

# Arthritis Clinical Link Newsletter



Created and Distributed by the Mary Pack Arthritis Program

A newsletter for health professionals working with people with arthritis

June 2014

## Editor's Message

As always, the ACE Clinical Link Newsletter is evolving. I'm working towards making the newsletter shorter. To do this, I'll begin to tweet short announcements once we launch our new MPAP website, thus freeing up space in the newsletter for more in-depth pieces. This should also result in a more timely dissemination of key news items.

I would love to hear your thoughts on the newsletter, the plan to begin Tweeting short announcements, or any arthritis-related initiatives that are taking place at your site.

Paul Adam, Rheumatology Liaison & Outreach Services Coordinator [Paul.Adam@vch.ca](mailto:Paul.Adam@vch.ca)

## New MPAP website is about to launch!

In the next few weeks look for an email announcing the new Mary Pack Arthritis Program (MPAP) website. The website is designed to inform people with arthritis about services at our 4 sites and travelling clinics. A section also describes non-MPAP arthritis services. A large section called "Manage your arthritis" features information and online resources for topics such as getting active, healthy eating & weight management, and managing fatigue. This website will house the health professional resources that had been on The Arthritis Society website.

## Welcome to the new ACE members in nursing

Eleven nurses attended the 2014 ACE course this past April. Attendees were from the Lower Mainland, Victoria and Whitehorse. Congratulations to Michelle Bains, Vanessa Barbossa, Shannon Duke, Margie Fracchia, Bonnie Leung, Victoria Long, Marsha MacDougall, Cindy Mo, Candace Moore, Zain Shariff, and Greta Wilderjans.

Sadly, the PT and OT components of the course were cancelled due to an insufficient number of registrants.

## New online resources

- The Association of Rheumatology Health Professionals (ARHP) has recently revised and updated the [Medication Administration Quick Guides](#) and made them freely available online to any health professional. The guides provide a quick reference and supplement to the prescribing information for the biologics and antiresorptive therapies and are particularly helpful for those developing new infusion protocols. They can be found at: [http://www.rheumatology.org/Practice/Clinical/Drugsafety/Drug\\_Safety\\_\(Members\\_Only\)/](http://www.rheumatology.org/Practice/Clinical/Drugsafety/Drug_Safety_(Members_Only)/)

- The [Arthritis Alliance of Canada](#) (AAC) is a collection of 36 consumer, professional, and non-profit member organizations including CAOT, CPA, the Canadian Rheumatology Association, and many more. The AAC has

developed a model of care (MOC) for inflammatory arthritis that targets stages of the care process including disease identification, access to care, medical management, and shared care (e.g., rehabilitation services, etc.). The model is at <http://www.arthritisalliance.ca/images/PDF/eng/20140430-2030-IA-MOCFINAL.pdf> An online toolkit with resources for each MOC stage is coming soon <http://www.arthritisalliance.ca/en/pcaia>

- **RheumTalks** is by Dr. Andy Thompson, the rheumatologist who created RheumInfo.com. RheumTalks provides free online health professional education in 4 areas: Understanding the JAK-STAT Pathway, Osteoarthritis for Primary Care Physicians, Differentiating Inflammatory Arthritis from Mechanical (Degenerative) Arthritis from Chronic Pain Conditions, and Rheumatology Laboratory for Non-Rheumatologists. Each topic has 6 - 17 modules, and modules take 10 - 20 minutes to complete. CE credits are available and most modules are suitable for health professionals <http://rheumtalks.com/programs.php>
- Dr. Evans, creator of the hugely popular Youtube video, “23 and 1/2 hours: What is the single best thing we can do for our health”, has a new patient education video for individuals preparing for hip or knee replacement surgery [https://www.youtube.com/watch?v=xAL\\_TrQdtTY](https://www.youtube.com/watch?v=xAL_TrQdtTY)
- **Getting A Grip on Arthritis** is a free OA and RA online health professional education series. Both the OA and RA modules are case-based, and utilize several interactive elements that encourages the viewer to take clinical actions and receive immediate feedback from a virtual patient. Developed for primary care physicians, the modules can benefit all health professionals. CE credits may be available. <https://www.mdcme.ca/grip/>

### **Systematic reviews of clinical practice guidelines for non-drug treatment of osteoarthritis**

We're probably all familiar with systematic reviews, their aim to synthesize evidence from a several studies and when possible, to pool the data and generate a single estimate of effect or impact of a given treatment. Often, systematic reviews are then used to develop clinical practice guidelines which take the evidence from one or more review and generate recommendations for clinical practice. Where the evidence is sparse or conflicting, guideline developers typically use an expert panel and formal consensus process such as the Delphi method, to come to agreement on key practice topics.

Recently, 3 systematic reviews of clinical practice guidelines were published - 2 addressing non-pharmacological or physical management of OA and 1 addressing RA. Following is a brief overview of the findings from the OA reviews and a link or citation to the original articles.

