as age, gender, disease duration and hand dominance, were homogeneous at the beginning of the study. In both groups there was a reduction in hand pain with time (intragroup analysis). Pain in the functional group, expressed as mean ± standard deviation, was 6.82±1.72 and 4.77±2.45 at the beginning and end of the treatment, respectively, and the corresponding figures for the nighttime group were 7.20±1.63 and 4.83±2.68. The p values for both groups were $p<0.001$. There were no statistically significant differences in the majority of the parameters assessed between the groups, including the outcome pain. Three measures considered to be occasional, presented a significant difference between the groups: right palmar abduction p=0.023 and right tripod pinch strength p=0.006 with better results for the group that used the night splint; and time execution of the pick-up test with eyes closed to the right hand p=0.048 with more representative results for the functional (daytime) splint use.



Figure 1: Splint for rhizarthrosis

**Conclusions:** There was no statistically significant difference between functional and night splint in terms of pain, function or any of the other parameters assessed in rhizarthrosis patients after one year of treatment.

**References:**
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[2] Rannou F, Dimet J, Boutron I, et al. Splint for Base-of-Thumb Osteoarthritis. A randomized trial. Annals of Internal Medicine 2009;150(10):661–9; osteoarthritis: systematic review and meta-analysis. Disabil. Rehabil, Early Online 2015: 1–19.

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THU0729-HPR | **PATIENTS AND CAREGIVERS PREFERENCES RELATED WITH THE USE OF INFORMATIC TECHNOLOGY TOOLS FOR EDUCATION IN RHEUMATOID ARTHRITIS**

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**Background:** Rheumatoid arthritis (RA) is a chronic inflammatory disease of the joints affecting more than 1% of global population, it is a long term condition that causes pain, disability and affects the quality of life (1). It has been demonstrated that patient's involvement with its treatment and disease management can be more effective than information-only given by the physician or a health care professional (2).
**Objectives:** To describe patient's preferences regarding information technology tools for education and RA management in a specialized center in Bogotá Colombia.
**Methods:** We conducted a descriptive study where a survey was applied to a group of patients or care-givers attending to a patient-focused symposium in Bogotá Colombia. Descriptive epidemiology was done; percentages and averages were calculated for qualitative variables.
**Results:** We included 452 participants, 80% were patients and 20% caregivers, only 25% referred to assist to informative activities regarding disease management, 41% reported to have information regarding RA, also between 29% and 45% of patients acknowledged the role of the health-care team in the disease activity management. Regarding technology information tools patients considered that WhatsApp was the most important tool to received messages to disease management (40%) followed by YouTube and websites. 70% reported to have a computer or a mobile phone with internet connection, 60% reported to use Facebook while only 30% reported to use easily websites and twitter.
**Conclusions:** It is important to know the preferences and access that patients and caregivers have to informatics technology in order to create self-care programs that really are going to be used in this population. This survey is evidence not only to start an educational program in our specialized center but to the health care professionals and stakeholders in Colombia.
**References:**
[1] Prothero L, Georgopoulou S, de Souza S. Patient involvement in the development of a handbook for moderate rheumatoid arthritis. 2016.

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THU0730-HPR | **CONTENT AND SUPERVISION OF GROUP EXERCISE THERAPY (GET) FOR AXIAL SPONDYLOARTHRITIS (AXSPA) IN THE NETHERLANDS; A NATION WIDE SURVEY**

