to their questions through the Internet or from healthcare professionals. Three different description categories emerged: Specific competence, Constructive dialogue, and Applicability. The informants' perceived Specific competence when the nurses were knowledgeable, the call was complementary to previously received information and when the informants had greater knowledge after the contact with RD. They perceived that it was a Constructive dialogue when they got someone to discuss with, a "sounding board", and perceived emotional support, felt reassured and were satisfied with the answer. The informants perceived Applicability because RD was available and they could make different choices according to their own desire; before (how and when they would contact RD), during (what to tell and what question they would ask) and after (how and what they would do after the contact with RD).

Conclusions: People calling RD perceived that the telephone call with the nurses meant meeting specific competence, gaining constructive dialogue and that the helpline was applicable. This knowledge ad to a fuller understanding of factors that from a caller's perspective, are important when calling a helpline with specially trained nurses on rheumatic diseases.

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AB1239-HPR FATIGUE AT DIAGNOSIS OF INFLAMMATORY JOINT DISEASES - A PREDICTOR OF FATIGUE DURING THE COURSE OF DISEASE DESPITE OF LOW DISEASE ACTIVITY

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Background: Fatigue is a common symptom in patients suffering from inflammatory rheumatic diseases. Several patients still present with fatigue, although they are well treated with anti TNF-therapy (1).

Objectives: To investigate disease-related aspects of fatigue in patients with inflammatory rheumatic diseases using the Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F) with the aim later to develop methods to improve the patients quality of life in a more specific way.

Methods: All patients with inflammatory diseases including Rheumatoid Arthritis (38) and Spondyloarthropathy (13) and Psoriatic arthritis (2) treated with Intravenous biologic from 15.10 until 31.12.16 were invited to fill out the FACIT-F questionnaire during intravenous (IV) infusion of the drugs in the rheumatology outpatient clinic. Furthermore hemoglobin and disease activity score were extracted from patients electronic records.

Results: Of 72 patients, 53 patients completed the questionnaire. 5 patients did not want to participate. In 11 patients treatment was discontinued during the study and 3 patients were not able to answer the questions.

Patients with a fatigue score of <30 had few problems with any of the subgroups within the FACIT-F questionnaire (A-E), whereas more than 30% of patients with a fatigue score of ≥ 30 had challenges in one of the FACIT-F subgroups (somewhat, quite a bit and very much) A. Physical well-being: lack of energy and troubles with meeting the needs of their family because of their physical condition. B. Social/family well-being: patients were not feeling close to their friends, not getting enough emotional support from their family and not satisfied with their sex life. C. Emotional well-being: patients worry if their conditions might get worse. D. Functional well-being: patients feel they are partly unable to work, not satisfied with their performance at work and they have sleeping and quality of life problems. E. Additional concerns: patients had problems with fatigue, weakness, tiredness, starting and finishing things because of tiredness, not having energy, not being able to do usual activities, frustration by being too tired to do the things they want to do as well as they want to limit social activities because of tiredness and they need to sleep during the day. Furthermore, there was a moderate correlation between fatigue at diagnosis and fatigue at time of data extraction ($r = 0.53$). The fatigue was not correlated with anemia or high disease activity.

Conclusions: Our results demonstrated that patients with a fatigue score of >30 had different challenges mentioned in the fatigue questionnaire. In addition, patients who experience fatigue at time of diagnosis, they often remain fatigue, provoking the thought that fatigue is not correlated with inflammatory joint disease. Maybe more explorative questions about fatigue at the consultation could be a part of improving the patients'quality of life.

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AB1240-HPR PATIENTS' DOGMA, NUMBER OF SWOLLEN JOINTS AND PHYSICIANS' AND PATIENTS' AGE PREDICT NON-ADHERENCE TO MEDICINES AND NON-PHARMACOLOGICAL INTERVENTIONS IN RHEUMATOID ARTHRITIS – A MIXED METHODS STUDY

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Background: In rheumatoid arthritis (RA), up to 80% of patients were found to be non-adherent to prescribed medication and non-pharmacological recommendations. These patients do not achieve an optimal clinical outcome.

Objectives: In the present study, we therefore explored predictors that may lead to non-adherence to both medicines and/or non-pharmacological recommendations.

Methods: In a mixed methods study, retrospective observational data from patients meeting the ACR/EULAR criteria for RA who were non-attenders/missed the routine check up visits for at least 9 months to the rheumatology clinic and had had an initial DMARD therapy were queried of the databases of two rheumatology centers in Austria (Graz, Vienna). Subsequently, we invited all patients to take part in a qualitative semi-structured interview study with a meaning condensation data analysis. In the interviews, patients were assigned to the subgroups "adherent" (e.g. having regular rheumatology visits in another clinic) or "non-adherent" (e.g. having stopped taking the prescribed medication). Possible predictors derived from the qualitative analysis and the retrospective observational data were then tested in a logistic regression model.