Brosseau L, Rahman P et al. A Systematic Critical Appraisal for Non-Pharmacological Management of Osteoarthritis Using the Appraisal of Guidelines Research and Evaluation II Instrument. PLOS ONE 2014;9(1):e82986. <http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0082986&representation=PDF>

Dr. Brosseau and colleagues searched for English language guidelines published between 2001 and 2013 that addressed the non-pharmacological management of hip, knee and/or hand OA. They used the AGREE II instrument [ <http://www.agreetrust.org/> ] to assess the methodological quality of the included guidelines. In this instrument, guidelines are rated on their scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability and editorial independence on a 7-point scale. The authors identified 17 relevant guidelines of which 10 were rated as high quality. The recommendations common to all guidelines included therapeutic exercise, patient education, transcutaneous electrical nerve stimulation, orthoses and insoles, and weight control.

Larmer PJ, Reay ND et al. Systematic Review of Guidelines for the Physical Management of Osteoarthritis. Archives Phys Med Rehabil 2014;95:375-89.

In this review published 1 month later, the authors also searched for English language guidelines published between 2000 and April 2013 related to the physical management of OA. They too found 17 guidelines (13 were included in the Brosseau review) and used the AGREE II to assess the quality of each. They reported that 6 of the guidelines could be recommended for use without any modifications while the other 11 were recommended with some modifications. The 5 most common strongly recommended interventions were: education, exercise (strengthening, aerobic, aquatic), wedged insoles of knee OA, weight loss and self-management. The authors concluded that “because exercise and education were found to be among the strongest recommendations within the guidelines and can be relatively cost-effective to provide, there is an opportunity for those engaged in rehabilitation to move into a leading role in the management of OA.”

Look for a summary of the systematic review of RA practice guidelines in the next Clinical Link!

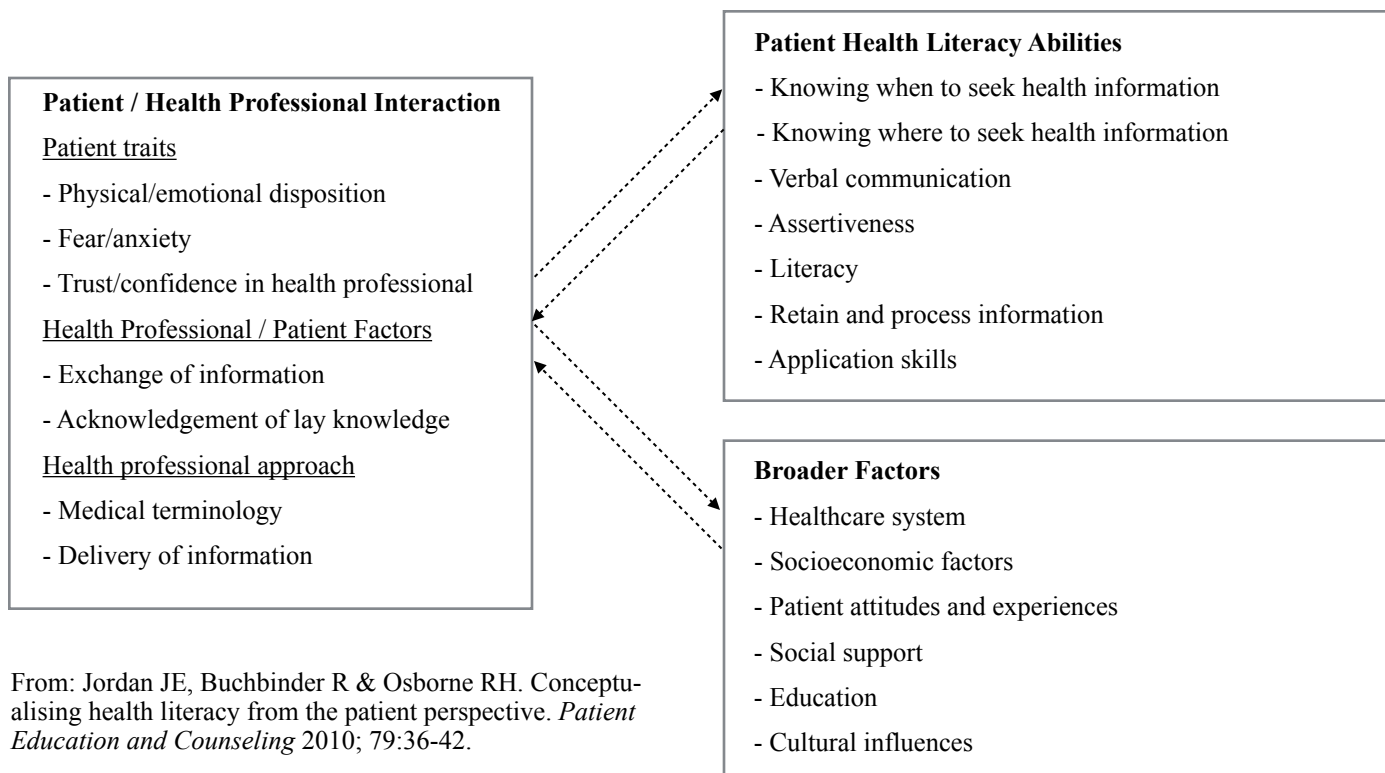
Submitted by Marie Westby, PT, PhD

### A strategic approach to patient education

Patient learning needs are multiple and varied. What a patient may want to learn may depend on a myriad of factors including how long they’ve had their diagnosis, how engaged they are in learning about their condition, and the specific problems they’re experiencing associated with their disease. Someone newly diagnosed and keen to learn everything about her disease will have different learning needs than someone who has had his condition for 20 years and who has recently experienced a prolonged flare because his biologic has failed.

