

#### 414. CHARACTERISATION OF "FLARES" OF DISEASE ACTIVITY IN PRIMARY SJÖGREN'S SYNDROME

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**Background:** Primary Sjögren's Syndrome (1° SS) is a connective tissue disorder characterised by dryness (sicca) syndrome affecting the eyes and mucosal surfaces. It is generally thought of as a benign condition with no major increased impact on mortality except in those patients who develop lymphoma. However, major morbidity can occur as a result of the disease features. Whereas other rheumatic diseases such as rheumatoid arthritis or systemic lupus erythematosus are relapsing/remitting disorders with acute "flares" of disease, this is not generally thought to be the case with the sicca component of 1° SS. However, variations in activity of the systemic features of 1° SS have been poorly characterised. Therefore, we set out to review a cohort of patients with 1° SS to assess the prevalence of clinical "flares" and whether any serological features defined this group.

**Methods:** A retrospective case note review was performed, using patients from a database of 1° SS active since 1997. Patients who had a "flare" of disease over the 5 year period from 1997-2002 were identified. A "flare" was provisionally defined as a reversible worsening of systemic clinical features not including the sicca component. All data from the database, which includes clinical and serological parameters, were analysed for defining features. Each patient that was identified were matched for age, sex and disease duration with another who had not had a history of "flares". Disease characteristics were compared to see if any features identified the "flare" group.

**Results:** Over the period of review 8 out of 63 patients with 1° SS (12.7%) were identified as having 1 or more "flares" with a total of 11 episodes. The features of "flare" consisted of: increased fatigue 7/11 (63.6%); polyarthritis 7/11 (63.6%); polyarthralgia 4/11 (36.4%); worsening Raynaud's phenomenon 2/11 (18.2%); livedo reticularis 1/11; general malaise 1/11; myalgia 1/11; tenosynovitis 1/11. Therapy used for a flare was: (im) Depomedrone 120mg in 8/11 (72.7%); initiation of Hydroxychloroquine 200-400mg/day in 5/11 (45.4%); initiation of NSAID in 1/11. By 3 months all but one flare had settled (90.9%) with the one that failed needing another (im) Depomedrone 120mg to settle it. The only laboratory assessments that were associated with "flares" were that in 3 patients there was a rise in ESR and in 2 a rise in CRP. There were no significant differences between the "flare" group or "non-flare" group with respect to characteristics associated with 1° SS.

**Conclusions:** Patients with 1° SS undergo "flares" of systemic features, mainly affecting the joints, that are amenable to treatment. No obvious features of 1° SS were able to distinguish those who have "flares" and those who do not.

#### 415. PRIMARY SJÖGREN'S SYNDROME ASSOCIATED WITH LIFE-THREATENING NECROTIZING VASCULITIS

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**Background:** Vasculitis in patients with Sjögren's syndrome, which often involves small vessels, is associated with hypergammaglobulinemia, cryoglobulinemia, and anti SSA/SSB antibodies. On the contrary, middle-size vessels necrotizing vasculitis is unfrequent. We retrospectively evaluated this association between middle-size vessels vasculitis and SS in a large cohort of 300 patients.

**Methods:** All the patients fulfilled the diagnosis of primary SS according to the European/American criteria (4 criteria with focus score  $\geq 1$  or presence of anti-SSA/SSB antibodies). Patients came from three French reference centres for SS. Review of the medical charts ruled out ANCA-mediated or drug-induced vasculitis, as well as vasculitis associated with neoplasia, infectious and other auto-immune diseases, including rheumatoid arthritis.

**Results:** We identified 6 patients with histologically proved middle-size vessels vasculitis. Mean age at onset of vasculitis was 59.3 years, mean delay between diagnosis of SS and vasculitis was 9 years. Vasculitis and onset of SS were simultaneous in 2 patients. 5 out of 6 patients had Raynaud phenomenon and multinevritis, 3 had skin lesions (purpura, skin ulcerations), 1 patient had a myocardial infarction, 1 patient had an ileus due to jejunal vasculitis, 1 patient had a bilateral hypoacusia and a vestibular syndrome. Muscle biopsy showed middle-size vessels in all patients, with a necrotizing aspect in 4 patients. 4 patients had positive anti-SSA, whereas two had also positive anti-SSB. All the 6 patients had positive rheumatoid factor and

polyclonal hypergammaglobulinemia. Mixed II cryoglobulinemia with a monoclonal component was found in two patients. 5 patients required treatment with pulse cyclophosphamide and prednisone. One patient was treated with pulse methylprednisolone, followed by oral prednisone alone. Evolution under therapy was good, as no patient died after a mean follow-up of 13.8 months.

**Conclusions:** Exceptionally, SS can involve medium-sized blood vessels and cause a necrotizing vasculitis which can be life-threatening. Differential diagnosis of polyarteritis nodosa must include primary SS.

## BHPR

#### 416. DISTORTING PROPRIOCEPTION IN CHRONIC PAIN PATIENTS EXACERBATES SENSORY DISTURBANCES - IMPLICATIONS FOR PATHOLOGY



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**Background:** Some rheumatology patients report a variety of pains which appear to have no biomedical explanation e.g. in Complex Regional Pain Syndrome Type 1 (CRPS) and Fibromyalgia (FMS). It has been hypothesised that discordance between motor intention and sensory perception may generate sensations including pain. Evidence of cortical sensory reorganisation exists in many chronic pain states including CRPS and we have demonstrated, in CRPS, that an analgesic response can be induced when 'appropriate' sensory input is provided via visual illusion. We therefore, hypothesised that the sensations described by our patients could be exacerbated when motor/sensory mismatch is increased using false visual feedback

**Methods:** Subjects >18 years with a diagnosis of CRPS or FMS were recruited. Sensory/motor mismatch can be produced when incongruent movement is performed e.g. viewing the reflected image of the moving right limb (perceived as left) in a mirror whilst moving the left limb in the opposite direction. Therefore a mirror (active intervention), with a whiteboard (control) on the reverse, was positioned between the upper (and then lower) limbs at right angles to the body. The subjects moved their limbs in a congruent manner for 20 seconds whilst viewing the whiteboard or mirror and reported any sensory changes in either limb. The protocol was repeated (random order) in upper and lower limbs using incongruent movements, viewing first the whiteboard and then the mirror (the reflected image of their limb).

**Results:** Sensory changes were described in addition to the subjects current symptoms and, for those with CRPS in their affected and unaffected limbs (table 1). Pain ranged from mild (pins and needles, aching), to moderate (crampy, sharp) and severe (extremely painful) Changes in weight, temperature, severe pain, and perceived loss of limb were greatest when incongruent visual feedback was induced.

Percentage of additional sensory changes in limbs reported by subjects whilst exercising limbs and viewing whiteboard (control) and mirror

n = 23	Female = 20		Male = 3	
	W Con	W Inc	M Con	M Inc
Temperature change	4%	13%	13%	21%
Weight change	26%	30%	21%	48%
Mild pain	30%	17%	13%	9%
Moderate pain	13%	17%	4%	9%
Severe pain	0%	0%	4%	17%
Perceived loss of limb	21%	17%	43%	52%
Disorientation	0%	17%	17%	30%

W Con/Inc = Whiteboard congruent/incongruent, M Con/Inc = mirror congruent/incongruent

**Conclusions:** Our findings support the hypothesis that sensory disturbances can be exacerbated and most notably, generated in unaffected limbs, when motor output is not matched to expected sensory input. This has important implications for understanding the pathogenesis of 'inappropriate' pain and the tailoring of therapeutic initiatives.

#### 417. PROPRIOCEPTION OF THE CERVICAL SPINE IN SUBJECTS WITH AND WITHOUT A HISTORY OF NECK PAIN



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**Background:** Proprioception is considered to make an essential contribution to functional stability of a joint. It is thought that pain can reduce proprioceptive acuity and that this may promote joint pathology. Neck pain is a common musculoskeletal problem and to date there are few studies that have investigated its relationship with proprioception of the cervical spine. The purpose of this study was to determine whether a history of neck pain is associated with altered proprioceptive acuity of the cervical spine.

**Methods:** Twelve subjects with, and twelve subjects without a history of neck pain aged between 17 and 45 years, were recruited from a university population. Subjects sat in a chair wearing a cervical range of motion goniometer (CROM) on their head. Target angles for proprioceptive testing were calculated for each subject at 25% and 75% of their total left and right cervical rotation. The subjects were then blindfolded and their head passively rotated to one of the target angles where it was held for ten seconds. The subjects actively returned their head to the start position and were then asked to actively reproduce this target angle nine times. Deviation from the target angle was recorded in degrees for each of the 9 repositioning attempts. This procedure was repeated for all four target angles. The mean error for deviations from each of the target angles were compared for the two groups using unrelated t-tests (normally distributed interval/ratio data) and Mann-Whitney U test (non-normally distributed interval/ratio data).

**Results:** Neck pain subjects had a greater repositioning error than non-neck pain subjects. Mean errors for the four target angles were between 3.72 (SD=1.82) to 6.19 (SD=3.05) degrees in neck pain subjects and 2.39 (SD=1.70) to 3.61 (SD=3.55) degrees in non-neck pain subjects. The difference in mean errors was statistically significant ( $p < 0.05$ ) for the 25% and 75% left rotation target angles ( $p = 0.025$  and  $p = 0.031$  respectively) and the 25% right rotation target angle ( $p = 0.020$ ). Repeatability testing of the data collection procedure showed mean measurement errors of less than 1.0 degree.

**Conclusions:** The results of this study suggest that the subjects with a history of neck pain had a significant reduction in the ability to reproduce specified target angles of cervical spine rotation. i.e. reduced proprioceptive acuity of their cervical spine. These results give impetus for further research into the relationship between neck pain and proprioception.

#### 418. A PILOT RANDOMISED PLACEBO-CONTROLLED TRIAL OF PHYSIOTHERAPY AND OSTEOPATHIC TREATMENT FOR FROZEN SHOULDER



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**Background:** Frozen shoulder (FS) is highly prevalent, affecting 5 - 10% of the population and is frequently treated by both osteopaths and physiotherapists. There is little evidence to support current modes of treatment. The purpose of this study was to assess the efficacy of physiotherapy, placebo treatment and a novel osteopathic approach to treatment of FS.

**Methods:** Patients recruited for a randomised, controlled trial of treatment for FS were assessed at the beginning and end of a twelve-week treatment period. All patients were assessed by a chartered physiotherapist blinded to treatment allocation and completed a range of outcome measures including the primary measure for this study, the Shoulder Pain and Disability Index (SPADI) - a 0 to 100 scale in which 0 represents normal. Treatment comprised either placebo (consisting of breathing exercising, effleurage massage, and pain-free range of motion exercises), physiotherapy (consisting of manual therapy and therapeutic exercise), or a novel osteopathic technique (the Niel Asher Technique, consisting of a progression of deep tissue manipulations).

