experiences. Data and experiences were iteratively analysed and discussed to identify and further explore themes.

Results: The personalised written consultation summary was interpreted to be a *living document*, *shared document*, *valued document*, *dialogued document* and *stored document*. Our research experiences echoed these themes, in that they were *lived*, *shared*, *valued*, *dialogued* and *recorded*. The five themes, and their echoes, will be illustrated with quotes. Implications for patient-centred practice and research will be discussed.

Conclusions: A set of reflective questions will be posed for the consideration of patients, their families and carers and their clinicians, as well as researchers. These questions have scope to inform dialogue about patient-centred communication in rheumatology practice, and guide collaborative research in this space.

REFERENCE:

1. Croker, Higgs, Trede. Collaborating in healthcare 2016. Sense Publishers, Rotterdam.

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FRI0722-HPR POSTURAL PROBLEMS AND PAIN IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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Background: Juvenile idiopathic arthritis (JIA) is a chronic autoimmune condition of unknown etiology. JIA combine with joint pain and inflammation that affects children who are less 16 years of age and continue more 6 weeks. JIA is a chronic inflammatory disease resulting in joints arthritis, pain and deformities. Disturbances in the posture may occur before deformities in patients with JIA. In some cases, pain can also lead to postural deterioration. Postural control is the ability to maintain equilibrium in a gravitational field by keeping or returning the center of body mass over its base of support.

Objectives: The first purposes of this study was to assessed postural problems in patients with JIA and compared with healthy peers. The other objective was to examine the pain relationship with postural problems.

Methods: 19 patients with JIA aged 5–17 years (13 girls and 6boys) diagnosed according to ILAR classification criteria and 19 healthy controls were enrolled in this cross-sectional study. "PostureScreen Mobile[®]" was used to evaluate static posture, "11-point Numeric Analogue Scale (NRS)" was used to evaluate the pain (during rest, activity and exercise). The PostureScreen Mobile[®] an application facilitates the assessment of posture in a variety of settings. Anterior (Head, Shoulders, Ribcage, Hips) and lateral translation (Head, Shoulders, Hips, Knees) were recorded and calculated as a total score for anterior and lateral. For statistical analysis SPSS Version 21.0 program was used.

Results: The mean age and body mass index of patients and healthy control were 10.79±3.59 and 10.68±2.86 years, 17.05±3.88, and 18.50±2.49 kg/m², respectively. The mean of NRS-rest, activity and exercise scores were 1.18±1.42, 3±2.64 and 1.91±2.02, respectively. As a result of postural assessment for patients and healthy control, the mean of anterior translation scores was significantly higher in patients with JIA than healthy control (p=0.014) (table 1). Two significant correlations with NRS-rest between hip anterior translation (r=0.375, p=0.029) and ribcage anterior translation (r=-0.534, p=0.027) were found.

Table 1 Anterior and lateral translation in patients with JIA and healthy controls

	JIAmean ±SD	Healthy controlsmean ±SD	t	p
Anterior translation	4.16±1.91	2.82±1.16	2.602	0.014
Lateral translation	9.03±4.35	8.41±3.35	0.490	0.627

Conclusions: We found that children with JIA have minimal postural problems according to their healthy peers. At the same time, pain during rest is associated with anterior postural deterioration. Therefore in future researches, translations in the posture should be evaluated comprehensively in children with JIA for larger sample size. If it is not intervened in the early period, it may lead to overloading of joints and increased pain in later periods.

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FRI0723-HPR PHYSICAL ACTIVITY AWARENESS AND PREFERENCES IN RHEUMATIC DISEASES: A QUALITATIVE STUDY.

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Background: Physical inactivity is the fourth leading cause of death (1) and a risk factor for cardiovascular disease (CVD). Patients with rheumatic diseases (RDs), especially rheumatoid arthritis (RA), report low cardiorespiratory fitness levels (2), placing them at an increased risk of premature mortality and CVD.

Objectives: The aims of the present study were: a) to evaluate if patients with RDs [RA, ankylosing spondylitis (AS), systemic lupus erythematosus (SLE), osteoarthritis (OA), psoriatic arthritis (PSA), systemic sclerosis (SSC), fibromyalgia (FM), enteropathic arthritis-Crohn's disease (CD), Sjögren's syndrome (SD), Raynaud's disease (RD)] were aware of the physical activity (PA) benefits, and b) to examine their preferences in terms of PA mode and principles (i.e. intensity, duration, frequency).

Methods: We designed a questionnaire consisted of dichotomous, open-ended and multiple-choice questions. Patients registered with the Hellenic League Against Rheumatism (EL.E.A.N.A), participated by filling in the questionnaire a) online, or b) through phone calls. Content analysis approach was performed for data analysis.