The Public Health Agency of Canada defines health literacy as, “the ability to access, understand and act on information for health”. Frameworks illustrate the key factors that impact health literacy (see fig. 1).

**Figure 1: Key Factors Impacting Health Literacy**



From: Jordan JE, Buchbinder R & Osborne RH. Conceptualising health literacy from the patient perspective. *Patient Education and Counseling* 2010; 79:36-42.

Work by the Outcome Measures in Rheumatology Clinical Trials (OMERACT) Health Literacy Special Interest Group has begun to identify specific patient-related knowledge, attributes, attitudes, skills, and actions that are integral to health literacy. A sampling of these competencies is outlined below.

**Table 1: Patient Competencies**

<b>Competency Theme</b>	<b>Competency Type</b>	<b>Individual Competency Items</b>
<b>Disease</b>	Attitude	Learn to accept and live with one's condition
	Knowledge	Understanding active arthritis state compared to [chronic] disease-related effect
	Knowledge	Knowledge of side effects
	Knowledge	Learn about disease/diagnosis
	Knowledge	Understand results (blood tests, scans)
	Knowledge	Understand medical terminology about specific issues
<b>Information</b>	Skills	Learning how to work with health information
	Skills	Ability to put information into context
	Skills	Ability to be critical/skeptical
	Skills	Ability to discern reliable from unreliable information
	Skills	Ability to synthesize information
	Skills	Sense of perspective (relative importance of all information and experiences)
	Skills	Ability to work out what you want to know

From: Buchbinder R, Batterham R, Ciciriello et al. *The Journal of Rheumatology* 2011; 38:1791-1797.

Our role as health professionals is to provide information that addresses our patients most salient learning needs (i.e., some of which may be outlined in table 1) and delivered in a way that patients can understand. As figure 1 notes, this may mean entering into a dialogue with our patients that addresses their fears and worries, acknowledges the expertise that they bring to the management of their disease, and provides information in a way that they can understand. Underlying this dialogue are 3 key factors: Attitudes, Techniques, and Resources. Attitudes encompass what we think and feel about how patients learn. Techniques are the strategies or approaches that can help facilitate patient learning. And resources include both professional and patient online sources of knowledge. And while these online patient resources can provide a broad overview of the topic in question, as

health professionals, we may need to fill in missing information, correct inaccuracies, or help our patients put this information into their own personal context, i.e., what does this information mean to them.

<b>Attitudes</b>	Accepting of patient’s autonomy to make their own decisions
	The patient is an expert on how their arthritis affects them
<b>Techniques</b>	The education process is a partnership between the patient and health professional, each with their own knowledge to share
	Teach Back
	Ask-Tell-Ask
<b>Resources</b>	Ask Me 3 / It’s Safe to Ask
	Public Health Agency of Canada <a href="http://www.phac-aspc.gc.ca/cd-mc/hl-ls/index-eng.php">http://www.phac-aspc.gc.ca/cd-mc/hl-ls/index-eng.php</a>
	Health Literacy Canada <a href="http://healthliteracy.ca/">http://healthliteracy.ca/</a>
<b>Professional</b>	It’s Safe to Ask <a href="http://www.safetoask.ca">www.safetoask.ca</a>
	Rheuminfo Pictopamphlets <a href="http://rheuminfo.com/">http://rheuminfo.com/</a>
	People Getting A Grip on Arthritis <a href="http://www.arthritis.ca/peoplegettingagrip">http://www.arthritis.ca/peoplegettingagrip</a>
<b>Patient</b>	Overcome Fatigue – 7-step program <a href="http://education.arthritis.ca/">http://education.arthritis.ca/</a>
	Online Chronic Disease Management Program - <a href="http://www.selfmanagementbc.ca/onlinechronicdiseaseprogram">http://www.selfmanagementbc.ca/onlinechronicdiseaseprogram</a>

People Getting A Grip on Arthritis is a collection of online slide presentations and videos freely accessible by people with RA or OA. Slide presentations are organized by technique (e.g., yoga for rheumatoid arthritis) and provide descriptive information. A number of techniques also have how-to videos demonstrating use of the technique. The RA slide collection includes presentations on low intensity strengthening\*, yoga\*, Tai Chi\*, aquatic jogging\*, wrist orthoses, insoles and footwear and TENS\*. The OA slide collection has presentations on ice massage\*, hand exercises\*, stationary bicycling\*, aquatic therapy exercises\*, weight management\*, thumb orthoses, acupuncture-like TENS\*, and aerobic walking\*. Topics with an asterisk also include an accompanying demonstration video. For more information, see the Brousseau et al. abstract in the Arthritis-related citations.

Overcome Fatigue is a free online program that helps a person with arthritis better understand their fatigue and the factors that contribute to it. The program shows how to track sources of fatigue, techniques and strategies to reduce fatigue, and how to create an action plan and implement this plan to reduce fatigue. The program has 7 chapters including fatigue and arthritis, physical activity and exercise, a healthy diet, balance activities, a good night’s sleep, dealing with depression, and chronic pain management.