**Results:** The results for a group of 27 patients are presented here. Primary outcome measures were the SPADI and active shoulder abduction ROM measured via goniometer. Mean abduction improved in the Osteopathy group by 52.6° (sd=14.6), the Physiotherapy group improved by 24.0° (sd=35.8) and the Placebo group improved by 0.8° (sd=39.5). There was a significant difference between groups for this measure ( $p = 0.005$  Kruskal-Wallis Test). Mean SPADI scores improved in the Osteopathy group by 38.7 (sd=22.5), the Physiotherapy group improved by 19.9 (sd=24.6) and the Placebo group improved by 22.8 (sd=18.2). There was no significant difference between the groups ( $p = 0.187$  Kruskal-Wallis Test).

**Conclusions:** Patients with FS have significant levels of impairment and associated disability. There has been little evidence to support traditional approaches to treatment of this condition. Treatment with the Niel Asher Technique resulted in improved active abduction ROM however, there were no significant differences between groups for the SPADI score. All groups improved on the SPADI, supporting the notion that patients with this problem may spontaneously improve with regards to pain and disability. Range of motion did not improve for the placebo group, indicating that impairment may linger without treatment in this group of people. A larger study with higher statistical power is warranted.

#### 419. A RANDOMISED PLACEBO-CONTROLLED STUDY OF PHYSIOTHERAPY TREATMENT FOR ROTATOR CUFF TENDINOPATHIES



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**Background:** Rotator cuff tendinopathies (RCT) affect up to 30% of the general population and become more prevalent and disabling with age. Patients with RCT have significant levels of impairment and associated disability. The purpose of this study was to assess the efficacy of physiotherapy approaches to treatment of RCT. There has been little evidence to support physiotherapy treatment of this condition.

**Methods:** SUBJECTS: The results for the first 30 subjects to complete the study (mean age 53 (sd=14) and mean duration of symptoms 46 weeks (sd=34) and 32 shoulders treated) are included here. All subjects gave informed consent. Patients recruited for a randomised, controlled trial of treatment for RCT were assessed at the beginning and end of a twelve-week treatment period. All patients were assessed by a chartered physiotherapist blinded to treatment-allocation and treated by a second chartered physiotherapist. All patients completed several outcome measures including the primary measure for this study, the Shoulder Pain and Disability Index (SPADI) - a 0 to 100 scale in which 0 represents normal and a decrease in 10 indicates a clinically meaningful change. Patients were randomised to one of four groups: Therapeutic Exercise (TE), Manual Therapy (MT), Combined manual therapy and therapeutic exercise (CT), or Placebo (P) (consisting of breathing exercising, effleurage massage, and pain-free range of motion exercises).

**Results:** ANALYSES: The statistical analyses were carried out using an SPSS package. The association between variables was measured using the Kruskal-Wallis Test. RESULTS: Mean SPADI scores improved in all treatment groups ( $p = 0.019$ ). The CT group (n=6) improved by 24.7 (sd=9.8), the TE group (n=6) by 26.4 (sd=15.7), the MT group (n=9) improved by 20.4 (sd=18.9), and the P group (n=11) improved by 2.4 (sd=14.3). Discussion: Physiotherapy treatment resulted in decreased pain and disability as measured by the SPADI. SPADI scores did not improve significantly for patients receiving placebo treatment.

**Conclusions:** Physiotherapy employing a combination of manual therapy and therapeutic exercise appears to be most effective in treating rotator cuff tendinopathies. Therapeutic exercise or manual therapy in isolation are more effective than placebo. Based on current results 85 subjects are needed to complete the trial to give 95% confidence and 80% power.

#### 420. TO EVALUATE THE EFFECTIVENESS OF ACUPUNCTURE AS AN ADJUNCT TO AN OSTEOARTHRITIS SELF-MANAGEMENT GROUP



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**Background:** Osteoarthritis (OA) is a major cause of disability in the elderly. Patients identify problems with pain, stiffness and loss of functional ability. There is evidence to support the use of exercise and education for OA. Acupuncture is an increasingly popular treatment used to control pain in OA. Within our department, we have noted an increasing demand for acupuncture. Existing evidence suggests that acupuncture may play a role in the treatment of knee OA. An OA self-management group was established at Selly Oak hospital 2 years ago to empower patients to self manage their condition.

**Methods:** All the patients were attending an OA self-management group. The OA group consists of education, assessment, weekly exercise sessions, home exercise practice and a final review. All the patients were offered the opportunity to receive acupuncture as an additional part of their treatment. Those patients wishing acupuncture received 6 sessions of manual acupuncture during the home exercise phase. Those patients choosing not to receive acupuncture attended the OA group as normal. Consecutive patients attending OA groups were divided into 2 groups - Group A patients requesting acupuncture; Group B patients declining acupuncture. Outcome

measures were VAS for pain, Euroqol EQ5D, Lesquesne index and 10 metre walk speed. The data was collected at the individual assessment session and at final review. The same acupuncture points were used on all Group A patients. The data collected from the first 10 consecutive patients with knee OA in each group to attend all treatment sessions has been analysed.

**Results:** Both groups benefitted from their physiotherapy intervention. Each group comprised 1 male and 9 female patients. Mean age group A - 58 years, Group B - 76 years. Similar statistically significant improvement was shown in walk time for both groups ( $p < 0.025$ ).

With the Lesquesne index, statistically significant improvement was shown (Group A -  $p < 0.01$ ; Group B -  $p < 0.005$ ). Euroqol EQ5D results were similar for Groups A & B but not significantly improved.

The results for walk time, Lesquesne & EQ5D were consistent with those found in previous audits of our OA groups where no acupuncture was used. However, the most significant improvement was found in Group A VAS for pain ( $p < 0.0005$ ), whereas there was no significant improvement in Group B.

**Conclusions:** The results indicate that acupuncture treatment was effective for pain control, although numbers were small and patients self-selecting acupuncture may have created a bias in favour of acupuncture. Because of ongoing positive outcomes in the OA group, it will continue in its present format and acupuncture will be offered as an adjunct. Assessment of the long term effects of this treatment programme is planned.

#### 421. RELIABILITY OF TWO INSTRUMENTS FOR USE IN A PILOT SURVEY OF HAND PAIN IN OLDER PEOPLE



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**Background:** Pre-pilot work indicated that illness perceptions and activity limitation are domains perceived as important in older people with hand osteoarthritis (HOA), and self-completion of instruments to assess these domains are considered appropriate by patients. The objective of the study was to carry out reliability testing of the instruments used to assess illness perceptions and activity limitation.

**Methods:** Cross-sectional postal survey. A two-phase pilot study of the questionnaire was carried out. Phase one questionnaire was sent out to patients ( $n=271$ ) who had indicated that they had experienced hand problems in the preceding 12 months. This sample was obtained from 1000 randomly selected patients aged 50 and over from one general practice in North Staffordshire. The questionnaire included the Illness Perceptions Questionnaire-Revised (IPQ-R) and the Arthritis Impact Measurement Scale 2 (AIMS(2)) (Hand and Finger Function and Arm Function subscales). The IPQ-R has been developed as a tool to measure the core components of illness perceptions, including: identity, timeline, consequences, control, illness coherence, emotional representations and cause. Phase two involved a repeatability study of the questionnaire sent out five weeks later.

**Results:** 201 participants (74% response rate) completed and returned the phase 1 questionnaire. 88 participants (44%) completed and returned the phase 2 questionnaire. Item completion of the AIMS(2) subscales showed 1-2% of missing data. Item completion of the IPQ-R showed between 4 and 5% of data were missing for the subscales, except for treatment control where 7% of the data were missing. Item-total correlation of the IPQ-R largely demonstrated good internal reliability with the majority of items well above 0.4. Cronbach's alpha indicated good internal consistency for each subscale, ranging from 0.76 for the treatment control subscale to 0.89 for the illness coherence and emotional representation subscales. Intra-class correlations for the AIMS(2) subscales showed good stability over this period with correlations of 0.84 (95% confidence intervals (CI) 0.76,0.89) and 0.71 (CI 0.59,0.80) respectively. Intra-class correlations for the IPQ-R showed good stability with correlations ranging from 0.63 (CI 0.48,0.75) for the personal control and treatment control subscales to 0.76 (CI 0.66,0.84) for the emotional representation subscale.

**Conclusions:** The AIMS(2) (Hand and Finger Function and Arm Function subscales) and the IPQ-R are reliable measures to use in population surveys of hand problems in older people.

#### 422. COMPARING PERSON-PERCEIVED AND SOCIETY-PERCEIVED MEASURES OF PARTICIPATION IN OLDER ADULTS



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**Background:** The impact of osteoarthritis in populations is usually measured by disability, which may not capture the personal and social consequences (e.g. reduced ability to work, reduced ability to look after others) that are important to the individual. The World Health Organization has proposed the concept of participation (formerly handicap) to measure such con-

sequences. Participation can be estimated from the perspective of society or the individual. Our aim was to compare participation levels in older adults estimated from both perspectives.

**Methods:** Cross-sectional postal survey to a random sample of 1461 adults (aged 50 years and over) registered at one local general practice. Reminders sent to non-responders after two and four weeks. Participation restriction during the past month was measured across mobility, self-care, domestic and social domains in two ways (i) reduced frequency of actual participation in each domain (societal perspective) and (ii) perceived participation restriction in the same domain (individual perspective)(1). Agreement between the two perspectives for 24 pairs of matched items by domain was calculated.

**Results:** There was an adjusted response (allowing for incorrect address, illness, death) of 78% ( $n=1117$ ). Of the responders, 615 (55.1%) were female and the mean age was 65.5 years ( $SD = 10.2$  years).

There was evidence of discordance between the estimates of societal and individual participation in all domains. Many responders who participated infrequently, nevertheless perceived their participation levels to be high. For example, 224 (37%) of 604 responders attended social events in few or no days in the past month, but considered that they participated in their social life "as and when they wanted", all or most of the time.

Conversely, some responders who participated frequently perceived their participation levels to be low. For example, 12 (43%) of 28 individuals who took a bath or shower most or every day, nevertheless felt that they participated in self-care "as and when they wanted" only a little or none of the time.

**Conclusions:** Estimates of participation based on frequency alone may mask wide variations in the degree of restriction perceived by individuals and we are currently exploring the implications of this in osteoarthritis.