Results: Out of the 625 RDs patients registered with the EL.E.A.N.A, 197 (31.5 % response rate) returned the questionnaire [137 online and 60 via phone calls (69.6% and 30.4% of the sample, respectively)]. 93 patients had RA (47.3% of the sample, age=54.9±14.5) and 104 (52.7% of the sample, age=50.2±13.9) were diagnosed with other RDs [AS (n=29, 14.7%), SLE (n=25, 12.6%), OA (n=15, 7.6%), PSA (n=10, 5%), SSC (n=8, 4%), FM (n=7, 3.5%), CD (n=4, 2%), SD (n=4, 2%) and RD (n=2, 1%)]. In all patients, subjective beliefs about the benefits of PA, concerned three main themes: a) functional ability, b) mental health and c) overall health. Swimming, was revealed as the most frequent PA mode (n=63, 38.1%). Regarding the principals of PA, patients reported that they preferred moderate intensity (n=76, 41.7%), a duration of "about an hour" (n=81, 49.3%), a frequency of "2–3 times per week" (n=71, 45.2%) and a blended intervention consisted of group-based, individualised and supervised programmes (n=56, 29.4%). The questionnaire was judged by the patients to be very or fairly understandable in almost all cases (n=196, 99.5%).

Conclusions: According to subjective beliefs from the self-reported data of this study, PA is considered from patients to improve physical and mental health in RDs. Additionally, individualisation and supervision of PA programmes were considered amongst the most important parameters of a program for participation. In planning successful PA regimes in RDs, more qualitative studies with representative sample sizes and demographic data are required to address patients' PA needs and preferences and help them adhere to a more physically active lifestyle.

REFERENCES:

1. Lee I, Shiroma E, Lobelo F, Puska P, Blair S, Katzmarzyk P. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. The Lancet 2012;380 (9838):219–229.
2. Metsios G, Koutedakis Y, Veldhuijzen van Zanten J, Stavropoulos-Kalinooglou A, Vitalis P, Duda J, et al. Cardiorespiratory fitness levels and their association with cardiovascular profile in patients with rheumatoid arthritis: a cross-sectional study. Rheumatology 2015;54(12):2215–2220.

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FRI0724-HPR DISEASE ACTIVITY AFFECTS FAT MASS INDEX AND FUNCTIONAL CAPACITY OF RA PATIENTS OVER 12 MONTHS

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Background: Rheumatoid cachexia (RC) is a condition characterized by adverse changes in body composition, specifically in muscle mass and fat mass components [1]. RA patients have life quality and expectative impacted by RC [2], but there are very few prospective data analyzing the evolution of this condition.

Objectives: To assess body composition, RC, clinical features and functional capacity in RA patients followed for 12 months.

Methods: 81 patients with RA, aged between 40 and 70 years, were recruited. Body composition was assessed by total body dual-energy x-ray absorptiometry (DXA) for measurement of fat mass index (FMI;Kg/m²) and fat free mass index (FFMI;Kg/m²).The patients were categorized as rheumatoid cachectic if FFMI was below the 10th percentile and FMI above the 25th percentile[1],and if FFMI was below the 25th percentile and FMI above the 50th percentile[2].Disease features assessed were disease activity score 28 (DAS28). Functional capacity was assessed by muscle strength (hand grip test;Kg) and gait speed (Time up and Go (TUG;m/s)). Frequency analysis, McNemar test and GEE analyses were used and statistical significance was considered as p<0.05.

Results: Of the 81 patients analyzed, most were women (88.9%;72/81), with mean age of 56.8±7.3, mean disease duration time of 11.9±9.6 years. At baseline, the prevalences of RC using both diagnostic criteria were similar to the prevalences described in literature (table 1), and they did not change during the 12 month follow-up(p>0.05).FMI increased after 12 months and patients with moderate disease activity showed higher FMI when compared with other DAS28 categories (p<0.05).Thus, over 12 months, DAS28 affected FMI, and had no impact on FFMI (p>0.05).Muscle strength decreased significantly after 12 months, and patients with high disease activity showed less muscle strength when compared with other DAS28 categories(p<0.05).Gait speed increased after 12 months(p<0.05).

Table 1

	Baseline	12 months
FMI(kg/m ²)	10.8±4.3	11.1±4.2*
FFMI(kg/m ²)	16.3±1.9	16.4±1.8
RC [1]	12(13.3%)	12(13.3%)
RC [2]	27(30.0%)	22(24.4%)
DAS28	3.7±1.3	4.0±1.3*
Muscle strength(kg)	16.6±10.4	9.7±8.7*
Gait speed (m/s)	0.5±0.1	0.6±0.1*

*p<0.05 between baseline and 12 months.

Conclusions: In this study, RC prevalence was similar to the prevalence described in literature. DAS28 score of our patients increased over 12 months, and it affected FMI, muscle strength and gait speed of RA patients. However, no effect was observed on FFMI. Our results show that the patients that are not in remission by DAS28 have decreased muscle strength and increased fat mass, possibly due the inflammatory process and the reduced physical activity level, creating a vicious circle.This vicious circle may negatively impact on life quality of RA patients.

REFERENCES:

- [1] Engvall IL, et al. Scand J Rheumatol 2008.
- [2] Elkan AC, et al. Arthritis Res Ther. 2009.