The Online Chronic Disease Management Program is an online workshop, which can help people with chronic conditions learn about healthier ways to live, gain confidence, and motivation to manage their health. This free workshop is available to any BC resident with a computer and Internet connection. The program was developed and researched at Stanford University and follows a standardized format proven to help people learn to better manage symptoms.

*Submitted by Paul Adam and Lori Cyr*

## **Measuring outcomes before and after hip and knee arthroplasty: A new PT knowledge broker toolkit will help you get started**

This toolkit provides clinicians with outcome measures appropriate for use along the continuum of care for patients before and after total joint arthroplasty.

Toolkit includes:

- A guide to using the toolkit
- Summaries of the recommended outcome measures (patient self-report and performance-based measures)
- Online learning modules (still under development)
- Template of discharge letter with information to help you interpret and report the results
- Overview of the evidence and research that were used to create the toolkit

The TJAOM toolkit is available to members on the PABC website (<http://bcphysio.org>) and everyone on the UBC Department of PT website (<http://physicaltherapy.med.ubc.ca/physical-therapy-knowledge-broker/total-joint-arthroplasty-and-outcome-measures-tjaom-toolkit/>)

For more information, contact: Marie Westby ([marie.westby@vch.ca](mailto:marie.westby@vch.ca)) or PT Knowledge Broker Alison Hoens ([alison.hoens@ubc.ca](mailto:alison.hoens@ubc.ca))

## **CORE back pain toolkit**

I recently attended a workshop by Dr. Hamilton Hall who provided an overview of the CORE back pain toolkit developed by the Centre for Effective Practice, an Ontario Ministry of Health initiative. These and other tools can be found at <http://www.effectivepractice.org/index.cfm?id=48100>

The approach that Dr. Hall advocates consists of a 3-step approach. The information gleaned from the patient at each of these steps is then used to confirm or counter the clinician's working hypothesis as to the primary source of the problem, and therefore what should be done to address the problem.

Step 1: Assessment interview

1. Where is your pain the worst - i.e., is it back- or leg-dominant?
2. Is the pain constant or intermittent - i.e., does the pain go away for even the briefest of moments during the day?
3. Does bending forward make your typical pain worse?
4. Since the start of your pain has there been a change in your bowel or bladder function?
5. What can't you do now that you could do before you were in pain, and why?
6. What are the relieving movements/positions?
7. Have you had this same pain before?
8. What have you tried before? Did it work?

Step 2: Physical examination

Step 3: Intervention

The objective of all 3 steps is to categorize someone into one of 4 mechanical patterns:

### **Pattern 1**

- Back-dominant pain, worse with flexion, pain is constant or intermittent
- Probably discogenic (2 sub-patterns)
  - o Pattern 1: PEP (prone extension positive) - pain slowly improves with regular and frequent prone extension exercises
  - o Pattern 2: PEN (prone extension negative) - pain worse with prone extension exercises

#### Pattern 2

- Back-dominant pain, worse with extension and never worse with flexion, always intermittent
- No clear etiology

#### Pattern 3

- Leg-dominant pain, always constant, affected by back movement, positive irritative test
- Root irritation, sciatica

#### Pattern 4

- Leg-dominant pain, always intermittent, worse with flexion, always better with unloaded back extension
- Neurogenic claudication (2 sub-patterns)
  - o Pattern 1: PEP (prone extension positive) - less severe and therefore can start exercises at a higher level
  - o Pattern 2: PEN (prone extension negative) - more severe and therefore requiring a more gradual progression of exercises

### Citation “Take Home” messages

As I summarized the journal articles in the next section several “Take Home” messages jumped out at me:

- A simple recommendation by a health care professional to a patient to become more physically active or to engage in weight management can be a powerful motivator.
- Patients with high levels of disease activity are less likely to change their treatment if they have low levels of perceived consequences of their disease, concern, and emotional impact.
- Health literacy is more strongly associated with functional status than prednisone use, smoking history, and use of biologics, and was independent of educational attainment.
- The finding that different people exposed to the same information may form different gist representations, especially in relation to information about medication risks and benefits, reiterated the importance of using techniques such as Teach Back, as a way of confirming that our educational messages are being accurately heard. And the fact that all of the coders in this study were well-educated women suggests that Teach Back should be part of every patient education encounter.

### Arthritis-related citations

**O'Donnell S, Rusu C, Bernatsky S et al.** *Exercise/physical activity and weight management efforts in Canadians with self-reported arthritis.* Arthritis Care & Research December 2013; 65(12):2015-2023. The objectives of this study were to describe the exercise/physical activity and weight management efforts in a nationally representative sample of Canadian adults with self-reported arthritis, to examine factors associated with engagement in these self-management activities, and to explore the reasons for lack of engagement. Data for this study were taken from the arthritis component of the 2009 Survey on Living with Chronic Diseases in Canada (SLCDC). This survey included 4,565 individuals currently living in Canada,  $\geq 20$  years of age, self-reported

having received a diagnosis of arthritis from a health professional, and consented to share their data. Sixty-three percent of respondents reported that they were exercising to manage their arthritis. Of those who were overweight/obese, 68% reported that they were trying to control/lose weight and 45.7% were engaged in both self-management activities. Having contacted a health care professional in the past 12 months about their arthritis and having received a clinical recommendation(s) from a health professional to help manage their arthritis (i.e., exercise/physical activity, weight control/loss, course/class, and/or use of an assistive device) were associated with engaging in exercise/physical activity. Being obese, having lived with a diagnosis of arthritis for  $\geq 10$  years, and having received any clinical recommendations from a health professional were associated with engaging in weight control/loss. The most common reason for not engaging in exercise to manage arthritis was having a co-existing health condition, while the most common reason for not controlling/losing weight among those who were overweight/obese was that they felt that they did not need to, i.e., they were already a healthy weight.