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#### 423. THE DEVELOPMENT OF A HAND SURVEY QUESTIONNAIRE FOR AN ASSESSMENT OF HAND PROBLEMS IN OLDER PEOPLE



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**Background:** The prevalence of hand osteoarthritis (HOA) increases steeply with age and is a major cause of 'disability' in the elderly. The aims of this pre-pilot study were to determine whether self-complete questionnaires cover the domains perceived as important by patients, develop new questionnaires for self-completion and reject questionnaires if not practical or appropriate.

**Methods:** Completion of the hand questionnaire was undertaken by 29 patients from primary and secondary care with a clinical diagnosis of HOA (mean age 63 ( $SD$  9.2); F:M, 25:4). The hand questionnaire incorporated the following measures: The Disease Repercussion Profile (DRP); body and hand pain manikins; finger node manikin; Arthritis Impact Measurement Scales 2 (AIMS(2)) subscales - pain, hand and finger function, and arm function; the appearance subscale of the Michigan Hand Outcomes Questionnaire (MHOQ); the Hospital Anxiety and Depression Scale (HADS); the Illness Perceptions Questionnaire Revised (IPQ-R) and several single item questions relating to severity and frequency of hand symptoms, difficulty in carrying out activities, socio-demographic questions and general questions concerning the hand, including hand injury. Data were analysed quantitatively for understanding and lack of coverage. Qualitative data generated using the framework of the DRP were analysed using content analysis.

**Results:** Patients had difficulty with self-completion of the DRP and preferred to verbalise responses. Participants responded to some of the questions in the HADS only in relation to their hand problem or from a physical point of view ( $n=7$ ); the wording of questions and instructions and the layout of the IPQ-R were also problematic, for example, 'altered immunity' required further explanation ( $n=13$ ). Specific areas of importance were identified by respondents as being missing from the questionnaire, for example, self-care with toileting ( $n=5$ ). Qualitative data were found to represent four broad categories: the practical impact, the psychological effects, coping or control and other illness perceptions.

**Conclusions:** With the exception of the DRP, measures were appropriate for self-completion. The DRP, however, provided useful data on illness perceptions. Specific areas identified as missing from the questionnaire were added as single item questions. The questionnaire was then piloted in a general health and joint pain survey in older people.

#### 424. THE USE OF A COMPUTERISED DRUG MONITORING SYSTEM IS SUPERIOR TO MANUAL MONITORING BY RHEUMATOLOGY NURSE PRACTITIONERS



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**Background:** The use of disease-modifying anti-rheumatic drugs (DMARDs) in rheumatology practice requires regular monitoring as per existing guidelines. This is traditionally done by manual checking of results by nurse practitioners (NPs) but computerised systems are now available as well.

**Aims:** To compare computer and manual DMARD monitoring in terms of detection of abnormal results, trends in results, and non-attendees; and do a preliminary assessment of their impact on resource utilisation.

**Methods:** A randomised controlled study was conducted over 24 weeks. Two Nurse Practitioners (NP1 and NP2) conducted the monitoring. 125 patients were randomly allocated to the study group. 98 were further randomised into control groups A and B. The study group was monitored concurrently by the computer and manually. The control groups were monitored manually. Non-attendees were sent reminder letters when monitoring was 14 days overdue. The study group was monitored by NP1 manually and NP2 using the computer for 12 weeks; NP's crossed over for the next 12 weeks. NP1 monitored control group A and NP2 monitored control group B for 12 weeks, crossing over for the next 12 weeks.

**Results:** More abnormalities were detected by computer (n=666) than manual monitoring (n=328). More trends were detected by computer (n=201) versus manual monitoring (n=3) (p<0.001). More computer monitored patients (74%) were monitored at the correct intervals than manual monitored patients (49%) (p<0.001) Computer monitoring took 963 minutes compared with 214 minutes for manual monitoring.

**Conclusions:** Computer monitoring is superior to manual monitoring in detecting abnormalities, trends and non-attendees. Computer monitoring appears to be more time consuming than manual monitoring, but it offers additional administrative functions and the database is useful for audit and educational purposes.

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#### 425. SEXUAL HEALTH AND ARTHRITIS - THE PERSPECTIVES OF RHEUMATOLOGY NURSES



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**Background:** The World Health Organisation refers to sexual health as the integration of the somatic, emotional, intellectual and social aspects of sexual being in ways that are positively enriching. Research has demonstrated that the symptoms of RA can have a negative impact on sexual health and patients would welcome the opportunity to discuss the potential impact with a nurse or doctor. The aim of this study was to assess current perceived practice, skills and knowledge with respect to the sexual health of patients with RA of rheumatology nurses within the United Kingdom.

**Methods:** A postal questionnaire was sent to 132 rheumatology nurses, including clinical nurse specialists (CNS)/practitioners, nursing sisters, staff nurses, lecturers and research nurses working in inpatient and outpatient settings. The questionnaire focused on the following areas: the nurse's role in the assessment of sexual health, factors that influence whether this topic is discussed, and education and training needs.

**Results:** 76 questionnaires were returned (51% response rate). The highest response rates were from CNS/practitioners (n=32), staff nurses (n=19) and nursing sisters (n=11). The mean age of the sample was 44 years, with 66 nurses having worked as a nurse for 12 years or over and 28 nurses possessing degrees.

91% of nurses agreed that sexual health should be included within the nursing assessment. Factors with the greatest influence on whether sexual health was discussed included the level of the nurse's knowledge and skills, time and privacy. Nurses currently discuss in depth contraceptive advice for patients treated with cytotoxic drugs, briefly discuss the effects of physical and psychological symptoms and do not discuss the patient's sexual relationship with their partner or erectile failure.

83% of nurses had received no training in addressing sexual health, although 97% would undergo training if they had the opportunity to do so. Subjects rated as 'very important' to include in a training programme were communication skills, assessment techniques, effects of chronic illness on sexual health, drugs and arthritis, practical advice and the patient's perspective.

**Conclusions:** This survey has identified that rheumatology nurses perceive sexual health as an important component of providing holistic care for patients with RA and would be willing to undertake education and training in

this area. The next stage is to develop an appropriate education package and measure its effect on nursing practice.

#### 426. NURSE PROFESSIONALS' PERCEPTION OF THE USEFULNESS OF THE COMPUTER ASSISTED LEARNING PACKAGE (CAL), VIRTUAL RHEUMATOLOGY



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**Background:** The demand for rheumatology specialist nurses to perform physical assessment of patients with musculoskeletal conditions is increasing. The use of CAL tools in the training of such health professionals offers promise in terms of their potential flexibility and interactive nature (1). Virtual Rheumatology is a multimedia package designed to help learn the clinical anatomy and regional examination of the knee and shoulder. Aim: Among rheumatology nurses, to investigate (a) the perceived educational value of the Virtual Rheumatology CD and (b) the perceived usefulness of various other learning resources.

(1) Greenhalgh T. Computer assisted learning in undergraduate medical education. England: British Medical Assn., 2001.

**Methods:** (a) Mailed questionnaire to nurses who requested the CD from arc. (b) In-depth questionnaire completed by nurses attending the Joint Injection course at Cannock Chase Hospital. (c) Focus group interview of nurses attending the same course.

**Results:** (a) 26 rheumatology nurses returned the mailed evaluation questionnaire. 23/26 said that they found the CD "very useful". To the question of what new knowledge or skills you have learned from the CD, responses included anatomy and clinical skills. (b) Nine nurses completed the in-depth questionnaire and participated in the focus group. The most popular function for using computers was word processing followed by email. The data from the learning resource checklist indicated that journals and lecture notes were perceived as extremely useful and lectures as useful. In contrast to our experience with undergraduate medical students only 4/9 had experience of learning via CAL material and graded their exposure as being very good/helpful. All the participants (8/9) who used the CD responded Yes to the statement 'The CD helped me learn' and reasons included 'helped put theory into action' and 'refresher of patient assessment', 'able to repeat over again' and 'information presented visually'. From the 8 who used the CD, 7 said they gained new knowledge from anatomy and joint examination. During the focus group participants unanimously agreed that hands on experience was the best way of learning anatomy and examination skills.

**Conclusions:** CAL tools are perceived to be useful for the learning of anatomy and examination skills by nurse professionals learning musculoskeletal assessment. Previous exposure to CAL is often minimal in this group. The Virtual Rheumatology CD is perceived to be of educational value to this group. There is scope for expanding such learning resources available to rheumatology nurses.

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#### 427. IN HOUSE ACCREDITATION, IMPLEMENTATION AND EVALUATION OF A NURSE LED INTRA-ARTICULAR JOINT INJECTION SERVICE



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**Background:** Intra-articular injections are an essential aspect of rheumatological care. However, performing such injections can be a big burden for medical staff in busy rheumatological clinics. As well as increasing workload, consultation times and patient waiting times, the provision of intra-articular injections in a pressurised environment is not ideal for patients. As part of their expanding and developing roles, nurses perform joint injections in some centres, outside the busy medical clinic. Traditionally such nurses have attended external courses, which are expensive and time consuming, to learn these skills.

Having identified an enthusiasm and need for a Nurse-provided joint injection service, we decided to establish in house accreditation and intra-articular joint injection training for nurses in our Trust, with the aim of setting up a specialised, easy access, evidence based, nurse-led, intra-articular knee injection service for patients with RA and OA.

**Methods:** A Rheumatology Consultant trained three Rheumatology Specialist Nurses to give intra-articular injections to the knee. Following an initial literature review, a clinic protocol was devised, with nurse accreditation document, patient assessment form and prescription sheet. Each nurse observed 10 intra-articular injections before performing 10 under consultant supervi-

sion and then completing a likert scale evaluation form. When both nurse and consultant felt the nurse was confident and competent to perform injections, the nurse was approved for unsupervised injections, with ready access to a consultant if any problems.

The nurses then set up a joint injection clinic, negotiating appropriate clerical support, a clinic room and rota for backup medical support. Referrals for the clinic were accepted from the rheumatology team, general practitioners and from established patients. Once the clinic was running effectively, a semi-structured qualitative patient satisfaction form was devised and sent to 30 randomly selected patients who had attended the clinic.

**Results:** The weekly nurse led joint injection clinic has run effectively for 10 months, with 154 patients seen. The nurse evaluation form showed that the nurses enjoy working in the clinic and feel confident at giving injections of steroid or hyaluronic acid to the knee. The semi-structured qualitative questionnaire was returned by 20 patients, all of whom reported extreme satisfaction with the service. The clinic has taken significant pressure off busy out-patient medical clinics and provided an organised environment to perform audit and research.