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FRI0725-HPR UNDERSTANDING THE BURDEN OF RHEUMATOID ARTHRITIS USING QUALITATIVE RESEARCH: WHICH IMPACTS ARE NOT CAPTURED BY PATIENT-REPORTED MEASURES?

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Background: Existing measures of disease burden in rheumatoid arthritis (RA) include patient-reported measures (PRMs) of physical and mental functioning, symptoms and work disability. However, these measures may be inaccurate if interpreted by respondents in unintended ways and may not capture some impacts of RA of importance to patients.

Objectives: To explore the perspectives of RA patients on PRMs used in The National Data Bank for Rheumatic Diseases (Forward) registry and to identify impacts of importance to patients that may not be captured by commonly used measures.

Methods: Semi-structured ethnographic interviews were conducted with adult RA patients in the United States participating in Forward. Interviewees were asked to discuss the impact of RA on their lives and their perspectives on PRMs used in Forward. Interviews were audio-recorded and transcribed verbatim. Transcripts were analyzed for themes related to: 1) perspectives on PRMs, and 2) important impacts of RA.

Results: We interviewed 18 patients aged 27–80 years, with RA durations of 4–40 years and Forward participation of 1–19 years. Participants' perspectives on PRMs fell into 4 categories (table 1). Several patients doubted that the PRMs adequately captured the severity of their symptoms. Important impacts of RA not measured by Forward included: expenditures on adaptive devices and measures,

impact on life goals and activities (educational and career plans, family responsibilities, and valued activities) and interaction with stressful life events (such as family deaths).

Table 1 Patient Perspectives on PRMs

Category	Perspectives
Ease of responding to questions	<ul style="list-style-type: none"> - Numerical measures are easy to comprehend - Anchors for scale endpoints are too vague - Difficulty remembering severity of past symptoms - Difficulty understanding questions - Questions could be emotionally disturbing
Communication of symptoms	<ul style="list-style-type: none"> - Numerical measures were preferred to open-ended survey questions because communicating symptoms in words can be difficult - Difficulty quantifying symptoms and feelings - Infrequent assessments cause gaps in measurement
Factors biasing responses	<ul style="list-style-type: none"> - Patients may interpret questions in unintended ways - Adaptation and high tolerance for symptoms may lead patients to underreport the severity of symptoms - Patients may underreport the severity of past symptoms not clearly remembered
Interpretation of responses	<ul style="list-style-type: none"> - PRMs do not assess shifts in expectations for health that may affect responses - Responses from 1 patient at different times/from different patients may not be comparable

Conclusions: Challenges in interpreting and answering questions may reduce the accuracy of PRMs of RA symptoms. The PRMs discussed by participants may not fully capture the impact of RA on patients' financial burdens and on their pursuit of life goals and activities. Future efforts to improve the accuracy and comprehensiveness of burden of disease measurement in RA should help to address these issues. Use of qualitative methods (such as ethnography) may also help to illuminate aspects of living with RA that are not captured by existing PRMs.

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HPR Service developments, innovation and economics in healthcare

FRI0726-HPR STUDY ON THE EFFICACY OF CURCUMIN THERAPY IN EARLY STAGES OF JUVENILE OLIGOARTHRITIS

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Background: Juvenile arthritis is one of the most common rheumatic diseases in childhood. With all remission drugs, a high percentage of patients continue to have an active disease as young adults and sometimes locomotor and ocular sequelae. Turmeric originated in South Asia is used as spice in these regions and has in its structure a polyphenolic compound called Curcumin, very well known for its anti-microbial, anti-inflammatory, anti-oxidative effects and anti-cancer action. Pleiotropic effects are demonstrated by inhibition of transcriptional-kappa B nuclear factor and subsequently of tumor necrosis factor, IL-12 and IL-2 cytokines involved in the inflammatory cascade. Curcumin has been successfully administered in rheumatoid arthritis, but less investigated in juvenile arthritis.

Objectives: Aim of study was to evaluate the effects of curcumin administration in patients with Oligoarticular Juvenile Idiopathic Arthritis (OJIA) as an integrated therapy at the onset of the disease.

Methods: Thirty-two children aged 8–16 years with OJIA were included in a randomized placebo controlled trial from May 2014 – May 2017. All patients were initially hospitalized at the "St. Mary" Emergency Hospital for Children, Iasi and met the criteria of the American College of Rheumatology (ACR). Patients and their parents/legal guardians signed an informative consent on the treatment with curcumin at Laser Clinic. Patients were randomly assigned to one of the two groups: Group 1 (16 patients) received UltraCur 600 mg of Protein Curcumin Complex (15,000-fold bioavailability supplement), 1.8 g per day (in 3 doses, during meals) for 9 months and Group 2 (16 patients) received placebo; all patients were under their standard treatment. Disease activity was evaluated at 0, 3, 6 and 9 months using ACR Pedi30 score. This score defines the improvement of at least 30% from baseline in three of the six variables in the base set, while no more than