**Barbour KE, Whitman JM, Helmick CG, et al.** *Meeting physical activity guidelines and the risk of incident knee osteoarthritis: A population-based prospective cohort study.* Arthritis Care & Research January 2014; 66(1):139-146. The purpose of this study was to examine the association between meeting the US Department of Health and Human Services physical activity guidelines and incident knee OA among middle-aged and older community-dwelling adults. Using data from the Johnston County Osteoarthritis Project study, the authors tested the association between meeting physical activity guidelines ( $\geq 150$  minutes/week) and incident knee OA among 1,522 adults ages  $\geq 45$  years. The median follow-up time was 6.5 years with a range of 4.0 – 10.2 years. Physical activity at baseline was calculated using the Minnesota Leisure Time Physical Activity questionnaire. Incident knee radiographic OA (ROA) was defined as the development of Kellgren/Lawrence grade  $\geq 2$  in a knee at follow-up. Incident knee symptomatic ROA (sROA) was defined as the development of ROA and symptoms in at least one knee at follow-up. The study showed that meeting the physical activity guidelines was not significantly associated with ROA or sROA. Adults in the highest level ( $\geq 300$  minutes/week) of physical activity had a higher risk of knee ROA and sROA compared with inactive (0 to  $< 10$  minutes/week) participants, although these associations were not statistically significant. The authors stated that their findings support recommendations to engage in moderate levels of physical activity, as these activities do not increase the risk of OA. The findings also corroborated evidence of an elevated risk of negative OA outcomes among persons in the highest level of physical activity.

**Brousseau L, Wells G, Brooks S et al.** *People getting a grip on arthritis II: An innovative strategy to implement clinical practice guidelines for rheumatoid arthritis and osteoarthritis patients through Facebook.* Health Education Journal 2014; 73(1):109-125. This study used a Knowledge-To-Action Cycle (KTAC) theoretical framework to develop, implement and evaluate the use of Facebook as a platform for providing an online evidence-based educational programme to improve knowledge, skills and self-efficacy in patients with OA and RA in relation to self-management (SM) rehabilitation interventions. The following KTAC steps were adhered to in this study. Stage 1: Knowledge Creation – previously developed evidence-based clinical practice guidelines (EBCPGs) for the non-pharmacologic management of OA and RA were updated by 8 experts in EBCPG development by reviewing and grading current research findings. This group selected 9 SM interventions, i.e., treatments that could be carried out by patients themselves, with positive grades (A, B, or C+) including aquatic jogging, aquatic therapy, TENS, wrist and thumb orthotics, ice massage, stationary biking, yoga, nutrition (weight loss), and hand strengthening exercises. Stage 2: Identification of question – is an online evidence-based educational programme delivered through Facebook effective in improving knowledge acquisition among people with arthritis. Stage 3: Adaptation of knowledge to local context – all recommendations were written in plain language (Grade 6 level) in English and French. Two series of video presentations were created



for each intervention; narrated PowerPoint presentation delivered by a health professional providing information and case scenarios, and a second video presentation of a health professional providing step-by-step instructions while performing the SM intervention with a patient. Stage 4: Assessment of barriers / support to knowledge use – two focus groups were held, one with 7 people with OA and one with 5 people with RA, to obtain feedback on the feasibility of using these interventions in real life. Based on this feedback all SM interventions were retained. Stage 5: Selection, tailoring and implementation of interventions – two Facebook group pages were created. Stage 6: Evaluation outcomes – knowledge acquisition scores improved among OA and RA participants with a mean difference of 1.8 ( $p < 0.01$ ) when compared from baseline to immediate post-intervention. Eighty-three percent of the OA participants and 74% of the RA participants intended to use at least one of the SM interventions. Actual use of these interventions among OA participants ranged from 14% – 100%, with ice massage, aquatic therapy, and strengthening exercises for the hand exhibiting the highest usage levels. Intervention use among RA participants ranged from 0 – 100%, with weight management and ice massage exhibiting the highest usage levels.

