and South Korea. We collected data on demographics, obstetrical history, SLE characteristics, baseline co-morbidities, and APO at each of the 2nd trimester, 3rd trimester, and end-of-pregnancy (8-12 weeks) visits. APO included: 1) fetal death >20 weeks gestation, 2) neonatal death due to preterm birth and/or placental insufficiency, 3) preterm delivery or termination <36 weeks due to placental insufficiency, gestational hypertension, preeclampsia, and/or eclampsia, and 4) small-for-gestational-age (<5th percentile). We assessed the proportion of APO across the different BMI groups. We conducted a multivariate analysis using the Korean BMI classification for pregnancies from Asian mothers [obese (BMI ≥25 kg/m2), overweight (BMI 23-24.9 kg/m2), and normal weight (BMI <23 kg/m2)].
Results: We analyzed 80 completed pregnancies, with a mean maternal age of 33.9 years (standard deviation, SD 4.1) and BMI of 26.0 kg/m2 (SD 6.7). Almost half (40%) of pregnancies had a maternal BMI ≥25 kg/m2. Non-Hispanic Whites made up 40% of the pregnancies and more than half (56%) of pregnancies with a maternal BMI ≥30 kg/m2. [1] Overall, APO occurred in 8 (10%) pregnancies. The proportion of APO was 19% [95% confidence interval (CI) 0, 38%] in both the BMI 25-29.9 kg/m2 and BMI ≥30 kg/m2 groups and 4% (95% CI 1, 12%) in the BMI <25 kg/m2 group. In univariate analysis, there was more than a 5-fold increased risk of APO in pregnancies with maternal BMI ≥25 kg/m2 versus those with BMI <25

kg/m2 [odds ratio (OR) 5.31; 95% CI 1.00, 28.24]. In multivariate analysis, using the Korean BMI classification for all Asian mothers and adjusting for race and antiphospholipid antibody status, overweight and obese pregnancies had a substantially increased risk of APO compared to those with normal weight (OR 6.32; 95% CI 1.25, 32.0).
Conclusion: Overweight and obese SLE women had higher APO risk compared to those with normal weight. High BMI may be a modifiable risk factor for APO in women with SLE.
Supported by a CIORA grant.

WORKSHOP3E_04

Peripartum Outcomes and Safe Disease-Specific Medication Use Remain Suboptimal in Women with Immune-Mediated Inflammatory Diseases

Stephanie Keeling (University of Alberta, Division of Rheumatology, Edmonton); Anamaria Savu (University of Alberta, Edmonton); Luan Manh Chu (Edmonton); Padmaja Kaul (University of Alberta, Edmonton)

Objectives: Observational and population levels studies confirm that immune mediated inflammatory diseases (IMIDs) including rheumatoid (RA) and psoriatic (PsA) arthritis, spondyloarthritis (SpA) and systemic lupus erythematous (SLE) can negatively affect maternal and neonatal outcomes by way of disease activity and peripartum treatment choices. We hypothesize that despite increased availability of safe peripartum disease treatments for IMID, outcomes are still worse, and treatments underutilized compared to those without IMID in a contemporary Albertan pregnancy cohort.
Methods: A contemporary pregnancy cohort of 446,017 women and corresponding birth events was assembled for the province of Alberta from the random selection of 1 live birth event per woman. We identified 5 groups: (1) no IMID (n=728,102), (2) RA (n=2,170), (3) PsA (n=103), (4) SpA (n=312) and (5) SLE (n=393). We compared maternal and neonatal outcomes, comorbid conditions and medication use at any point in the pregnancies amongst the 5 groups.
Results: Pregnant women with SLE were more likely to have preterm delivery (13.7%), “small for gestational age” babies (19.3%), and NICU admissions (18.6%), compared to the other IMIDs. [1] Cesarean section deliveries were highest in women with SLE (35.9%) and RA (34.7%) while women with SpA had more induction (37.8%) compared to the other groups. The PsA group had the highest corticosteroid (17.5%) and biologic use (16.5%) in the peripartum period while it was lower in RA (8.7%) patients. Antimalarial use was highest in women with SLE (25.4%) and did not decrease when broken down when assessed per trimester.
Conclusion: Worse peripartum outcomes are higher amongst women with SLE and RA compared to women with PsA, AS or no IMID although specific findings including more inductions in SpA patients is notable. Medications are safe in pregnancy (e.g. anti-malarials and certain biologics) have low uptake which may influence these outcomes. Further peripartum studies evaluating drug safety and outcomes are needed with assessment of the contributions of disease activity. **Supported by a CIORA grant.**