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**Background:** For axSpA patients exercise therapy is recommended in (inter)national treatment guidelines. Apart from mobility exercises, muscle strengthening and cardio vascular training are recommended therapeutic modalities [1,2]. In the Netherlands 45 therapy groups (land based exercises; 1, hydrotherapy; 13, combination groups; 31) are organized by 17 local patient organizations exclusively for AxSpA patients. It is unclear if the treatment recommendations are followed and what the nature of the supervision in these exercise programs is.
**Objectives:** To describe the therapeutic modalities used and characteristics of the supervision in GET for patients with axSpA in the Netherlands.
**Methods:** A questionnaire was sent to the coordinating supervisors of GET from the17 local patient organisations involved in GET for axSpA with questions regarding the frequency and duration of group exercise programs and treatment modalities (mobility, stregthening and/or cardio-vascular exercises) used in land-based and hydrotherapy parts of the programs. In addition the questionnaire included questions regarding the number of supervisors involved in the supervision of GET, their professional background (physical therapist, other), years of experience with GET ($<1$yr, 1–5 yrs, $>5$yrs) additional education related to rheumatic diseases (yes/no) and rheumatology network membership (yes/no).
**Results:** All 17 coordinating supervisors of GET for axSpA returned the questionnaire. All exercise groups were performed once a week with a median (range) duration of 30 minutes (30–60) for the hydrotherapy and 105 minutes (45–180) for the combination therapy groups. Regarding land-based treatment modalities, active joint range of motion exercises and muscle strengthening exercises were used as stated by 15/17 and 14/16 coordinators respectively. In hydrotherapy this was 17/17 both. 13/16 coordinators stated that cardio-vascular training was used in land-based parts and in hydrotherapy parts in 14/17. Only 1/17 coordinator stated that hart rate monitoring (land-based) was used. A total of 64 supervisors were involved in GET for axSpA of whom 54/60 were physical therapists. 35/59 were involved for more than 5 years, 21/55 had post graduate rheumatology education and 10/54 were rheumatology network members.
**Conclusions:** Mobility and strengthening exercises are used in the majority of GET programs, but hart rate monitoring is almost never used raising questions regarding the intensity of these programs. The duration of exercise sessions showed a wide variety, as did the program composition (water based/land and water based) identifying considerable practice variation. The majority of the supervisors were physical therapists with long standing experience but only a minority had postgraduate rheumatology education. To ensure the quality of GET for patients with axSpA, reducing practice variation is a future challenge. Education of GET supervisors might be important aspects and target of priority.
**References:**
[1] Van der Heijde D, Ramiro S, et al. 2016 update of the ASAS-EULAR management recommendations for axial spondyloarthritis. Annals of the rheumatic diseases. 2017.
[2] Dutch Arthritis Association, Guidelines for diagnostics and treatment in axial spondylitis. 2014.

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THU0731-HPR | **CAN A THREE WEEKS PROGRAM IN A REHABILITATION CENTER IMPROVE SYMPTOMS AND EXERCISE-FREQUENCY FOR RHEUMATIC PATIENTS?**

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**Background:** Rehabilitation for people with rheumatic disorders (15% of worldwide population) is a long term project (Stoffer et al. 2015). Rheumatic patients do not exercise as often as recommended (Holm et al. 2015). Intensive multidisciplinary interventions in rehabilitation-centers are in some countries an option – of which there is little effect knowledge. Perhaps data from a quality-management report can shed some preliminary light on this subject.
**Objectives:** Primarily to observe short and long term effects of a three weeks intensive multidisciplinary program for people with rheumatic disorders, and secondary to see if a correlation can be found between level of training frequency and levels of pain, stiffness, and self rated health.

**Methods:** 738 patients (age 62.0+11.1, 84% women), followed a three weeks multidisciplinary program of individual and group sessions - with physiotherapy as main focus - during the period of August 2010 to September 2016 at Skogli Health- and Rehabilitation Center, Lillehammer, Norway.

3-month follow-up: N=252 and 12-month follow-up: N=118. Data from self-reported questionnaires at T1-T4 was gathered. Paired sampled T-tests and Pearson product-moment correlation coefficients was used to analyze the data obtained, using IBM SPSS Statistics v.23.

Instruments:
- NRS-11 for pain and stiffness at baseline (T1), at discharge (T2), and at 3- (T3) and 12 months (T4) after discharge.
- Likert scale (1–6) for self-rated level of health at T1, T2, T3 and T4.
- Self-reported level of training frequency at T1, T3 and T4

**Results:** There was a clear mean improvement ($p<0.0001$) on all factors at T2 of moderate/large effect-size. At T3 there was a mean improvement ($p<0.05$) on all factors, except pain, of small/moderate effect size. There was a mean improvement ($p<0.05$) on self-rated level of health and training frequency at T4 of a small effect size. Worth noting is that the degree of stiffness and pain at T4 is back to T1-level.

There was a correlation ($p<0.05$) between level of training frequency and self-rated level of health (small at T1/T3, medium at T4), but no correlation between level of training frequency and level of pain or stiffness, at any time. This suggests that a higher training frequency is associated with a higher sense of health – regardless of symptom levels.

**Conclusions:** People with rheumatic disorders seem to have a very positive short term effect on all aspects after a three week intensive multidisciplinary program, but gradually return to pre-rehab levels during the following year – especially regarding symptoms like stiffness and pain. At the same time there seems to be a much slower decline in self-rated level of health – especially for those who regularly exercise. Properly randomized controlled trials are however needed to be able to draw any clear conclusions.

**Implications:** There might be a need for intensive multidisciplinary programs for rheumatic patients at intervals of less than a year, to be able to better keep the general health and function gained. Another possible implication is to implement a stronger focus on teaching rheumatic patients the necessity for an active lifestyle – including regular exercises – for them to be able to maintain their sense of general health, regardless of symptom levels.

**References:**
[1] Stoffer MA, Smolen JS, et al. Ann Rheum Dis 2015; 74: 1145–1149.
[2] Holm I, Tveter AT, et al. Physiotherapy 2015; 101 (3): 273–8.