**Tymms K, Zochling Z, Scott J et al.** *Barriers to optimal disease control for rheumatoid arthritis patients with moderate or high disease activity.* Arthritis Care & Research February 2014; 66(2):190-196. The aim of this study was to identify the barriers to disease control (BTC) that prevent RA patients with moderate disease activity (MDA) or high disease activity (HDA) from achieving clinical remission or low disease activity. Electronic health records of 23 rheumatologists were reviewed in October 2010 to identify patients in MDA or HDA in the past 12 months, based on their DAS28 and ESR scores, with no changes to their arthritis medications, and with a rheumatologist recorded BTC. Results showed that of the 4,037 RA patients with a recorded DAS28-ESR score in October 2010, 1,515 (38%) were in MDA or HDA, and of this group, 47% had a BTC recorded. Of the 714 patients in MDA or HAD, and with a recorded BTC, 584 patients had no change to their arthritis medications. The most common barriers to disease control as recorded by rheumatologists, and therefore the clearest impediments to changing medications, included irreversible joint damage (19.7%), patient-driven under-treatment (14.7%), rheumatologist-driven under-treatment (9.9%), non-inflammatory MSK pain (9.2%), insufficient time to assess response to treatment (9.2%), safety-driven concerns (7.5%), co-morbidities (6.5%), and resistant disease (6.3%).

**Fraenkel L & Cunningham M.** *High disease activity may not be sufficient to escalate care.* Arthritis Care & Research February 2014; 66(2):197-203. The purpose of this study was to determine how ‘high disease activity’ and ‘patients’ illness beliefs’ combine to predict future treatment changes in patients under the care of a rheumatologist. Study participants were; patients with RA, age  $\geq 18$  years, having seen their rheumatologist at least twice in the past 12 months, with pain at least “3” on an 11-point numeric rating scale, and currently prescribed at least one DMARD. Patients reporting a contraindication to biologic use were excluded from the study. Participants were recruited from 4 community-based rheumatology practices. Data were collected in face-to-face interviews using paper-and-pencil questionnaires at 2-month intervals over a 6-month period. Disease activity was measured using the RAPID-4 and illness beliefs were measured using 5 items from the 8-item Brief Illness Perception Questionnaire (BIPQ). The design of the BIPQ is such that each item corresponds to a different belief allowing item scores to be analyzed separately. The 5 beliefs examined included *consequences* (the degree to which the patient believes that the illness affects his or her life), *treatment control* (patients’ beliefs about the effectiveness of treatment), *experience of symptoms* (the extent to which the patient believe they experience symptoms of the illness), *concern* (the extent to which patients are concerned about their condition) and *emotions* (the degree to which the condition is perceived as affecting the patients emotionally). Treatment escalation, the dependent variable, was defined as adding or increasing the dose of corticosteroids and/or switching

DMARDs since the previous interview. The additions of NSAIDs, or changes in medications due to adverse events, were not considered as an escalation in treatment. One hundred and forty-two individuals completed all 4 interviews. Disease activity and illness beliefs were significantly associated with escalation of treatment, except for treatment control. High disease activity was not associated with a future escalation in treatment in patients reporting low levels of perceived consequences, concern, and emotional impact. The combination of disease activity and illness belief better predicted future escalation than either factor on its own.

**Manning VL, Hurley MV, Scott DL, et al.** *Education, self-management, and upper extremity exercise training in people with rheumatoid arthritis: A randomized controlled trial.* *Arthritis Care & Research* February 2014; 66 (2):217-227. This study evaluated the effectiveness of a brief supervised education, self-management and upper extremity exercise training (EXTRA) program as a supplement to the usual home exercise regimen of patients with RA. Study participants were people >18 years of age, diagnosed with RA of ≤5 years duration, and with no contraindications to upper extremity exercise who were recruited from the rheumatology clinics and physiotherapy departments at 4 public hospitals. People who had received intramuscular or upper extremity intraarticular steroid injections in the previous 4 weeks, or upper extremity surgery or physiotherapy in the previous 5 months were excluded. The primary outcome measure was the 30-item DASH questionnaire. Secondary outcome measures were the Grip Ability Test (GAT), handgrip strength, the Rheumatoid Arthritis Quality of Life (RAQoL) questionnaire, Arthritis Self-Efficacy Scale, the DAS28, and patient-reported pain, fatigue, and morning fatigue, as well as assessor-rated disease activity. Participants were randomly assigned to receive either usual medical care or the EXTRA program in addition to usual care. Assessors were blinded as to whether participants received the EXTRA program or usual care. The EXTRA program was comprised of 4 supervised group education sessions, self-management, and global upper extremity exercise training sessions delivered twice weekly for two weeks. This included a 15-minute interactive discussion to increase participants' knowledge of RA and exercise, self-efficacy, and disease management, followed by an exercise warm-up, a personalized exercise circuit of upper extremity exercises (from a core set of 16), and an exercise cool down. Participants were asked to complete the exercise warm-up, individually prescribed upper extremity exercises, and the exercise cool down on a daily basis at home for 12 weeks, other than the days they attended the supervised program. To ensure uniformity, physiotherapists conducting the EXTRA program received 2 hours of training on the aims and content of the program and techniques to facilitate the interactive discussions. A therapist manual was also created to support accurate program delivery. One hundred and eight participants received either the EXTRA program or usual care. EXTRA program participants showed significant improvements in their DASH scores at 12 weeks, but by 36 weeks the difference between groups was no longer significant. At 12 weeks there were also significant differences in function (GAT), non-dominant grip strength, pain and disease activity self-efficacy, DAS28 scores, and participant-reported pain between the two groups. At 36 weeks, only pain self-efficacy and self-reported pain were significantly improved in the EXTRA participants. The authors hypothesize that the reason for the falloff in benefits between 12 and 36 weeks was because EXTRA program participants did not continue the exercises beyond the 12-week period, although this was not assessed in the study. The therapist manual is available upon request from the corresponding author.