TOUR3C

Placental Abnormalities in Systemic Lupus Erythematosus : Novel Markers of Adverse Pregnancy Outcomes

Kaitlin Nuechterlein (McGill University , Montreal); Karl Grenier (McGill University , Montreal); Luisa Ciofani (McGill University Health Centre, Department of Medicine, Division of Clinical Epidemiology, Montreal); Popi Panaritis (Research Institute of the McGill University Health Centre, Montreal); Sasha Bernatsky (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Division of Clinical Epidemiology, Montreal); Évelyne

Vinet (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Division of Clinical Epidemiology, Montreal)
Objectives: Placenta-mediated adverse pregnancy outcomes (APO) are a huge concern in SLE. Recent efforts to understand APO include the establishment of the 2016 Amsterdam classification criteria, developed to standardize placental pathology evaluation. No study to date evaluated the Amsterdam criteria in SLE. Using the prospective "Lupus prEGnAnCY (LEGACY)" biobank, we assessed the relationship between placental abnormalities, lupus anticoagulant (LAC), and APO, applying the Amsterdam criteria.
Methods: LEGACY is a prospective cohort enrolling SLE pregnancies (before the 17th gestational week). Relevant information is collected at each trimester and/or end-of-pregnancy visits. We evaluated pregnancies delivered beyond 17 weeks at the Montreal site. Placental pathology was defined as abnormal if fulfilling at least one of the 4 main Amsterdam classification subtypes: 1) maternal vascular malperfusion, 2) fetal vascular malperfusion, 3) acute chorioamnionitis, and/or 4) villitis of unknown etiology. Pregnancies with and without abnormal pathology were further characterized based on presence of LAC and APO (i.e. stillbirth, placental insufficiency, gestational hypertension, preeclampsia, small-for-gestational age neonate <5%).
Results: Of 44 LEGACY pregnancies delivered (beyond 17 weeks), 32 (73%) had placental pathology available. Among these 32, 15 (47%) had abnormal pathology. Of those with abnormal pathology, 6/15 (40%) had maternal vascular malperfusion, 5/15 (33%) acute chorioamnionitis, 4/15 (27%) villitis of unknown etiology, and 1/15 (7%) fetal vascular malperfusion. Mean gestational age at delivery was substantially lower in pregnancies with abnormal pathology [mean 33.7 weeks, standard deviation (SD) 6.8] versus those with normal pathology (mean 37.8 weeks, SD 1.7), with a difference in mean gestational age of -4.1 weeks (95% CI -0.6, -7.6). LAC was more frequent in pregnancies with abnormal pathology (4/15; 27%) as opposed to pregnancies with normal pathology (2/17; 12%). APO occurred in 8/15 (53%) pregnancies with abnormal pathology (including 3 with early preterm preeclampsia <34 weeks) as opposed to 7/17 (41%) pregnancies with normal pathology (none with early preterm preeclampsia). Maternal vascular malperfusion was strongly associated with APO (odds ratio 8.1; 95% CI 0.8, 83.7), although the CI included the null.
Conclusion: In this cross-sectional analysis, SLE pregnancies with abnormal placenta pathology, particularly maternal vascular malperfusion, experienced shorter gestation and more severe placenta-mediated APO, including early preterm preeclampsia. Future studies will aim to expand the sample and investigate if placental abnormalities in one pregnancy helps predict APO in subsequent pregnancies. [1.] Khong T. Arch Pathol Lab Med 2016; 140(7): 698-713. **Best Abstract on Basic Science Research by a Trainee Award.** **Supported by a CIORA grant.**

TOUR4B

Antibiotic Prophylaxis During Treatment of ANCA-Associated Vasculitis with Rituximab: Data from a Canadian Multicenter Cohort

Natasha Le Blanc (McGill University, Montreal); Lillian Barra (Western University/ Lawson Health Research Institute, London); Sasha Bernatsky (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Division of Clinical Epidemiology, Montreal); Alison Clifford (University of Alberta, Edmonton); Mojtaba Dabaghjamanesh (Western University, London); Natasha Dehghan (University of British Columbia, Division of Rheumatology, Vancouver); Aurore Fifi-Mah (University of Calgary, Calgary); Jean-Paul