**Conclusions:** In-house training of Rheumatology Nurses for joint injections and the provision of a nurse led joint injection service is convenient, cost effective, and satisfactory for both patients and Nurses.

#### 428. EVALUATION OF SPECIALIST NURSE SOS CLINIC



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**Background:** The last 3 years has seen an increase in telephone help line calls. Many of these calls result in SOS style concerns, which had previously been dealt with in out patient clinics, leading to unpredictable clinic lists and waiting times. A solution to this problem was to develop a nurse led, rapid access, SOS clinic for patients with acute flare of rheumatoid arthritis or adverse drug reaction.

**Methods:** Four clinic sessions were allocated per week with 30-minute appointments and staffed by the Nurse Specialist [job share]. Referral criteria: patients in an acute flare and patients experiencing possible adverse drug reactions from disease modifying therapy. Referral to SOS included self-referral, GP referral and MDT referral. Patient history and assessment included DAS score, acute phase response, DMARD history, EMS [Early morning stiffness] and pain level. Outcomes included ordering of investigations, alteration to DMARD therapy in line with protocol, referral to joint injection clinic, MDT and liaison with medical staff. Data collection was in the form of patient satisfaction questionnaire and audit form to measure outcomes.

**Results:** An average number of 32 patients are seen per month in the SOS clinic. A total of 65 patient questionnaires were collected in March and April 2001. Of those who responded, 100% had their questions answered and 100% found attending the clinic helped them to cope with their problems. The questionnaire demonstrated that 93% of patients were seen within 7 days of initial contact with the department. Referral sources were identified as 75% from the help line via the nurse specialists, 22% from the metrologist and 3% from secretarial staff. Of those attending, 90% [n=59] of patients met the referral criteria, 44 were in an acute flare, 4 had a confirmed drug reaction and 15 required a joint injection only. Treatment was commenced at time of appointment for 84% [n=55] of patients and of the remaining 16% [n=10], 9 patients had their problem addressed within 7 days. Outcome measures showed that 52% of patients required a treatment change or modification in line with agreed protocols, 30% of patients required liaison with medical staff, and 10% were admitted to the Rheumatology ward. A further 6% had their rheumatology clinic appointment postponed, and 2% had a rheumatology appointment expedited.

**Conclusions:** This initiative addressed patient need for rapid access to the Rheumatology service whilst not compromising the smooth running of out-patient services. With appropriate protocols, over 50% of patients in an acute flare can be assessed and treated by Rheumatology Specialist Nurses. This was further supported by high levels of patient satisfaction throughout. Therefore with a reliable nurse led SOS service, it is possible to ease pressures on already busy outpatient clinics and manage acute flares efficiently and effectively.

#### 429. NSAID USE AND PATIENT KNOWLEDGE: A RE-AUDIT FOLLOWING 'NICE' GUIDANCE



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**Background:** In 2000 we presented an audit of outpatient non-steroidal anti-inflammatory drug (NSAID) use and patient knowledge in rheumatoid arthritis

(RA) patients attending our unit<sup>1</sup>. Data from this suggested many patients were unaware that NSAIDs could cause gastro-intestinal (GI) side-effects, and many at risk groups were not taking GI protection. We revisited this topic following the introduction of NICE guidance<sup>2</sup>.

**Methods:** Structured questionnaire administered to 100 consecutive follow-up patients attending nurse specialist and consultant rheumatology clinics. This was supplemented by notes review. All patients were current NSAID users.

**Results:** All 100 patients were analysed: 33 male, 67 female. Mean age: 55 yrs (30 - 87). Diagnoses: RA (68%), osteoarthritis (OA) (10%), other (28%). Median duration of NSAID use was 4 yrs (2 wks-26 yrs). 86% had been taking NSAIDs for more than 6 mths. 17% were unaware that NSAIDs could cause GI side-effects, compared to 29% in 2000. 24% had present symptoms of epigastric pain or heartburn, compared to 30% in 2000. Diclofenac remains the most commonly used NSAID (39%). This compares to 60% in 2000. The 2nd commonest is now meloxicam (16%). Others included rofecoxib (13%), ibuprofen (12%), naproxen (6%) and celecoxib (6%). No patients were on etodolac. 7% were taking concomitant aspirin. In 2000 only 7% were taking a COX 2 selective inhibitor.

We looked at NICE-specified at risk groups and whether they were using a COX 2 selective inhibitor or GI prophylaxis (proton pump inhibitor (PPI), misoprostol or H2 antagonist):

NICE-specified at risk groups

	Number (%)	Number (%) on COX 2 selective inhibitor or GI prophylaxis
Age >65yrs	23 (23)	19 (83)
Long-term NSAID (>6 mths)	86 (86)	41 (48)
On corticosteroids/warfarin	38 (38)	21 (55)
Previous peptic ulcer	4 (4)	4 (100)
CVD/diabetes/hypertension/ liver/renal disease	36 (36)	21 (58)

**Conclusions:** This patient group is more heterogenous than in our previous audit but otherwise is well age- and sex-matched. RA patients are well represented. Those on long-term NSAIDs, with concomitant illnesses or on steroids or warfarin are poorly represented in terms of COX 2 selective inhibitor or GI prophylaxis prescription, although overall there has been an increase in COX 2 prescription. Patients seem more knowledgeable about GI side-effects but we need to find more effective approaches to NSAID prescribing in at risk patients. Strict interpretation of NICE guidance is likely to mean medication review for large numbers of follow-up rheumatology patients.

#### References

- [1] *Rheumatology* 2000;39;suppl1:171
- [2] National Institute for Clinical Excellence. Technology Appraisal Guidance - No. 27, July 2001

#### 430. INFORMATION RECEIVED AT DIAGNOSIS – THE PERCEPTION OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)



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**Background:** Systemic lupus erythematosus (SLE) is a complex, chronic, multisystem autoimmune disease predominantly affecting females. Newly diagnosed patients have often never heard of the disease. Education has an important role to play in assisting patients to develop self-care strategies and cope with the disease. Previous research has indicated that nurses and patients had different perceptions of information needs.

**Aim:** 1. To evaluate (a) patients' perception of information received at diagnosis (b) their satisfaction with it and (c) whether they felt this could be improved; and 2. To determine which other sources of information the patients utilised.

**Methods:** A qualitative methodology was used. A semi-structured interview was administered to 30 female SLE patients who fulfilled the 1997 modified American College of Rheumatology criteria. The mean age and disease duration were 48.9 years (range 21-75 years) and 8.1 years (range 1-28 years) respectively. Transcripts were analysed thematically to ascertain the most important issues.

**Results:** Nineteen patients received their diagnosis during an outpatient consultation and nine patients during an in-patient episode. All patients received verbal information from the consultant. Those who also received written information (n = 9, 30%) were diagnosed more recently (mean 5.6 years) than those who did not (mean 9.1 years).

Two thirds (67%) were dissatisfied with the amount and quality of the verbal

information they received. A third (33%) reported that they did not ask any questions during an outpatient's consultation, mainly due to their perception of time constraints.

The improvements suggested by patients were as follows: (I) the provision of verbal information on a one-to-one basis followed by written information (II) more frequent outpatient appointments following diagnosis with sufficient time for discussion/questions and (III) the provision of a telephone help line for further support.

The four patients who used the library were dissatisfied with the quality of the information they received. Patients who sought information via the Internet (n=7) found it overwhelming but gained support from the comments of others with SLE. All eleven (four also used the library, two the internet) patients who contacted LUPUS UK found the information very helpful. Again the support from other members and "not being alone with the disease" were important.

**Conclusions:** Services and resources could be targeted more efficiently to meet the needs of patients with SLE by the provision of both verbal and written information at diagnosis, the allocation of more time to each patient at outpatient clinics and the provision of LUPUS UK contact details.

#### 431. SETTING UP A YOUNG ADULT CLINIC FOR PATIENTS WITH RHEUMATIC DISEASES

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**Background:** Provision of care for young adults entering into adult services, is often limited. It is well recognised that young people experience many emotional, educational, recreational/social hurdles; these can be exacerbated when facing and dealing with chronic illness. The aim of the Young Adult clinic at this NHS Trust is to provide health & lifestyle advice via a co-ordinated, age appropriate approach in order to promote independence whilst mentoring and supporting young individuals.

**Methods:** Patients were identified aged between 16 and 25 years and were subsequently referred to the young adult clinic, this runs alongside the clinic of the Consultant Rheumatologist who has an interest in paediatric rheumatology. Initial assessment and review proformas were designed jointly by the Consultant and Specialist Nurses. At the first appointment patients are assessed by the Specialist Nurse, the Physiotherapist and the Occupational Therapist. As part of the initial and subsequent review assessments, young adults are seen on their own and confidentiality explained. Advice is provided and supported in the form of health care leaflets relating particularly to alcohol, recreational drugs, contraception and pregnancy. The role of mentoring and supporting the young adults is ongoing, assisting them to address their often-complex emotional, educational/career and social needs as they move through adulthood.

**Results:** At present 10 patients attend the young adult clinic of which 7 are female and 3 are male. Currently 7 patients have inflammatory arthritis, 2 dermatomyositis and 1 has hypermobility syndrome. Outcome measures include dichotomous responses and visual analogue scales (VAS in mm where 0 = no problems). At first visit all young adults were seen without their parents and mean VAS score for taking responsibility for illness was 56mm (range 10-90). Outcome measures for first review appointment showed that all young adults were reviewed without parents. Taking responsibility improved to a mean score of 13mm [range 0-50], giving a statistically significant improvement  $p=0.004$  [Mann Whitney U test]. Support then extended to education/employment issues, mean score 33 [range 0-100mm], and relationships, mean score 18 [range 0-100mm].

**Conclusions:** It is interesting to note that so far, young adults have been reviewed without their parents. This makes it possible for the team to provide specific need related confidential support and set future goals/targets. This mentoring approach has improved the VAS scores for young adults taking responsibility for illness. This clinic is already demonstrating positive results proving that this approach to care enables young adults to move towards independence whilst focusing on relevant personal issues. In the next 6 months, 3 new patient clinics and 4 follow up clinics are planned enabling the collection of more data.

#### 432. PATIENT PREFERENCE FOR MODE OF DELIVERY OF TELEPHONE HELPLINE: DIRECT RESPONSE VERSUS ANSWERPHONE

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**Background:** A telephone helpline is provided in the outpatient rheumatology unit at a district general hospital with a patient population of 350,000. From Nov 1995 patient contact was provided by a recorded answerphone message with personalised response at a later time. In April 2002 a study of patient satisfaction with this service was published (Ann Rheum Dis

2002;61:341-345). Due to increased activity and time required to run this service, from April 2002 the helpline was changed to direct telephone access to a nurse during a daily time of one hour. This study aimed to establish the patient's perspective for ease of access, satisfaction and to explore patient preference for method of helpline delivery.