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**THU0732-HPR | ENHANCED MANAGEMENT OF ANKYLOSING SPONDYLITIES THROUGH GUANGDONG INTERNET HOSPITAL IN CHINA:A RANDOMIZED, CONTROLLED TRIAL**

H. Zhengping[1], L. Tianwang[1], H. Zhixiang[1], P. Xia[1], Z. Lihua[2], H. Yukai[1], Y. Xiaoyan[1], L. Meng[1], H. Xuechan[1], W. Yunqing[1], L. Xumian[1], T. Yao[1]. [1]*Department of Rheumatology and Clinical Immunology;* [2]*Nursing Department, Guangdong NO.2 Provincial People's Hospital, Guangzhou, China*

**Background:** Ankylosing Spondylitis (AS) is a kind of common chronic disease.Guangdong Internet Hospital is China's first officially recognized network hospital and the government encourage development of telemedicine in the country. Increasing research evidences support the efficacy of telemedicine in management of chronic diseases. However, There are still few researches about AS management by using telemedicine.

**Objectives:** We here conducted a 6-month randomized, controlled trial to evaluate the feasibility and efficacy of Guangdong Internet Hospital in AS management.

**Methods:** A total of 102 AS patients were randomly divided into two groups: standard care (ST) group or standard care with Network-Enhanced Management (ST-NEM) group. NEM enhanced disease management including cognition of the disease, medication monitoring, behavioral management and psychotherapy. Individuals were assessed by using several tools at baseline and 6 months later: Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) for the disease acticity, Ankylosing Spondylitis Functional Index (BASFI) for the functional limitation, the Zung Self-Rating Anxiety Scale (SAS) and the Zung Self-Rating Depression Scale Zung (SDS) for the psychological status, Pittsburgh sleep quality index (PSQI) for the sleep quality, and SF-36 for the general health status. In addition, we made a satisfaction survey about the network platform in the management of the disease. Both group received the same medications during the period. There were no significant differences in baseline demographic and clinical characteristics between the two groups.

**Results:** After 6 month, 91 patients completed the trial. BASFI (1.75±0.73 vs. 2.04±0.69, P=0.026), SAS (28.12±3.22 vs. 39.56±4.61, P=0.022), SDS (26.51±6.34 vs. 32.12±6.34, P=0.031), PSQI (3.31±0.46 vs. 4.79±0.54, P=0.019) and SF-36 (SF-36M: 54.24±9.66 vs. 61.41±8.56, P=0.014; SF-36P: 63.42±11.08 vs. 68.98±10.46, P=0.032) were significantly lower in ST-NEM group than ST group after 6 months. There was no significant difference in BASDAI (2.66±0.91 vs. 2.75±0.75, P=0.068) between the two groups. Individuals assigned to the ST-NEM group reported significantly improvement in functional limitation, psycho-
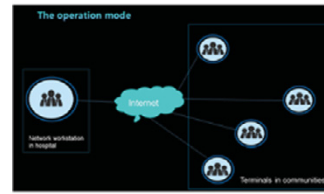

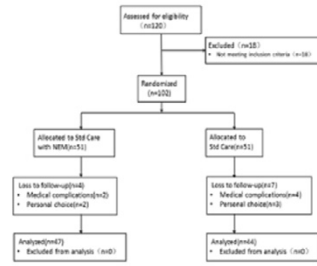Figure.1 The operation mode of Guangdong Internet Hospital

Table 1.Baseline Demographic and Clinical Characteristics of AS patients

| Characteristic | ST-NEM (n=47) | ST (n=44) | Total(n=91) |
|---|---|---|---|
| Male(n) | 43 | 41 | 84 |
| Age(y) | | | |
| Mean(SD) | 27.69(5.31) | 28.53(5.72) | 28.10(5.49) |
| Disease duration(y) | | | |
| Mean(SD) | 4.16(6.91) | 4.58(7.08) | 4.36(6.94) |
| B27 positive (n) | 41 | 39 | 80(88.9%) |
| Education Status(n) | | | |
| Junior high school | 3 | 5 | 8(8.8%) |
| Senior high school | 23 | 22 | 45(49.5%) |
| College Graduate | 19 | 15 | 34(37.4%) |
| Post Graduate | 2 | 2 | 4(4.4%) |