Makhzoum (Vasculitis Clinic, Canadian Network for Research on Vasculitides (CanVasc), Department of Medicine, Hôpital du Sacré-Coeur de Montréal, University of Montreal, Montreal); Rosalie Meunier (Hôpital du Sacré-Coeur de Montréal, Montreal, Montreal); Nataliya Milman (The University of Ottawa, Ottawa); Medha Soowamber (Division of Rheumatology, Department of Medicine, University of Toronto, Toronto); Nader Khalidi (McMaster University, St Joseph's Healthcare Hamilton, Hamilton); Christian Pagnoux (Vasculitis Clinic, Canadian Network for Research on Vasculitides (CanVasc), Division of Rheumatology, Mount Sinai Hospital, University of Toronto, Toronto); Arielle Mendel (McGill University Health Centre, Department of Medicine, Division of Rheumatology, Montreal)

Objectives: Antibiotic prophylaxis is recommended during initial treatment of ANCA-associated vasculitis (AAV). We assessed characteristics associated with prophylaxis within a Canadian multicenter AAV cohort starting rituximab (RTX) for either induction or maintenance of remission.

Methods: We performed a secondary analysis of baseline characteristics from the Biosimilars in ANCA-associated Vasculitis compared to the Originator (BRAVO) cohort, including adults with granulomatosis with polyangiitis (GPA) or microscopic polyangiitis (MPA) who started RTX induction or maintenance (either the originator or a biosimilar) at cohort entry. We stratified characteristics (at time of starting RTX induction or maintenance, as applicable) according to concurrent antibiotic prophylaxis (e.g. trimethoprim sulfamethoxazole [TMP-SMX], dapsone, atovaquone), and compared groups using 95% confidence interval (CI) for the differences in mean or proportion, or the Mann Whitney U test as applicable. Characteristics of interest included demographics, current prednisone dose, disease activity, disease duration and prior relapse. Univariable and multivariable logistic regressions assessed the association of covariates of interest with prophylaxis.

Results: Of the 200 participants in BRAVO, 126 initiated induction and 58 initiated maintenance at baseline. [1] The proportion taking prophylaxis at the start of induction (81%) and maintenance (79%) was similar, whereas 98 (96%) of the induction group and 39 (85%) of the maintenance group were receiving prednisone at baseline. TMP-SMX was the most commonly used antibiotic during induction (95%) and maintenance (89%), with the remainder being primarily atovaquone (2% induction, 11% maintenance) and dapsone (2% in induction). In the induction group, any prednisone use (OR 4.9; 95% CI 1.1-21.4), prednisone ≥20 mg/day (OR 6.5; CI 2.5-17.0) and baseline Birmingham Vasculitis Activity Score (BVAS) (OR for each point 1.2; 95 CI 1.1-1.3) were associated with antibiotic prophylaxis, while use of other concurrent immunosuppressants (OR 0.3; 95% CI 0.1-0.8) and having ≥1 prior relapse (0.3 OR; 95% CI 0.1-0.9) were negatively associated with prophylaxis. In multivariable analyses, daily prednisone dose ≥20 mg (adjusted OR 3.4; 95% CI 1.2-10.0) and BVAS (aOR 1.1, 95% 1.0-1.2) remained associated with prophylaxis. In the maintenance group, prednisone use was also associated with prophylaxis in adjusted analyses (aOR 6.1, 95% CI 1.3-27.0).

Conclusion: In this Canadian cohort initiating RTX for induction or maintenance, 80% of the participants were taking antibiotic prophylaxis, which is higher than reported in other cohorts. During the induction and maintenance period, concurrent prednisone was associated with prophylaxis, as was higher disease activity during induction. Our results permit further understanding of Canadian patterns of antibiotic prophylaxis in AAV. **Supported by a CIORA grant.**

97

Improving Triage Accuracy of Unclear Rheumatology Referrals: A Quality Improvement

Study

Stephanie Gottheil (London Rheumatology, Western University, London); Chiara Gottheil (London Rheumatology, London); Joseph Carson (London Rheumatology, Western University, London)

Objectives: Patients with early inflammatory arthritis (EIA) need to be seen urgently to initiate treatment. Our community rheumatology clinic in Ontario, Canada was concerned that EIA cases may be delayed unnecessarily if referrals lacked sufficient detail to triage accurately. In a prior quality improvement project, we redesigned our triage process to include a patient survey (the "EIA Tool"), which was validated to identify referrals with EIA. In this study, we aimed to evaluate the sensitivity and specificity of the new triage process for referrals with unclear urgency after 12 months of use.