**Methods:** A postal questionnaire was sent to 71 patients who called during July 2002. One mailing only was sent with anonymised answers. Patients were asked about ease of access, courtesy of the response, previous use of helpline answerphone service and preference for answerphone versus direct response. The number of calls received over 6 months was compared with the number received in the same 6 months of the previous year via the previous answerphone system.

**Results:** 58 of 71 questionnaires were returned (58/71;82%). 56/58 were content that the person answering their call had identified themselves and 100% found that they were answered politely. 24/58 (41%) identified difficulty accessing the helpline. 25 patients had rung the helpline more than once in trying to speak to the nurse but not all identified this as a problem. 12 patients rang more than once and less than 4 times, whilst 13 patients had called 4 or more times. 55/58 felt questions had been answered to their satisfaction. 34 patients had previously called the helpline when the answerphone service was in use. 31 of these 34 (91%) expressed their preference for the direct access telephone helpline system. Within an open question about preference, reasons given included; immediate access to advice without any delay, personalised response, avoidance of the need for return calls and their apprehension and dislike of answerphone messages. 517 calls were received on the helpline between Apr - Sept 2002 whilst a further 123 patients accessed the department via other telephone routes (total calls = 640). In comparison 816 calls were received to the helpline (answerphone service) between Apr-Sept 2001 with a further 116 accessing via a different source (total=932).

**Conclusions:** Patients appear to prefer a helpline that is answered directly and in person as opposed to initial contact via an answerphone helpline. With direct answering, the majority of patients were satisfied with the outcome of their call. 41% patients had difficulty in getting their call answered. The change from an answerphone service to direct answering resulted in a reduction in calls for help from 816 to 517.

#### 433. AN AUDIT OF SHARED CARE PRACTICE FOR MONITORING OF SECOND-LINE AGENTS IN RHEUMATOLOGY

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**Background:** A sophisticated shared care monitoring system has been set up in the town of Chesterfield for monitoring of patients who need to be treated with second-line agents for the treatment of rheumatic diseases. This system was established in 1999 as a contractual agreement between primary care and secondary care with primary care (GPs, practice nurses, etc) taking over the responsibility of monitoring these patients.

**Objective:** To assess whether the Primary care trusts were following the protocols agreed for monitoring of patients on second-line medications for rheumatic diseases:

- 1) Were the right tests being done at the right times?
- 2) Was the appropriate action (as per the shared care agreement) taken in the instances where the blood results were abnormal?
- 3) Were the patients being managed appropriately?
- 4) Were monitoring records being adequately and accurately maintained?

**Methods:** 100 consecutive eligible patients presenting to the rheumatology follow-up clinics were assessed from the point of view of monitoring protocols. For these patients, the doctor assessing the patient filled in a half-page questionnaire relating to the degree of concordance with the monitoring protocol. The results of blood and urine tests were crosschecked with the laboratory where applicable. In instances where patients did not have their monitoring books with them during the consultation, their blood results were obtained from the laboratory.

**Results:** 5 of the 100 patients had to be excluded as they were under hospital monitoring. Of the remaining 95 patients, all patients had the right investigations done. 9 patients had abnormal results during the duration of the audit. In all 9 patients, the appropriate action was taken. In one instance, a patient was co prescribed Trimethoprim and Methotrexate leading to mucocutaneous ulceration. Monitoring books however, were a problem with only 74% of monitoring books being adequately and accurately completed with one patient's book having an inaccurate result, which if accurate, should have been acted on.

**Conclusions:** The results of this audit suggest that shared care monitoring has the potential to work extremely well. Bookkeeping, however, is one aspect that needs further improvement. Another area that needs some im-

provement in primary care is the knowledge and understanding of second-line agents.

#### 434. FOUR YEAR OUTCOMES OF A RANDOMISED CONTROLLED TRIAL OF AN EDUCATIONAL-BEHAVIOURAL JOINT PROTECTION PROGRAMME FOR PEOPLE WITH RHEUMATOID ARTHRITIS



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**Background:** To evaluate the long-term effects of an educational-behavioural joint protection education programme on adherence and health status of people with early rheumatoid arthritis (RA).

**Methods:** A four year follow-up of a randomised, controlled, assessor blinded trial was conducted. Outcomes of two interventions (both 8 hours) were compared: a standard arthritis education group, including 2.5 hours of joint protection education based on typical UK practice; and a joint protection arthritis education programme, using educational-behavioural methods.

**Results:** 65 people with RA attended the joint protection and 62 the standard programmes. Groups at entry were similar in age (51 years; 49 years), disease duration (21 months; 17.5 months) and use of non-steroidal anti-inflammatory drugs and disease modifying drugs. In comparison to the standard group at 4 years, the joint protection group continued to have significantly improved: joint protection adherence ( $p = 0.001$ ); early morning stiffness ( $p = 0.01$ ); AIMS2 activities of daily living score ( $p = 0.05$ ). Within group analyses showed the joint protection group had improved tender joint counts ( $p = 0.005$ ), grip strength ( $p = 0.004$ ), self-efficacy for pain ( $p = 0.01$ ) and perceived control ( $p = 0.01$ ). Within group analyses for the standard group showed they had significantly worsened AIMS2: activities of daily living ( $p = 0.01$ ), upper limb function ( $p = 0.04$ ), and a trend to worse lower limb function ( $p = 0.06$ ) scores.

**Conclusions:** Significant improvements in joint protection adherence continued at 4 years, although this was less than at one year follow-up. Functional and upper limb ability was maintained in those attending the joint protection programme compared to declining function in the standard education group. At 4 years the functional benefits of joint protection continue.

This study recruited people with early RA (<5years) who had hand pain and at least some hand function limitations. They were thus more likely to see the potential benefits of joint protection. Targeting programmes appropriately is an important aspect of clinical service delivery.

#### 435. PERCEIVED AND ACTUAL CHANGE IN DISABILITY IN RHEUMATOID ARTHRITIS: DISSATISFACTION AND IMPACT



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**Background:** Change in disability is commonly calculated from serial disability scores (ie 'actual' change) but may be assessed by asking patients a transition question (ie perceived change). Previous work has shown these to be poorly correlated over 6 month periods. This study explores the associations of actual and perceived change in disability with other health variables.

**Methods:** As part of another study, 109 RA patients were invited to complete assessments at 0, 6 and 12 months, measuring disability (HAQ, Perceived Change HAQ, Satisfaction HAQ, Personal Impact HAQ); disease activity (pain, stiffness, joint count); mood (anxiety, depression, helplessness), social support; personality (negativism, optimism); and life satisfaction. Changes over 0-6 and 6-12 months were calculated and Z transformations used to establish mean correlations for each variable across the two timepoints.

**Results:** 93 patients participated, mean age 60 yrs (30-79) and HAQ 1.42 (0-2.75). Perceived change (PC, scale of -8 to +8) was that disability was increasing (mean +2, 0-6 months; +4, 6-12 months, range +1.84 to +3.77) although actual change was minimal (mean +0.02 and +0.06 HAQ). Perceived and actual change in disability were weakly associated ( $r=0.286^{**}$ ).

Actual change in disability was associated with recent change in the personal impact of disability ( $r=0.682^{***}$ ) and current impact ( $r=0.232^{*}$ ) and also with recent increase in dissatisfaction with disability ( $r=0.265^{**}$ ). There were weak associations with current disability and helplessness ( $r=0.213^{*}$ ,  $r=0.210^{*}$ ).

Perceived change in disability was moderately associated with recent changes in disease activity, dissatisfaction with disability, social support and helplessness (all  $<r=0.278^{**}$ ). However perceived change was more strongly associated with current variables: disease activity (pain  $r=0.533^{***}$  stiffness  $r=0.462^{***}$  painful joints  $r=0.383^{***}$ ), feelings about disability (dissatisfaction  $r=0.555^{***}$  and personal impact  $r=0.420^{***}$ ), mood (helplessness  $r=0.478^{***}$  depression  $r=0.450^{***}$  anxiety  $r=0.303^{**}$ ), dissatisfaction with life ( $r=-0.397^{***}$ ) and with current disability ( $r=0.338^{**}$ ). Perceived change, which was of increasing disability, was not associated with negative or pessimistic personality, age or disease duration.

**Conclusions:** Both actual and perceived change in disability are associated with current and recent change in dissatisfaction with disability and the impact of disability, despite minimal actual change. Perceived change is more closely associated with these variables than it is with actual change in disability. Measuring actual disability alone may not portray the patient's experience adequately, but measuring perceived change alone may introduce associations with current health status and feelings about that status.

#### 436. DISCREPANCIES BETWEEN ILLNESS BELIEFS OF PATIENTS AND SPOUSES IN RHEUMATOID ARTHRITIS (RA)



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**Background:** Illness beliefs may predict patients' behaviour, compliance and outcomes and discordance between patients' and spouses' beliefs may result in poor adaptation to illness. This study aimed to elicit the illness beliefs of patients and their spouses, to identify the degree of concordance between those beliefs and to explore factors associated with discordance.

**Methods:** 100 randomly selected patients with RA living with a spouse/partner participated in the study. Patients and spouses completed questionnaires to elicit illness beliefs (Illness Perceptions Questionnaire (IPQ)), psychological well-being and satisfaction with their relationship. Spousal support, function, pain and disease status were also measured in patients. The IPQ measures beliefs in relation to: duration and cyclical nature of illness, consequences, emotional impact, personal and treatment control of symptoms and understanding of illness.

**Results:** 72 female and 28 male patients (mean age 59.87 yrs, SD 11.71) and spouses took part. Most participants (>89%) believed RA is long lasting and treatment can be effective in controlling symptoms (>70%). Most patients (72%) but few spouses (48%) felt they had some control over symptoms. Spouses were more likely to view RA as having serious consequences (86% vs 65%) and an emotional impact (63% vs 45%). Paired sample t-tests showed significant differences between patient and spouses beliefs about the duration of RA (spouses believed it would last longer than patients:  $t = -4.48$ ,  $p < 0.0006$ ); its consequences (spouses believed them more severe than patients:  $t = -5.28$ ,  $p < 0.0006$ ), personal control (patients believed they had more control over symptoms than spouses:  $t = 5.68$ ,  $p < 0.0006$ ) and emotional impact (greater for spouses than patients:  $t = -3.67$ ,  $p < 0.0006$ ). Discrepant beliefs were associated with patient and spouse anxiety (R -0.20-0.28,  $p < 0.04$ ), patient depression (R 0.20,  $p < 0.05$ ), function (R -0.21,  $p < 0.04$ ) and pain (R -0.22,  $p < 0.03$ ). Stepwise regression suggested discrepant beliefs were not predicted by any demographic or relationship factors. Function (adjusted  $R^2$  0.29) was predicted by discrepancy in beliefs about the cyclical nature of RA (B 0.19,  $p < 0.05$ ) and patient depression (B 0.54,  $p < 0.001$ ). Pain (adjusted  $R^2$  0.18) was predicted by discrepancy in beliefs about the emotional impact of RA (B -0.30,  $p < 0.005$ ) and patient depression (B -0.37,  $p < 0.001$ ).