Results: In total, data of 459 patients (346 [75.4%] females; mean age 63.0 [SD± 14.8]) were extracted out of the databases. 131 patients (109 [83.2%] females; mean age 64.8 [SD± 14.1]) participated in the qualitative interviews. In addition to already known themes, new topics arose from the analysis: (i) patient's dogma inhibited adherent behavior, in that patients felt that pain was an important part of life and attributed to having had a high manual workload during life of which patients were proud; (ii) patients had less trust in physicians when they were seeking support from other physicians, because they appeared to be "young or unexperienced"; (iii) Some patients did not feel properly understood if physicians only prescribed medication without giving advice on non-pharmacological aspects of treatment.

Two clinical variables were found to be predictors for non-adherent behavior (table 1): swollen joint count (patients with higher numbers of swollen joints were less adherent) and age (younger patients were less adherent).

Table 1. Logistic regression models. Odds ratios of relevant factors for non-adherent behavior in RA: results of the logistic regression analysis

Regression Model	Odds Ratio	CI 95%	Significance at 0.05 (p)
Age at the last visit	1.033	1.005 to 1.063	0.022
Swollen Joint Count using a 32 joint count form	0.876	0.767 to 1.000	0.050

Conclusions: In order to achieve a good clinical outcome, it is important to provide evidence based treatment recommendations, but also to ensure adherence to these. The predictors found in our study could be used to enhance patient adherence and therefore improve clinical outcome.

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AB1241-HPR EVALUATION OF PATIENT COMPLIANCE WITH LONG TERM PRESCRIBED RHEUMATIC MEDICATION AT LOCAL LONDON HOSPITAL RHEUMATOLOGY UNIT

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Background: Non-Compliance with Long term medication is reported as high 60% (1). Health belief model suggests four elements contribute to this problem. The Beliefs About Medicines Questionnaire (BMQ) is a tool for evaluating people's beliefs about medicines (1).

Objectives: A Service Evaluation of compliance with prescribed medication for Long Term Rheumatologic Conditions at Central Middlesex Hospital. This was conducted to assess any possible relationship between compliance with medicines and beliefs or concerns or patient's ethnicity.

Methods: The design was a voluntary self-reported, cross-sectional paper based questionnaire survey of people with Rheumatic Conditions. Twelve questions were grouped within three categories (healthcare utilisation, necessity beliefs and concern beliefs) to capture compliance behaviour for later analysis and comparison.

The Beliefs about Medicines Questionnaire was adapted from ref (1) to distinguish patients beliefs of 'necessity' or 'concerns'. In line with principles of PPP, the questionnaire was discussed prior to the audit with a sample focus group of 5

patients who contributed to the wording and the simplification of the questions re: ethnicity.
Questionnaires were offered to all patients attending the CMH Rheumatology Unit. The evaluation was discontinued when a target of 100 was reached (n=102). No questionnaires were excluded. And upto 5% of questions were unanswered. Data was analysed on SPSS.
Results: The Number of questionnaires returned for this service evaluation was 102.
- Most respondents (94%) showed compliance with rheumatic medication as prescribed.
- More than half the respondents (66%) agreed or strongly agreed that their arthritis medications are necessary for their health.
- 54% were concerned about potential adverse consequences.
- The overall necessity score (19.32 S.D. 3.17) was higher than the concerns score (13.48; S.D. 3.35; t =61.57, P<0.001).
- Concerns about the long term effect of rheumatic conditions correlate positively with perceptions of health in the future P<0.01 level (2-tailed Pearson).
- No significant correlation was found between compliance and patient's ethnicity/individuals demographics.

Conclusions: Most people with Rheumatic conditions have positive beliefs about the necessity of their medication. However, levels of concern are high, especially towards the long-term effects of the medication. This concurs with asimilar study in Rheumatoid Arthritis.(2). The service evaluation using the Beliefs about Medicines Questionnaire has helped to identify people at risk of poor compliance long term. This illustrates a need to discuss patients beliefs and concerns in targeted drug counseling sessions with specialist nurses. A post study patient focus group recognised the high level of compliance yet recommended a fixed weekly walk in session with a nurse and pharmacist to sustain this high quality outcome. Further methods of continued patient re-education will be explored.
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HPR service developments, innovation and economics in healthcare