n=number of cases, y=years, %=percentage, SD=standard deviation


Figure 2.CORT Study Flow diagram

Table 2. The primary outcomes in two groups at baseline and 6 months later

| Assessing Tool | Baseline | | | 6 months later | | |
|---|---|---|---|---|---|---|
| | ST-NEM | ST | P value | ST-NEM | ST | P value |
| BASDAI | 5.12±1.26 | 5.41±1.58 | 0.32 | 2.66±0.91 | 2.75±0.75 | 0.068 |
| BASFI | 4.71±1.49 | 4.86±1.37 | 0.20 | 1.75±0.73 | 2.04±0.69 | 0.026 |
| SDS | 52.62±5.52 | 54.52±6.34 | 0.61 | 26.51±6.34 | 32.12±6.34 | 0.031 |
| SAS | 47.32±6.41 | 48.58±5.32 | 0.38 | 28.12±3.22 | 39.56±4.61 | 0.022 |
| PSQI | 8.71±1.13 | 8.63±0.96 | 0.44 | 3.31±0.46 | 4.79±0.54 | 0.019 |
| SF-36M | 44.06±6.06 | 44.08±5.18 | 0.58 | 54.24±9.66 | 61.41±8.56 | 0.014 |
| SF-36P | 50.43±5.15 | 52.61±10.48 | 0.31 | 63.42±11.08 | 68.98±10.46 | 0.032 |

SF-36M: SF-36 Mental Component Summary score
SF-36P: SF-36 Physical Component Summary score

Table 3. Result of patients' satisfaction survey

| Contents | Strongly agree | Agree | Not agree |
|---|---|---|---|
| It was convenient and quick to achieve disease management | 40 | 7 | 0 |
| The nurse's explanations were easily understood | 40 | 7 | 0 |
| Problems could be solved with this network platform in time | 36 | 8 | 3 |
| It was useful to my disease recovery | 42 | 5 | 0 |
| My privacy was protected | 43 | 4 | 0 |
| I will keep using the network hospital in future | 40 | 5 | 2 |
| I will recommend to my family and friends | 43 | 3 | 1 |

logical status, sleep quality and the general health status. In addition, Guangdong Internet Hospital were widely accepted by the AS patients in disease management.

**Conclusions:** Guangdong Internet Hospital showed potential feasibility and efficacy in AS management. AS patients may receive disease management through the netwrok platform conveniently and effectively, especially those in the remote areas of the country. The results may be important for clinical practice in disease management of AS by using telemedicine.

**References:**
[1] Sinclair. 2015. Effectiveness and User Acceptance of Online Chronic Disease Management Interventions in Rural and Remote Settings: Systematic Review and Narrative Synthesis. Clinical Medicine Insights: Therapeutics: 43.
[2] Tu J, Wang C, Wu S. 2015. The internet hospital: an emerging innovation in China. The Lancet Global Health 3: e445-e6.

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**THU0733-HPR | REHABILITATION IN WARM CLIMATE FOR YOUNG ADULTS WITH INFLAMMATORY RHEUMATIC DISEASE. A 12 MONTHS RANDOMIZED CONTROLLED TRIAL**

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**Background:** Rehabilitation in warm climate has long been an established non-pharmacological treatment for patients with inflammatory rheumatic disease (IRD) in Norway. It has however not been tailored to the needs of young adults, who often have different challenges than older adults with IRD.

**Objectives:** The aim of this study was to investigate if a rehabilitation program in warm climate tailored to young adults from 20 to 35 years had effect on physical function and self-management/coping, 12 months after completed intervention.

**Methods:** This was an open randomized controlled pilot trial, with a 2-group parallel design and a 1:1 allocation ratio. Patients were recruited from three different rheumatology outpatient clinics in central Norway. The intervention group received a 17 day long rehabilitation stay in Spain. The main component of the tailored intervention was intensive exercise (2–3 times per/day), individual physiotherapy (daily) and patient education. The control group received treatment as usual. The primary outcome measure was physical function assessed by the "30 second Sit to Stand test" (30sSTS, number of sit and stand during 30 seconds, higher score is better) and self-management/coping measured by the "Effective Musculoskeletal Consumer Scale" (EC17, higher score is better).

**Results:** Forty patients (mean age 27.5, 65% female) with IRD (intervention/control: 3/2 rheumatoid arthritis, 3/9 juvenile idiopathic arthritis, 4/5 psoriatic arthritis, 8/3 ankylosing spondylitis and 2/1 polyarthritis) were randomized. 19 out of 20 patients completed the intervention. At twelve months follow up there were 3 patients lost to follow up from the intervention group, and 2 in the control group. Patients in the intervention group had a significant improvement in the 30sSTS test 3, 6 and 12 months after completed intervention, compared to the control group (Table 1). The within group analysis showed that both groups improved at 6 and 12 months. The EC17 showed no difference between the two groups at 3, 6 or 12 months.

**Conclusions:** The results indicate that the intervention group significantly improved their physical function one year after the intervention compared to the control group, but there was no effect on self-management/coping. These results