**Conclusions:** Patients and spouses have different beliefs about RA. Discrepant beliefs associate with function, depression, anxiety and pain in patients and anxiety in their spouses. Patient and spouse beliefs should be identified to allow management and education to be tailored to the individual. This study was funded by arc

#### 437. THE USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE IN PATIENTS WITH RHEUMATOID ARTHRITIS



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**Background:** There are few randomised-controlled studies on the efficacy of Complementary/Alternative Medicine (CAMs). We have previously reported in a pilot study on the type of CAMS used by patients with RA (ref). One of the main reasons patients seek alternatives is to try to relieve symptoms (pain and stiffness), but lack of or misleading information for patients could lead to inappropriate management. Our concern was whether patients were using CAMS instead of disease modifying drugs (DMARDs), and whether these patients had severe uncontrolled RA. Some of these questions could be answered by examination of the longitudinal profiles of disease activity and drug and non drug therapies from the onset of RA held on the Early Rheumatoid Arthritis Study (ERAS) database to see if there are any trends when compared with disease activity markers, to convince us that there could be benefits in using CAMS as our previous results have shown.

**Methods:** A postal questionnaire was sent to 200 patients who are still attending ERAS. A further 100 responses were obtained from clinic visits. ERAS is a long term observational study of early RA from 9 different regions of England. Yearly measures include pain score, articular index, grip strength, Health Assessment Questionnaire (HAQ), disease activity score (DAS), ESR, drug therapies and other interventions. 206 (69%) patients responded (M:F 71: 135, mean age 56).

**Results:** Responses were grouped as follows: patients not taking DMARDS or CAMs (n=7, 3%), not taking DMARDS but currently taking CAMs only (n=8, 3%), not taking DMARDS but had previously used CAMs (n=10, 5%), currently taking DMARDS only (n=57, 28%), currently taking DMARDS and CAMs (n=55, 27%), currently taking DMARDS and had previously used CAMs (n=65, 32%), none currently taking steroids only, and currently taking steroids and CAMs (n=4, 1%). Tables will show the frequency of individual CAM use with regional variations, but overall vitamin supplements were the most commonly CAMs used by patients (n=53, 26%), and especially those who are currently taking CAMs only (n=6, 75%). Correlations between clinical indices and responses to drug therapies in the above groups will be demonstrated graphically, but there were no clear cut associations with CAM use.

**Conclusions:** Many patients with early RA take CAMs at some stage and 6% of those who responded but had not taken CAMs requested more information. There was little evidence from our study to suggest that patients take CAMs instead of DMARDS or that they persisted with them in the presence of severe disease.

#### 438. LIVING WITH A PERSON WITH RHEUMATOID ARTHRITIS "THE PARTNERS' PERSPECTIVE"

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**Background:** It has been identified that living with someone with a chronic disease has an effect on both parties. It is important to treat patients holistically and that includes their family. Unless we are aware of their problems we cannot begin to understand or give the necessary support and advice. Research so far had shown that living with someone with rheumatoid arthritis has positive and negative effects. It can alter the relationship, bring families closer together and change the role responsibility. The sexual relationship between couples has been shown by many researchers to be affected along with displays of anxiety and depression. Few studies have sought the partners' personal interpretation of this experience. It is evident that this perspective is an important area that has been under researched and requires further exploration to enable a better understanding to be developed.

**Methods:** A qualitative, phenomenological exploration of enquiry was the chosen method used to explore this question. The study population was selected by purposive sampling. Semi - structured, open - ended questions were used to help elicit the information from the partners' perspective. Each interview was audio taped, transcribed in its entirety and data was analysed using a modified version of Colaizzi's procedural steps. Demographic data was collected to show a variety of descriptions. Ethical approval was obtained.

**Results:** Five themes emerged from the data, namely: coping with the emotional challenges of rheumatoid arthritis, dealing with uncertainty, adapting to an altered life style, the importance of relationships and how the patient coped with their disease. The impact of this coping was an area of importance recognised by the entire sample. On examination of the demographic data little or no patterns emerged that could account for the individuals experiences other than the patients' disease duration. A limitation in this type of project is that the findings gained cannot be generalised to the whole population. A more extensive exploration would be required to enable the findings to be generalised to a wider audience.

**Conclusions:** This description gives an account of living with a person who copes well with their disease. However it is apparent that the partner is still affected and their need must be taken into account. Partners should be actively encouraged to attend with the patient and nurses should consider assessing their needs to identify those that require additional input. Interventions should be specifically designed with the partners problems in mind and outcome measures used to monitor efficacy.

#### 439. AN EXPLORATION OF RHEUMATOID ARTHRITIS PATIENT'S EXPERIENCE OF ANTI-TUMOUR NECROSIS FACTOR (ANTI-TNF) TREATMENT

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**Background:** Existing drug treatments for patients with rheumatoid arthritis have had limited success in improving patient outcome. The introduction of

the new biologic agents such as anti-TNF provides the opportunity to obtain disease control and consequently improve patient functions.

**Objectives:** Firstly to explore patient's perceptions of the effects of anti-TNF on psychological, physical and social well being. Secondly to explore patients perception of the benefits and or disadvantages of anti-TNF.

**Methods:** Seven patients with Rheumatoid Arthritis (RA) who received a six-month trial of Infliximab were selected for a semi-structured in-depth qualitative interview. A phenomenological approach was adopted in order to describe the patient's experiences whilst receiving the anti-TNF therapy. The interviews were tape recorded verbatim and analyzed using Colaizzi's procedural steps. Ordinal data was collected at baseline, 2 months and 5 months. Which included hospital assessment questionnaire, visual analogue scale for pain, tender joint count, swollen joint count, grip strength, and blood test results.

**Results:** Six main categories emerged from the data relating to the patient's experience of anti-TNF therapy.

- The level of Physical, psychological and social functions prior to anti-TNF therapy.
  - Experiences related to previous treatments.
  - Feelings regarding the commencement of anti-TNF therapy
  - The impact of the anti-TNF on patient functioning.
  - Experiences following completion of anti-TNF.
  - Advantages and disadvantages of anti-TNF
- Improvements were noted in pain, grip strength, functional ability, tender and swollen joint counts and blood test results.

**Conclusions:** All 7 patients perceived benefits from having anti-TNF therapy on physical, psychological, social and occupational aspects. These benefits diminished on the six month treatment period concluded.

#### 440. THE IMPACT OF FATIGUE IN RHEUMATOID ARTHRITIS - A QUALITATIVE STUDY

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**Background:** Fatigue is often reported as a cause of disability in rheumatoid arthritis (RA), but the medical literature pays less attention to it than to other systemic effects such as pain or stiffness. Fatigue is also conspicuously absent from most assessments of disease activity or function in arthritis, despite suggestions that it may lead patients to adopt positions of deformity, and should be a target for joint protection advice<sup>1</sup>. This qualitative study of people who have RA aims to explore the experience of fatigue from the patients' perspective, and to consider the implications for patients and multi-disciplinary healthcare teams.

**Methods:** A purpose-designed questionnaire, consisting mainly of open questions about the consequences of RA and hand involvement, was mailed to 20 people recruited from a hospital rheumatology department. A semi-structured, follow-up interview explored the issues raised in greater depth. Interviews were tape-recorded and transcribed verbatim. Questionnaire and interview data were subjected to qualitative thematic analysis.

**Results:** Seventeen people (85%) completed both questionnaire and interview. Participants included 4 men and 13 women, with a mean age of 65 years (range: 42-79) and mean disease duration of 13 years (range: 1-42). Mean pain and disease activity scores (visual analogue scale) were respectively 40 (range: 1-79) and 41 (range: 4-74).

Emergent themes were (1) the definition of fatigue as experienced by each individual, (2) the consequences of it, and (3) the coping strategies that were employed. Participants did not share a universal definition of fatigue. Some disclosures referred to constantly reduced energy levels, whilst others reported variability, (typically having sufficient energy to start a task but lacking the stamina to complete it). Participants' accounts referred to both general energy levels and to the performance of specific activities. Consequences included functional limitations (inability to undertake/complete tasks), emotional effects (especially anxiety or frustration), increased dependence on others and reduced social activities. Some participants reported using joint protection techniques successfully as coping strategies, but others complained that these were incompatible with their daily routines and resorted to endurance or avoidance. The generalisability of these findings could be verified by surveying a larger sample of people who have RA.

**Conclusions:** Fatigue clearly has a major impact on the lives of people who have RA and should be included in assessments of disease status by multi-disciplinary healthcare teams. The omission of fatigue from existing measures is a gap that needs to be addressed.

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#### 441. THE EFFECTS OF SPLINTING FOR ULNAR DRIFT IN RHEUMATOID ARTHRITIS: A PILOT STUDY

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**Background:** Metacarpophalangeal (MCP) ulnar drift is one of the most common presentations of rheumatoid arthritis (RA) in the hands often resulting in MCP pain and altered hand function. Occupational Therapists may provide splints to realign ulnar drift as part of a treatment programme. The efficacy of ulnar drift splinting is subject to debate and little research has been published.

**Methods:** A pilot study was conducted to assess the immediate and short-term effects of a hand-and-forearm based commercial splint on MCP ulnar drift, hand function and MCP joint pain during hand function, in adults with RA. Fourteen subjects (20 hands) with Fearnley grade 1 and 2 i.e. actively and passively correctable MCP ulnar drift were assessed using a pre-test/post-test single group study design. Subjects were assessed before and after the application of the splint to assess the immediate effects of the splint. The assessments were repeated 2 weeks later to record any short-term effects of the splint.

**Results:** Data was analysed using descriptive statistics. The immediate effect of the splint was to reduce MCP ulnar drift in the affected fingers. Measurements were also taken without the splint on following use of the splint for 2 weeks. Overall 75% of hands showed a decrease in ulnar drift in 2 or more MCP joints per hand. Furthermore 30% of hands showed a short-term reduction to 0 degrees of ulnar drift in 2 or more MCP joints over the same period. No correlation was found between the average hours of splint wear daily and the change in ulnar drift.