**Bredemeier M, De Oliveira FK & Rocha CM.** *Low- versus high-dose Rituximab for rheumatoid arthritis: A systematic review and meta-analysis.* *Arthritis Care & Research* February 2014; 66(2):228-235. The purpose of this meta-analysis was to compare the efficacy and safety of the low and high doses of Rituximab (RTX) in the treatment of RA. The authors first conducted a systematic literature review searching for randomized controlled trials (RCTs) and cohort studies comparing low- and high-dose RTX for the medical management of RA. This search was conducted on Embase, PubMed/Medline, the Cochrane Library, and the Web of Science. The prima-

ry end points were the American College of Rheumatology criteria for 20% improvement (ACR20), ACR50 and ACR70 responses and the DAS28 at 24 and 48 weeks. Secondary outcomes were patient-reported outcomes (HAQ, SF-36, and Functional Assessment of Chronic Illness Therapy – Fatigue scores) and adverse events. Six RCTs and 2 cohort studies were found that met the preset criteria, of which 4 RCTs were included in the meta-analysis. The meta-analysis showed that there were no significant differences in the primary clinical efficacy outcomes (ACR20, ACR50, ACR70, DAS28) between low- and high-dose RTX. Serious adverse events also did not differ significantly. These findings were corroborated by the 2 additional RCTs and a meta-analysis of the 2 cohort studies.

**Westby MD, Brittain A, Backman CL.** *Expert consensus on best practices for post-acute rehabilitation after total hip and knee arthroplasty: A Canada and United States Delphi study.* Arthritis Care & Research March 2014; 66(3):411-423. At present there is considerable variation in the duration and delivery of post-acute total hip arthroplasty (THA) and total knee arthroplasty (TKA) rehabilitation. The purpose of this study was to use a Delphi approach to reach consensus with a group of relevant stakeholders and experts. This group included individuals who had undergone THA or TKA, orthopaedic surgeons specializing in total joint arthroplasty, primary care and specialist physicians, rehabilitation professionals, researchers and decision-makers. Separate Delphi surveys were conducted for TKA and THA rehabilitation. The two sets of Delphi panelists were initially sent a summary of the evidence from the literature with each statement graded as to the quality of the evidence. The package of information also included a glossary to ensure all panelists had a similar level of knowledge. At each of the three rounds panelists rated their level of agreement with each statement using a 5-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral/no opinion, 4=agree, 5=strongly agree). Prior to beginning, panelists decided that 80% agreement was required to accept statements and  $\geq 50\%$  agreement was required for a statement to make it into the next round of voting. However, if 2 of 3 patient panelists rated a statement as important despite  $< 50\%$  agreement by the full panel, the item was flagged and included for further consideration in the next round. After each round panelists could also put forward new topics or items. Thirty-four of 40 patients and professionals, and 38 of 47 experts completed all 3 rounds. By the end of round 3, for THA and TKA consensus was achieved on 22 of 33 statements and 24 of 33 statements, respectively, a sampling of which follows. After primary TJR for OA with a typical acute care length of stay  $\leq 5$  days and no perioperative complications, the expert panel recommended that:

- It is important to distinguish between an early and late phase of post-acute rehabilitation, based on stages of tissue healing and recovery of muscle function after THA (94%) and TKA (97%)
- For TKA, post-acute rehabilitation be provided through direct health professional supervision (87%); self-directed rehabilitation is not recommended (82%)
- Timing of post-acute rehabilitation is important for optimal patient outcomes after THA (88%) and TKA (97%)

Three themes emerged that were common to both THA and TKA: 1) the need to differentiate early and late phase post-acute rehabilitation; 2) “best practice” guidelines are not a substitute for clinical judgment and individual patient needs, preferences, and response to treatment; and 3) the need for standardized training to ensure an appropriate level of knowledge and skills for rehab providers working with these patient populations.

This article included a list of contextual factors that influence the delivery and outcomes of post-acute rehabilitation after THA and TKA, a list of recommended post-acute rehabilitation interventions after primary THA and TKA, a list of recommended outcomes to routinely assess and/or monitor after primary THA and TKA, and a list of recommended assessment methods and outcome measures to routinely assess and/or monitor outcomes after primary THA and TKA.

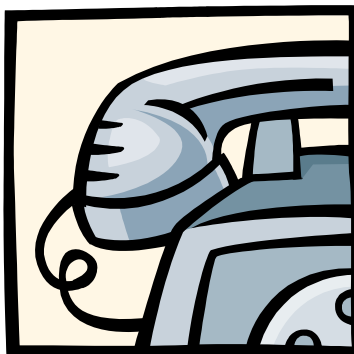
**Caplan L, Wolfe F, Michaud K et al.** *Strong association of health literacy with functional status among rheumatoid arthritis patients: A cross-sectional study.* Arthritis Care & Research April 2014; 66(4):508-514.