Methods: All referrals accepted by one rheumatologist were included from April 2020-July 2022. During the intervention period, we implemented the new triage process. The rheumatologist triaged all referrals as urgent, non-urgent, or unclear. Patients with unclear urgency were asked to complete the online EIA Tool prior to scheduling. [1] Their survey result determined a triage score of urgent or non-urgent, and consultations were scheduled accordingly. Post-consultation, the rheumatologist determined the 'true' urgency score, while blinded to the pre-consultation score. Data were collected prospectively on all incoming referrals. We analyzed the data using descriptive statistics and calculated the sensitivity and specificity of the baseline and new triage processes.

Results: The 16-month baseline period (April 2020 to July 2021) included 1296 referrals; 647 (50%) were triaged as urgent. The 12-month intervention period (August 2021-July 2022), included 888 referrals; 508 (57%) were triaged as urgent, and 97 (11%) were triaged as unclear. The EIA tool was completed in all unclear cases; 93 patients submitted the survey online, and 4 patients without email completed the survey by phone. Most patients (86%) completed the survey within 1 day of receiving it. Unclear cases had a cycle time from referral to scheduling of 5 days, compared to 3 days for those who were not sent the EIA tool. The sensitivity to identify urgent cases was 97% during the intervention versus 85% at baseline. The specificity during the intervention was 59% versus 70% at baseline.

Conclusion: The EIA Tool helped us detect 97% of truly urgent cases, thereby reducing the risk of delayed treatment caused by triage error. We have since spread this process to four rheumatologists in our clinic. Our next step is to analyze urgent referral volume using statistical process control charts, in order to modify our scheduling algorithm. **Supported by a CIORA grant.**

101

A Scoping Review of Approaches to Treat Juvenile Idiopathic Arthritis Symptoms to Inform the Expanded Version of the JIA Option Map

Mahta Rafieinia (University of Ottawa, Ottawa); Elizabeth Stringer (IWK Health Centre, Halifax); Rose Martini (University of Ottawa, Ottawa); Laurie Proulx (Canadian Arthritis Patient Alliance, Ottawa); Natasha Trehan (University of Ottawa, Markham); Naomi Abrahams (University of Ottawa, Ottawa); Emily Sirotich (Canadian Arthritis Patient Alliance, Toronto); Alexandra Sirois (McGill University, Montreal); Adam Huber (IWK Health Centre, Halifax); Ciaran Duffy (Children's Hospital of Eastern Ontario, Ottawa); Simon Décary (Université de Sherbrooke, Sherbrooke); Esi Morgan (Seattle Children's Hospital, Cincinnati); Isabelle Gaboury (Université de Sherbrooke, Sherbrooke); Kathryn Birnie (University of Calgary, Calgary); Paula Branco (University of Ottawa, Ottawa); Iman Kashif (University of Ottawa, Ottawa); Yvonne