MCP pain during hand function reduced overall during the 2-week period of the study. The splint made no measurable difference to hand function.

**Conclusions:** In this pilot study there was a reduction of MCP joint pain following use of the splint for many subjects. Preliminary data suggests that a long-term study is required to look at the effects of splinting on pain, ulnar drift and hand function and to aid the prescription of splints for people with RA.

The results of this study were presented in a short paper at the British Society of Surgery of the Hand/British Association of Hand Therapists autumn meeting in November 2002.

#### 442. SPLINTING THE RHEUMATOID WRIST AND HAND: EVIDENCE FOR ITS EFFECTIVENESS

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**Background:** Therapeutic aims of static splinting in rheumatoid arthritis (RA) include; supporting inflamed joints; decreasing localised pain and joint swelling; improving wrist stability; maintaining hand function and dexterity and preventing/correcting joint deformity. However, the theoretical biological basis for intermittent splinting is weak and evidence to support the effectiveness of conservative splinting in RA remains anecdotal (Akil and Amos 1995, Scott et al 1998). Synovitis, capsular weakening and instability are the primary causes of rheumatoid hand deformity and dysfunction. Later biomechanical disruption of the wrist and hand can lead to structural deformity in up to 85% of individuals with RA. Structural impairment can effect functional upper limb and hand performance in the later stages of the disease. This paper discusses the effectiveness of different types of splints, commonly used in rheumatology practice, in preserving anatomical and functional ability.

**Methods:** EMBASE, PUBMED, CINAHL and MEDLINE were used to search the splinting literature over the past 40 years. Evidence was sought for a variety of static splints meeting the stated therapeutic aims of splinting.

**Results:** All studies reported hand functional ability in isolation without any reference to overall disease activity. A minority were conducted as unblinded RCTs, most were cross over or observational pre and post test designs. None had power calculations or estimated effect sizes included. Certain forms of static splinting, applied at varying stages of RA, have been demonstrated to:

1. Provide localised pain relief
2. Improve wrist stability when worn
3. Increase functional dexterity and grip force when worn
4. Re align deviated and lax joints when worn

As yet there is no robust evidence that static splinting will prevent or delay deformity from occurring or maintain hand function in the long term. Evidence is also lacking as to the possible detrimental effects that splints may have.

**Conclusions:** Static splints are designed to maintain structural and functional ability in the rheumatoid wrist and hand. In some patients these may work. Further well designed, well powered clinical effectiveness and efficacy trials are required to establish which splinting protocols work, for whom and why.

#### 443. DEVELOPMENT, VALIDATION AND USE OF PATIENT KNOWLEDGE QUESTIONNAIRE (PKQ) FOR PATIENTS WITH EARLY RA

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**Background:** Currently it is important to justify the effectiveness of patient education and to show the health benefits that can be gained from increased knowledge. The purpose of this study is to design and validate a PKQ to use pre and post education programme for a group of early RA patients. The study aims 1) to design a tool to assess knowledge acquisition before and after arthritis information course (AIC) and 2) to determine potential influencing factors to this acquisition.

**Methods:** The PKQ was designed by the multi-disciplinary team using multiple choice questions covering the areas of aetiology, signs and symptoms, drug therapy and monitoring, joint protection, exercise and energy conservation. Validation procedures were undertaken using test-retest method. Pearson's Correlation Coefficient and Cronbach's alpha were used to assess reliability and internal consistency using. Following PKQ validation 30 patients were recruited from specialist practice having met the inclusion criteria: RA according to the ACR criteria and < 2 years disease duration having not previously attended for RA education. All patients attended the arthritis information course run by the multi-disciplinary team. Demographic data e.g. age, gender, disease duration and educational level were evaluated for possible significance.

**Results:** The PKQ demonstrated test-retest reliability, Pearson's Correlation Coefficient (0.965) and internal consistency, Cronbach's alpha (0.932) and face and content validity. Of the 30 early RA patients studied the results of the PKQ score were normally distributed. The PKQ was sensitive to change with a statistically significant improvement following 3 x 1 hour education sessions ( $p < 0.0001$ ). No correlation was found between baseline PKQ scores and age or disease duration. However significant correlation between educational level and pre-knowledge scores ( $p=0.035$ ) was demonstrated. Change in PKQ score was not associated with age, disease duration or educational level. Patients with lower initial pre-scores obtained the most improvement post AIC ( $p=0.003$ ). It was also noted that women retained greater knowledge at 3-months ( $p = 0.05$ ) compared to men.

**Conclusions:** The PKQ is therefore a reliable, valid and sensitive instrument suitable for measuring the acquisition of RA knowledge following arthritis information course (AIC).

#### 444. SOCIAL SUPPORT IN RHEUMATOID ARTHRITIS: SELF-ESTEEM, MOOD, AND LIFE DISSATISFACTION

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**Background:** Having a social network that is perceived as supportive may be particularly important for patients with rheumatoid arthritis (RA) who may need extra support because of disability, but whose disability could potentially cause social isolation. This study aimed to explore levels of social support and associated factors.

**Methods:** As part of a larger study 109 RA patients were invited to complete assessments at 0, 6 and 12 months, measuring social support (overall support, appraisal of support, sense of belonging, self-esteem for obtaining support, tangible help available); disability (HAQ, perceived change HAQ, satisfaction HAQ, Personal Impact HAQ); disease activity (pain, stiffness, joint count); mood (anxiety, depression, helplessness), personality (negativism, optimism) and life satisfaction. Z transformations were used to establish mean correlations for each variable across the three timepoints.

**Results:** 93 patients participated, mean age 60 yrs (30-79) and HAQ 1.42 (0-2.75). Overall social support at entry was close to the published healthy population mean (31.8/40, population mean 32.9). Levels of appraisal of support, sense of belonging and tangible help were similar (means 8.13, 8.35 and 8.82 out of 10) but self-esteem for obtaining support was significantly lower (6.77\*\*\*).

Overall social support was not related to age or disability and only weakly associated with disease activity (pain  $r=-0.233^*$ , stiffness  $r=-0.223^*$ ) and personality (pessimism  $r=-0.273^{**}$ ). Low social support was associated with life dissatisfaction ( $r=0.528^{***}$ ), mood (depression  $r=-0.554^{***}$  anxiety  $r=-0.367^{***}$  helplessness  $r=-0.296^{**}$ ) and beliefs about increasing disability ( $r=0.319^{**}$ ).

Low levels of appraisal of social support, sense of belonging and available tangible help were associated with mood (depression  $r=-0.263^{**}$  to  $r=-0.430^{***}$  and anxiety  $r=-0.221^*$  to  $r=-0.291^{**}$ ) and with life dissatisfaction ( $r=0.266^{**}$  to  $r=0.402^{***}$ ). Only limited availability of tangible help was associated with increasing age ( $r=-0.271^{**}$ ).

Low self-esteem for obtaining social support was associated with life dissatisfaction ( $r=0.545^{***}$ ), mood (depression  $r=-0.600^{***}$  anxiety  $r=-0.415^{***}$

helplessness  $r=-0.367^{***}$ ) and personality (pessimism  $r=0.351^{***}$  neuroticism  $r=-0.332^{***}$ ). Weaker associations were found with disease activity (stiffness  $r=-0.339^{**}$  pain  $r=-0.304^{**}$ ) and with the personal impact of disability ( $r=-0.308^{**}$ ).

**Conclusions:** In RA patients low social support is associated with mood and with life dissatisfaction rather than with disease or disability, and age is only associated with a lack of tangible help. RA patients have significantly low levels of self-esteem for obtaining social support and further research needs to explore the factors influencing social self-esteem which might then be addressed during self-management programmes.

\*\*\* $p<0.001$ , \*\* $p<0.01$ , \* $p<0.05$

#### 445. IT'S NEVER TOO LATE FOR PATIENTS WITH RHEUMATOID ARTHRITIS TO ATTEND AN EDUCATION PROGRAMME!



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**Background:** Education programmes for adults with Rheumatoid Arthritis complement medical treatment and have been shown to have clear but relatively small short term benefits. Programmes may be led by health professionals or lay people with arthritis, may be community or hospital based and employ a variety of teaching methods. Programmes involving behavioural treatment have shown superiority over those providing information only. Little is known about the optimum time for patients to attend an education programme and whether people derive benefit only in early disease. This study evaluates a hospital based education programme, led by members of the multidisciplinary team, consisting of a series of six weekly sessions lasting two hours. The programme includes provision of information, teaching of skills and strategies and an opportunity to meet others with the same condition.

**Methods:** Patients with inflammatory joint disease of any duration attending our rheumatology clinics can be referred to the programme by any member of the team; patients are sent an invitation and course details and are free to accept or decline. The following data are collected at baseline, at 6 weeks and 6 months: Pain (VAS), Function(HAQ), Anxiety and Depression(HAD), self-efficacy (Arthritis Self Efficacy Scale: pain and other symptoms). A course evaluation form is completed at 6 weeks. Data from 5 courses were analysed using ANOVA.

**Results:** Response to invitation was 70%, attendance was 81-97%. 46 patients attended, M:F1:4, mean age 58.4y (range 32-79y), median disease duration: 2.5y (range 0.3-28y). 100% found the course useful, the most valued elements were: meeting others (40%), drug information (36%), everything (20%). Many commented that they wished they had done the course earlier. Significant improvements were seen in anxiety and self efficacy scores which were maintained at 6 months.

	Baseline	6 weeks	6 months	ANOVA
Pain VAS	4.1(3.4, 4.7)	4.3(3.7, 4.9)	3.9(3.2, 4.5)	0.65
S-E pain	53.1(46.2, 59.9)	67.0 (61.4, 72.6)	67.6(61.9, 73.2)	0.001
S-E other symptoms	58.3(51.7, 65.0)	67.2(61.5, 73.0)	70.9(65.8, 75.9)	0.009
HAD anxiety	7.5(6.3, 8.7)	6.0(5.2, 6.9)	5.2(4.4, 6.1)	0.005
HAD depression	5.7(4.8, 6.6)	4.7(3.9, 5.5)	4.3(3.5, 5.1)	0.052
HAQ	1.1(1.0, 1.3)	1.2(1.0, 1.4)	1.2(1.0, 1.4)	0.97

There was no apparent effect of age or disease duration on these responses (data not shown).

**Conclusions:** Patients with varying disease duration appear to benefit equally from attending this education programme but many with long standing disease wished they had attended earlier. It is likely that those who do attend are already taking an active part in their disease management, it is important to consider effective ways of encouraging more patients to attend such programmes early in the course of their disease.