This study was conducted to determine if low health literacy is associated with worse functional status in people with RA, and secondarily, if low health literacy is associated with poorer self-reported adherence to RA medications. Study data was pulled from the National Data Bank for Rheumatic Diseases, an open U.S. cohort studying longitudinal RA outcomes. The researchers used an existing conceptual framework of factors thought to impact health outcomes including health literacy, and individual and disease-related characteristics. Individual characteristics included variables such as education and social support, and disease-related characteristics included such variables as RA treatment, RA severity and co-morbidities. Health literacy was measured using two validated single item scales, the Single Item Literacy Screener 1 (SILS1) and the Single Item Literacy Screener 2 (SILS2). Finally, health outcomes were measured using the Health Assessment Questionnaire (HAQ) for functional status and an RA-adapted version of the Medication Adherence Self-Report Inventory (MASRI) for adherence. Data was obtained on 6,052 individuals with RA. Results showed that when controlling for all covariates, low health literacy was associated with a 0.376-point greater HAQ score, as compared to subjects with adequate health literacy. Thus health literacy was more strongly associated with functional status than prednisone use, smoking history, and use of biologics, and was independent of educational attainment. Visual and memory problems were also associated with worse functional status. Low health literacy was also associated with poorer self-reported adherence to RA medications.

**Blalock SJ, Slota C, DeVellis B et al.** *Patient-rheumatologist communication concerning prescription medications: Getting to the gist.* Arthritis Care & Research April 2014; 66(4):542-550. This study used fuzzy trace theory (FTT) to better understand the meaning that patients glean from information provided by a rheumatologist. FTT posits that when an individual is exposed to a stimulus (e.g., a statement made by a physician), two representations are encoded in memory; a verbatim representation of the actual words and numbers presented and a gist representation of what that information means to the individual hearing it. Different people exposed to the same stimulus or message may form different gist representations depending on their preexisting knowledge, prior experiences, emotional state, and developmental stage. Importantly, when making decisions or judgments, people tend to rely on the gist representations that are stored in memory. The preference for gist information processing has been shown to increase with age and the acquisition of specialized expertise. In this study, 4 patients with RA were recruited as coders and provided with audiotape transcripts of office visits between patients and their rheumatologist created in an earlier study of older adults and drug decisions. For each transcript the coders independently identified the arthritis or osteoporosis medication discussed most during the visit. For visits that entailed at least some discussion about a medication, the coders used a standardized template to identify their interpretation of the gist of the rheumatologist's communication in relation to the degree and severity of side effects, relative safety of therapeutic alternatives, suggested patient actions to increase or decrease the risk of side effects, medication helpfulness, need for the medication, and rheumatologist guidance re starting or stopping a medication, changing dosage, or changing frequency of use. A total of 264 medication discussions were coded by all 4 coders. There was a moderate level of agreement among coders with respect to those parts of the discussion in which the rheumatologist communicated a need to make a change in regimen (85.7% – 90.3% agreement). In contrast, intercoder agreement was low in relation to rheumatologist's communication about medication risks and benefits (36.0% - 57.6% agreement). This study suggests that different people exposed to the same information may form different gist representations, especially in relation to information about medication risks and benefits.

**Siemons L, ten Klooster PM, Vonkeman HE et al.** *Distinct trajectories of disease activity over the first year in early rheumatoid arthritis patients following a treat-to-target strategy.* Arthritis Care & Research April 2014; 66(4):625-630. The purpose of this study was to identify distinct trajectories that may exist in the course to remission in RA patients on a treat-to-target (T2T) strategy over the first year of treatment. This study used data from the Dutch Rheumatoid Arthritis Monitoring remission induction cohort. Cohort participants met the following criteria: clinically diagnosed with early RA,  $\geq 18$  years of age, no history of taking disease-modifying anti-rheumatic drugs (DMARDs) or prednisone, and symptom duration of  $\leq 12$  months. All cohort participants were on a T2T strategy aimed at reaching remission ( $\text{DAS28} < 2.6$ ). Growth mixture modelling (GMM) was used to analyze whether different developmental trajectories could be determined. Data for this study were available for 568 patients. Analysis showed that 82.7% of participants were “fast responders”. These individuals had a quick decrease in their DAS28 score in the early treatment stages, which slowly stabilized at remission after 9 months. A second sub-group (14.1% of the participants) comprised the “slow responders”. These individuals were slower to react to treatment, but did show a steady decrease in disease activity, approaching remission after 12 months on treatment. The third sub-group (3.3% of participants) exhibited a poor outcome in which disease activity quickly decreased in the first 6 months, but then flared so that at 12 months these individuals were at their initial level of disease activity. Group comparisons at baseline showed that groups did not differ significantly in age, sex, or RF positivity. The “fast responders” had lower initial scores for disease activity and health status than the other two groups. Supplementary case history examinations carried out in the poor outcome group found 2 factors that might be related to their loss of treatment response: patients were tapering their initial doses of prednisone and patients stopped taking their DMARDs, mainly because of side effects.

### **Clinical Consultation available through your ACE membership**



As an ACE member, you have access to physical therapists, occupational therapists and a nurse with many years of rheumatology experience. If you have a clinical question or complex or challenging client and would like to consult with one of our experienced clinicians, please contact one of the people listed below. We will return your call or e-mail as quickly as possible.

You can also contact senior clinicians in our regional centres (Cranbrook, Penticton & Victoria). They are a valuable local resource.

An ACE member who has used this service in the past stated: “Great resource. Please continue!”

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