Brandelli (Dalhousie University, Halifax); Jeannette Cappon (Reade, Centre for Rehabilitation and Rheumatology, Amsterdam); Sabrina Cavallo (Université de Montréal, Montreal); Mark Connelly (Children's Mercy Kansas City, Kansas City); Natoshia Cunningham (Michigan State University, Grand Rapids); Juliana Barcellos de Souza (University of Ottawa, University); Daniela Ghio (University of Manchester, Manchester); Tala El Tal (Neurosciences and Mental Health Program, SickKids Research Institute; Division of Rheumatology, The Hospital for Sick Children, Toronto); Sabrina Gmuca (Children's Hospital of Philadelphia, Philadelphia); Nadia Luca (Division of Rheumatology, Department of Pediatrics, Children's Hospital of Eastern Ontario/University of Ottawa, Ottawa); Melissa Mannion (University of Alabama at Birmingham, Alabama); Peter Tugwell (University of Ottawa, Ottawa); Jennifer Stinson (The Hospital for Sick Kids/ University of Toronto, Toronto); Karine Toupin-April (University of Ottawa and Children's Hospital of Eastern Ontario Research Institute, Ottawa)
Objectives: Young people with juvenile idiopathic arthritis (JIA) experience physical and psychological symptoms that negatively impact functional activities. Our team previously developed the JIA Option Map, a web-based patient decision aid to support decision-making for JIA pain management. Qualitative work identified a need to expand the JIA Option Map to include ways to manage symptoms beyond pain, such as fatigue, stiffness and mental health symptoms (e.g., stress and anxiety), and provide tips to participate in meaningful activities. To inform the expansion of the JIA Option Map, we summarized the evidence for approaches to manage JIA symptoms.
Methods: We conducted a scoping review following the Arksey and O'Malley framework. We assembled a research team comprised of people with lived experience, health care providers and researchers, and searched major databases for clinical practice guidelines (CPGs) which included systematic reviews (SRs), SRs and randomized controlled trials (RCTs) of approaches for arthritis-symptom treatment other than approaches aimed primarily at reducing disease activity such as disease-modifying anti-rheumatic drugs. We included approaches that can be used in addition to arthritis treatment to manage pain, stiffness, fatigue and mental health in JIA compared to any control group from database inception to September 2024. We extracted study information including effectiveness and safety of approaches. We assessed the methodological quality of the studies using the Appraisal of guidelines for research and evaluation II (AGREE II), Assessing the methodological quality of systematic reviews 2 (AMSTAR 2) and the Cochrane Risk of Bias 2.0, as well as the strength of evidence using Grading of Recommendations Assessment, Development, and Evaluation (GRADE).
Results: We included a total of five CPGs, nine SRs and 43 RCTs. We found evidence for splints and orthoses, massage, low-energy laser therapy, various physical activity interventions such as therapeutic exercises and pilates, educational programs and self-management interventions using cognitive behavioural therapy, as well as non-steroidal anti-inflammatory drugs (NSAIDs). Both pharmacological and non-pharmacological approaches were effective although most studies were of low or moderate quality.
Conclusion: This scoping review shows that a wide variety of approaches are effective in improving JIA symptoms although there is a need for more high-quality studies. Efforts are underway to present this evidence to young people with JIA and parents/caregivers, HCPs and researchers to agree on the information to add to the expanded JIA Option Map. **Supported by a CIORA grant.**

112

Co-Designing a Patient-Facing Dashboard with Patients and Healthcare Providers:

Gathering User Input

Jotinder Waraich (University of Calgary, Calgary); Wrechelle Ocampo (University of Calgary, Calgary); Inelda Gjata (University of Calgary, Calgary); Martina Stevenson (University of Calgary, Calgary); Ann Casebeer (University of Calgary, Calgary); Deborah Marshall (University of Calgary, Calgary); Dianne Mosher (University of Calgary, Calgary)

Objectives: To co-design with rheumatology patients, healthcare providers, and human-centered design experts, a patient-facing dashboard that displays patient-reported outcome measures (PROMs) and clinician-derived data over time.

Methods: We recruited participants from the Rheum4U Precision Health Registry (PHR) to participate in semi-structured interviews or focus group sessions. Purposive sampling was used based on type of inflammatory arthritis (IA), sex, and geographic location. All the participants engaged in a card-sorting activity in which they sorted the content collected from the Rheum4U PHR's web-based platform based on what they wanted to see included in the dashboard. During each session, the participants' preferences of the content and features of dashboard, and the use of the dashboard were explored. The card-sorting data were analyzed using content analysis. Transcripts were analyzed using thematic analysis with NVivo software, guided by the Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) and Practical, Robust, Implementation and Sustainability Model (PRISM) frameworks. [1,2] The data from the card-sorting activity and interviews and focus-groups were used to inform human-centered design experts in creating a low-fidelity mock-up of the dashboard in an interface design tool, Figma. [3]

Results: Six patients, four nurses, and three rheumatologists participated in the sessions. The card sorting activity revealed the prioritized content deemed most beneficial by participants including disease activity (e.g., CDAI, BASDAI, DAS28), physician global, health assessment questionnaire (HAQ) score, pain intensity, and level of fatigue. Key themes emerging from the thematic analysis included: 1. Clear visual representations of longitudinal data trends and comparison over time. 2. Insights into treatment effectiveness. 3. User-friendly navigation of the dashboard. 4. integration with the electronic medical record system. 5. Integrating educational resources relevant to their IA. 6. Alerts for worsening PROMs. 7. Mobile access to the dashboard for patients. The mock-up of the dashboard based on these themes is displayed in Figure 1. [1]