#### 446. THE DEVELOPMENT OF AN INTEGRATED CARE PATHWAY FOR NEWLY DIAGNOSED PATIENTS WITH RHEUMATOID ARTHRITIS



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**Background:** Established, Integrated Care Pathways (ICPS) in Rheumatology are uncommon. One reason for this relates to other specialities, such as surgery, dealing with procedures which have relatively little variation and follow more predictable procedures of practice. Most Rheumatology diseases are complex. Within Rheumatology there are few situations where best practice can be defined, based on clear evidence.

Care Pathways are a way of offering Clinicians a framework for agreed best practice [1], using key standards to achieve key outcomes. In other words

a 'Charter of Care'. Our aim at Warwick Hospital was to develop an ICP for patients with Newly diagnosed Rheumatoid Arthritis (R/A)

**Methods:** We used a multidisciplinary team approach (MDT) including Drs, Clinical Nurse Specialists, Occupational Therapists, Physiotherapists and Orthotists. Information was collected and analysed using a 'Mapping Process' [2]. We defined the patients journey from confirmation of diagnosis by the Consultant Rheumatologist, through to review by the Multidisciplinary team. Although there are many different outcome measures used in Rheumatology we decided to incorporate those most frequently utilized in research trials and deemed to be most commonly used in practice [3]

- Tender Joint Count
- Swollen Joint Count
- Visual analogue pain scale
- Early morning stiffness
- Inflammatory response, using CRP

A variance tracking system was incorporated into the document. This will facilitate audit and subsequent improvements in patient care.

In view of the Government's directive [4], patient involvement was considered a priority. All written comments received from patients were positive.

**Results:** The ICP has taken approximately 12 months to develop. A clear algorithm of care has been developed.

Consultations between team members have been relatively straight forward, in part because of the contained size of the Rheumatology Department.

**Conclusions:** There is a clear need to measure clinical effectiveness against treatment outcome. The ICP will allow us to provide, evidence based quality care to our patients. It will enable us to audit our practice, identify deficiencies and eliminate them.

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#### 447. PROVISION OF A "CLINIC AT HOME" FOR PATIENTS WITH RHEUMATOID ARTHRITIS



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**Background:** Attending an out patient appointment for patients with long-standing rheumatoid arthritis can be unnecessarily stressful, especially if they are elderly and require ambulance transport. These patients often present with multiple functional problems creating complex needs. In view of this more than one discipline needs to be involved resulting in a lengthy frustrating process. These cannot normally be resolved at the time and are best addressed within the home environment. Following discussion it was identified that a multi disciplinary "Clinic at Home" service would be a more cost-effective way of reviewing the individual, resolving their complex needs, and providing a patient centred approach.

**Methods:** Team members identify patients meeting the criteria for this service. Following referral patients are allocated an appointment with the necessary disciplines. At the first visit a full explanation about the service is given, and opportunity to continue with out patient appointment reviews offered. If they want to continue with the Clinic at Home an initial assessment is undertaken setting the agenda for subsequent visits. Patients are then provided with contact names and numbers for the Rheumatology Department should they require an SOS consultation, otherwise a 6-month follow up appointment is given.

**Results:** 30 patients have been removed from a busy out patient clinic and are now reviewed in their own environment. 4 are awaiting their first assessment. These reviews are undertaken every 6 months by a nurse practitioner and physiotherapist/occupational therapist depending on the patient needs. If any problems are identified with either the patient or their carer the appropriate action is taken at that time i.e. an increase in disease modifying therapy, functional problem solving. Any patient requiring further medical attention can easily be slotted back into an out patient clinic or admission can be organised. To date one patient has opted to return to the out patient appointment system, and 3 patients have required admission.

**Conclusions:** Initial feedback indicates that the multi-disciplinary team feel this approach allows observation of the individual and carer in a familiar setting, reflecting a true picture of the functional ability. This relaxed, informal consultation promotes open discussion about the disease, current problems and management. An audit proposal for this service has been accepted and is to be commenced in the New Year. This will assess if patient and carer needs are being met and determine their satisfaction with the service, ensure safe practice, identify effective use of clinicians time and note any impact on the out patient and in patient services.

#### 448. EXPERT NURSE-CONDUCTED DRUG MONITOR CLINICS FOR PATIENTS WITH RHEUMATOID ARTHRITIS: ADDED VALUE?



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**Background:** The clinical nurse specialist spends a large proportion of time conducting drug safety monitor clinics for patients on disease modifying anti rheumatic drugs (DMARDs). These clinics also provide the opportunity for patients to receive on-going education and support. The aim of this study was to investigate whether consultation with an expert rheumatology nurse in the setting of the drug monitor clinic has a measurable impact on well-being in patients with rheumatoid arthritis.

**Methods:** Seventy one patients with RA who were commencing DMARDs were randomised into two groups. The intervention group (n=36) were reviewed by an expert rheumatology nurse and the control group (n=35) were seen by a qualified outpatient clinic staff nurse. In both groups, patients were seen weekly for the first month and then monthly for a year. During the consultation both groups were assessed for adverse drug reactions, given advice regarding drug administration and also patient education leaflets. The patients in the intervention group also received ongoing education and support. The primary outcome measures were the Rheumatology Attitude Index (RAI) and the Arthritis Impact Measurement Scale (AIMs). Other data collected included demographic, disease activity, medication usage and consultation with other health professionals. Data was collected at baseline, 3, 7 and 12 months.

**Results:** There were little differences between the groups in disease activity, medication usage or rates of consultation with other health professionals. The arthritis impact scale of the AIMs showed some significant differences in mean score improvement between the two groups during follow-up as compared to baseline: 1.3 (95% CI: 0.1, 2.5) at 3 months; 1.3 (95% CI: 0.0, 2.6) at 7 months, and 1.2 (95% CI: -0.3, 2.6) at 12 months. Patients in the intervention group also recorded a higher average improvement, though not statistically significant, in their control perceptions regarding their arthritis at 12 months compared to the control group: 1.4 (95% CI: -0.9, 3.7).

**Conclusions:** These findings suggest that the expert nurse does add something extra to the consultation in a drug monitor clinic in RA in terms of psychological well-being and the patient's perceived ability to cope with their arthritis.

#### 449. THE RHEUMATOLOGY NURSE AND PATIENTS' COPING WITH RHEUMATOID ARTHRITIS: AN INTERVIEW STUDY



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**Background:** The clinical nurse specialist is now an integral part of the rheumatology team yet there have been few studies investigating the impact of nurse interventions on patient health and well-being. An interview study was undertaken to complement quantitative data from a larger RCT investigating the effects of nurse support on the well-being of rheumatoid arthritis (RA) patients attending a drug monitor clinic. The study aimed to explore effects of perceptions of support, ways of coping, and feelings of control, on patients' accounts of well-being.

**Methods:** Five patients were randomly sampled from the intervention (expert nurse-supported) group and 5 from the control (outpatient staff nurse-supported) group. There were 4 women and 6 men, mean age of 56 yrs (range 32-72 yrs) and mean disease duration of 6 yrs (range 1-30 yrs). Using a list of 10 questions, patients were encouraged to talk about their disease, its stresses, and how they cope in everyday life. One question asked whether contact with health professionals had influenced strategies for coping and feelings of control.

**Results:** Although disability and restrictions are shared experiences among participants, their effects on patients' lives had both commonalities and differences. In general, the intervention group reported fewer medication problems, increased perceptions of control, greater support from friends, and

active attempts to remain positive. Use of self-talk and setting goals were coping strategies only reported by the intervention group. Although most patients saw the nurse as a technician, this was viewed positively. However, 2 female (intervention group) patients perceived that a positive relationship with the nurse had helped them manage their condition. The importance of nurse support was related to help in coping emotionally and practically, in a timely manner, as problems occurred. In 2 male (control group) participants, limitations of their knowledge about RA and their desire for additional information were apparent. The use of comparative coping strategies provided further insight into coping mechanisms. A comparison with previous disease states was used by every participant. This comparison enhanced their sense of control and fostered a sense of well-being. Social comparison was used by 6 participants as a way of showing themselves how fortunate they were in relation to others with RA. All intervention group participants explained this "downwards comparison" as a means of putting their condition into perspective.

**Conclusions:** Aspects of the nature of the positive contribution of expert nurse support to patients with RA have been identified and characterised. In addition the psychological construct of comparative coping has been identified as an important strategy adopted by these patients.

#### 450. DO OPINION LEADERS EXIST IN CLINICAL PRACTICE



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**Background:** The concept of evidence based practice (EBP) encourages clinicians to incorporate the most reliable evidence into patient care. Research evidence is usually disseminated in the written form, but this has been shown to have little impact on changing clinical practice (Freemantle et al, 1997). Opinion leaders have been suggested as an alternative way of effecting change. This study evaluated whether primary care physiotherapists could identify opinion leaders in a variety of specialised areas before and after (i) an evidence based training package on back pain and literature searching and critical appraisal skills or (ii) an attention control in-service training package on knee pain.

**Methods:** 30 primary care musculoskeletal physiotherapists were cluster randomised to the intervention or control group according to their location of work. Their ability to identify opinion leaders in a number of key clinical and research areas were measured at baseline and 6 months later.

**Results:** Please see table for results

Number (percent) of physiotherapists who were able to identify local opinion leaders in key areas

	Intervention Group		Control Group	
	Baseline	6 months	Baseline	6 months
Pain management	11 (65%)	11 (69%)	7 (54%)	8 (73%)
Low back pain management	11 (65%)	10 (67%)	4 (31%)	6 (55%)
Knee pain management	3 (18%)	3 (20%)	4 (31%)	7 (64%)
Literature searching	3 (18%)	9 (60%)	6 (46%)	5 (45%)
Research	7 (41%)	12 (80%)	8 (62%)	8 (73%)
Critical appraisal skill	3 (18%)	7 (47%)	1 (8%)	3 (27%)

**Conclusions:** A high proportion of primary care musculoskeletal physiotherapists were not able to identify local opinion leaders in areas such as literature searching and research, but also in common areas of physiotherapy clinical practice. Following an intervention that utilised opinion leaders, the frequency with which they were identified increased but still remained low in some areas. This raises the question about the usefulness of using this approach for delivering information on best evidence.

#### References

- [1] Freemantle N et al (1997) Printed educational materials to improve the behaviour of healthcare professionals and patient outcome. In Bero L, Grilli R, Grimshaw, Oxman A (eds). Collaboration on Effective Professional Practice Module of the Cochrane Database of Systematic Reviews.