AB1242-HPR NUMERICAL PREDICTION OF THE OPTIMUM SHEET METAL THICKNESS IMPLANTED AS THE JOINT CARTILAGE

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Background: The combination of computer-aided-design (CAD), digital image processing techniques and finite element method (FEM) has been successfully employed to create the customized distal condyle implants in human joints during arthroplasty surgery when the manufacturing method is incremental sheet forming (ISF) technique. However, due to the high time of process in the FEM analysing of human joints, finding the optimum material thickness with respect to the joint cartilage has been neglected.
Objectives: To apply a numerical investigation based on the FEM to predict and propose the sheet metal thickness for joint cartilage in the ISF process in a timely method for the human knee as a case study.
Methods: To reduce the expense of experiments and save the time of production, a numerical investigation method based on FEM is designed for the ISF. The user subroutine is employed to navigate the tool motion and material behaviour for reducing the time of simulation in the analysing tool. Hence, the sequence of FEM applied was as follow. 1) Create the solid model of the clamping system and sheet metal. 2) Choosing associated nodes together with Shell elements to increase the accuracy of the simulation and simplify the process. 3) Applying the specifications of every element. 4) Assign and render the material properties for sheet metal. 5) Apply the initial boundary conditions. 6) Assigning the asymmetric boundary conditions using the subroutine for time reduction purpose. 7) Apply the loads related to the complete FEM. Consequently, the proper thickness from MRI based on the previous study is sent to the CAD system for the mechanical and anatomical modification.
Sheet metal thickness and also material selection were based on the joint mechanical properties, shape and size. Therefore, by using the optimum pressure profile, the FEM can be performed to predict the sheet stretch and also shear failure to illuminate the optimum sheet thickness used in customized medical implants.
Results: The result of this study is based on the validation of predicted sheet thickness with the real patient cartilage thickness. This result showed a good agreement with the hospital data (for cartilage thickness of ~2.20mm) and simulation result (~2.23mm for sheet thickness). It was not possible to divide the model into some sections and only analyse one particular part as a sample. Therefore, the time of calculation was 23 hours for FEM when a high-performance computer was used. Regarding the same issue, the mesh was not uniform distributed so the time of analysing for each particular location was not the similar and predictable. The shear failure happens on the edge of design and also some locations that a turning point existed.
Conclusions: A numerical simulation is required to predict the material thickness replaced with the joint cartilage. Thus, the mathematical solution is investigated to predict the sheet thickness in the customized production process. Therefore, the result showed 98.5% similarity thickness of sheet metal with cartilage.
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AB1243-HPR USING INFORMATION-COMMUNICATION TECHNOLOGIES AND OPPORTUNITIES FOR TELEREHABILITATION IN OCCUPATIONAL THERAPY

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Background: The use of information and communication technology (ICT) in occupational therapy should allow management of chronic diseases by providing support programs in education including the use of multimedia services.
Objectives: In order to determine the presence of information and communication technologies use in the options of telerehabilitation, a survey was conducted 224 newly diagnosed patients with rheumatoid arthritis (RA).
Methods: The quantitative research approach was used with the newly created detected patients with RA treated on Department of Rheumatology at the University Medical Centre Ljubljana. The questionnaire included basic demographic information and questions about the use extent and possibilities for using ICT. The population also accounted for patients with RA diagnosed between 1 January 2014 and 31 December 2015. The data obtained was statistically analysed with the SPSS program IMB 20. The total of 64 survey questionnaires were completed, which represents 28% of the selected population.
Results: 23.4% RA patients don't use internet. 48.4% RA patients use personal computers (PC), and 51.6% patients use smart phones. 35.3% of patients that use PC use it for e-mailing, searching health information (35.4%), video calls (13.3%) and sending messages (15%). Patients who use smart phones use them for calls (31.9%), texting and calls (26.7%), e-mailing (25%), searching health information (12.9%), and video calls (3.4%). There is a positive correlation between the use of modern ICT and the opinion that the interviewed patients would use telerehabilitation services during their rehabilitation. Pearson correlation coefficients are statistically significant with all the ICT. With using a PC (r =0.602) and smart phones (r =0.542) there is a medium strong positive correlation Positive coefficients indicate that the surveyed patients who are increasingly using ICT think they could help themselves with telerehabilitation. Increased frequency of ICT usage is associated with potentially greater possibility of using telerehabilitation.
Conclusions: The need for rapid access and exchange of information is the main reason for the use of information and communication technologies in healthcare, and is conditional for the development of e-health. Research provided answers questions about the possibilities of using information and communication technology and rehabilitation services at a distance – telerehabilitation in occupational therapy.
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AB1244-HPR GUIDED SELF-MANAGEMENT FOR PATIENTS WITH RHEUMATIC INFLAMMATORY DISEASES AND FATIGUE – A PILOT PROJECT

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Background: Fatigue is reported to be a common symptom in people with inflammatory rheumatic diseases. It is a complex symptom, characterized by an individual interplay of biopsychosocial factors that has been associated with factors like inflammation, deconditioning, sleep problems, decreased function, pain and psychosocial factors like depression.
Objectives: The main objective was to contribute to improved coping and quality of life in people with inflammatory rheumatic disease and fatigue. Cognitive therapy is one of the common psychological interventions used in the rehabilitation