Conclusion: Co-designing a patient-facing dashboard by patients and healthcare providers supports the identification of priority for intuitive data visualization of personalized health metrics and for integrating resources to support understanding of disease progression to guide care needs. A collaborative approach to the construction of dashboard enhances the potential for all users to benefit once the tool is available. [1.] Glasgow RE, Harden SM, Gaglio B, Rabin B, Smith ML, Porter GC, et al. Front Public Health. 2019;7:64. [2.] Feldstein AC, Glasgow RE. Jt Comm J Qual Patient Saf. 2008;34(4):228-43. [3.] Figma. (n.d.). Figma: The collaborative interface design tool. Figma Inc. Retrieved from https://www.figma.com. **Supported by a CIORA grant.**

123

Appointments by Choice: An Implementation Pilot Study for Patient-Initiated Follow-Up Care in Rheumatoid Arthritis

Manuel Ester (McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Calgary); Kiran Dhiman (University of Calgary, Calgary); Ann Rebutoc (McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Calgary); Alexandra Charlton (Alberta Health Services, Calgary); Krista White

(McCaig Institute for Bone and Joint Health, Cumming School of Medicine, University of Calgary, Calgary); Glen Hazlewood (University of Calgary, Calgary); Sarah Manske (University of Calgary, Calgary); Diane Lacaille (Arthritis Research Canada, University of British Columbia, Vancouver); Alison Hoens (University of British Columbia/Arthritis Research Canada, Vancouver); Monika Szpunar (Arthritis Research Canada, Toronto); Karen Then (University of Calgary, Calgary); Gabrielle Zimmermann (Alberta SPOR SUPPORT Unit Knowledge Translation and Implementation Science, Edmonton); Michelle Jung (University of Calgary, Calgary); Erin Carter (University of Calgary, Calgary); Dianne Mosher (University of Calgary, Calgary); Claire Barber (University of Calgary/Arthritis Research Canada, Calgary)
Objectives: The aim of the study was to conduct an implementation pilot for Appointments by Choice (ABC), a new patient-initiated follow-up model seeking to optimize follow-up efficiency and patient-centeredness of rheumatoid arthritis (RA) care. Objectives were to evaluate patient recruitment and early implementation outcomes.
Methods: The implementation pilot started in January 2024 at a single rheumatology clinic in Calgary. Eligible patients had (1) established RA, (2) well-controlled disease, (3) no major medication changes, and (4) no other active complex conditions. Patients and providers used a discussion tool for shared decision-making about moving from regular care to the ABC pathway. [1] This included scheduling a new follow-up interval of 12-24+ months, a reduction compared to usual care. Between rheumatologist appointments, patient care was managed through a pharmacist-led clinic. Self-care was encouraged using a flare action plan. Baseline demographics were collected via survey and chart review. Feasibility was measured through recruitment numbers, ABC pathway adherence, flare clinic workload, and implementation adaptations using the FRAME criteria [1.]. Preliminary data on ABC recruitment and feasibility were summarized using descriptive statistics.
Results: Over 8 months, 38/108 (35.2%) eligible individuals with RA chose to adopt the ABC pathway. 28 participants provided reasons for declining. Common reasons included lack of time/interest in research (n=6), concerns about reduced care access (n=3), and preference for usual care (n=5). Mean participant age was 59.5±11.0 years, with 82.7% identifying as White and 10.3% as Southeast Asian. Mean RA duration was 13.3±9.1 years. Only 2/38 (5.3%) participants withdrew from the study and returned to usual care, due to a major RA flare or inability to complete the baseline questionnaire. 36/38 (94.7%) remained on the pathway. The pharmacist-led flare clinic conducted 2 flare-related follow-up calls, 2 medication renewals, and 8 calls for other medical needs. One participant required an in-person follow-up. 32 implementation challenges were noted, 8 of which resulted in minor adaptations. Adaptations include opening recruitment to individuals with (1) RA with minor medication changes and (2) those with palindromic rheumatism who were on treatment and had positive serology; (3) adjusting recruitment timing to align with biologic renewal schedules, and (4) improving physician-pharmacist communication using a standardized electronic health record "smartphrase" for detailing follow-up needs.
Conclusion: The ABC implementation pilot has provided valuable learnings for recruitment, implementation, and ongoing care when using patient-initiated follow-up models for RA care. Post-pilot analyses will provide additional insights into ABC safety, feasibility, and potential benefits. [1.] Wiltsey Stirman S, Baumann AA, Miller CJ. The FRAME: an expanded framework for reporting adaptations and modifications to evidence-based interventions. Implementation Science. 2019 Dec;14:1-0. **Supported by a CIORA grant**.