Results: 16 first level constructs emerged overall, clustering into 5 second level themes, reflecting participants’ perceptions of exercise on their joint health. The themes that emerged were: 4Health professionals show a lack of exercise knowledge”, “I don’t know what I should be doing”, “My joints hurt so I don’t want to do it”, “I worry about causing harm to my joints” and “I have to exercise because it is helpful”.

Conclusions: RA patients had acquired knowledge of the advantages of exercise for their joints, both experientially and through education. However, it was perceived that health professionals were lacking in certainty and clarity as to specific exercise recommendations. Patients expressed particular concern about the effects of different types of exercise on the health of their joints and whether the sensation of pain equated to the occurrence of damage. Thus, to enhance exercise prescription for RA patients, uncertainties surrounding joint health, pain symptoms and exercise expertise need to be addressed, alongside continual emphasis of the benefits of exercise. Future research directions include the development of a questionnaire for assessment of these perceptions on a wider scale and a comparative investigation of the experiences of clinical professionals.

Disclosure statement: All authors have declared no conflicts of interest.

289. PATIENTS’ WORDS FOR SCALES TO MEASURE FLARE: “SOMETIMES IT DOESN’T FIT INTO THAT NEAT LITTLE BOX”

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Background: Early re-treatment with biologic therapies when RA starts to flare, yields better outcomes than delaying treatment. Assessment of patient-reported RA activity is thus crucial, usually by a global Visual Analog Scale (VAS). In a study to explore preferred ways of reporting flare, patients discussed preferred wordings in the literature on the calculation of the disease activity score.

Methods: 8 focus groups were held with RA patients, sampled for a range of characteristics (UK 3, Australia 3, USA 2). Taped discussions were analysed using inductive thematic analysis by a researcher and patient partner independently, reviewed by two further researchers.

Results: 37 patients (32F, 5M) were aged from 35–82 yrs (mean 59.2), with a mean age of 59.86 yrs (range 29–77), 13.41 yrs disease duration (1-38) and baseline fatigue VAS 5.84 (0.5–9.9). Patients set 74 goals, with 83% achieved successfully. The goals addressed desires to change lifestyle behaviours, including exercise uptake, weight management, sleep hygiene, energy balance and pacing.

Conclusions: RA patients had acquired knowledge of the advantages of exercise for their joints, both experientially and through education. However, it was perceived that health professionals were lacking in certainty and clarity as to specific exercise recommendations. Patients expressed particular concern about the effects of different types of exercise on the health of their joints and whether the sensation of pain equated to the occurrence of damage. Thus, to enhance exercise prescription for RA patients, uncertainties surrounding joint health, pain symptoms and exercise expertise need to be addressed, alongside continual emphasis of the benefits of exercise. Future research directions include the development of a questionnaire for assessment of these perceptions on a wider scale and a comparative investigation of the experiences of clinical professionals.

Disclosure statement: All authors have declared no conflicts of interest.

290. GOAL SETTING FOR MANAGING RHEUMATOID ARTHRITIS FATIGUE: A QUALITATIVE EXPLORATION

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Background: Cognitive behavioural therapy (CBT) addresses the links between thoughts, feelings and behaviours and often uses goal setting to facilitate behaviour change. Some studies suggest that goal setting improves health-related behaviours in long-term conditions, therefore this was explored in a randomized controlled trial of CBT for the self-management of RA fatigue.

Methods: Groups of 4–6 patients attended a 7-session CBT course for managing RA fatigue. Goal setting was discussed in groups of 2 or 3 for 30–45 min facilitated by the clinical psychologist or occupational therapist. At each session the clinician documented the agreed goals and detailed any clinician-observed and patient-reported outcomes.

Conclusions: RA patients had acquired knowledge of the advantages of exercise for their joints, both experientially and through education. However, it was perceived that health professionals were lacking in certainty and clarity as to specific exercise recommendations. Patients expressed particular concern about the effects of different types of exercise on the health of their joints and whether the sensation of pain equated to the occurrence of damage. Thus, to enhance exercise prescription for RA patients, uncertainties surrounding joint health, pain symptoms and exercise expertise need to be addressed, alongside continual emphasis of the benefits of exercise. Future research directions include the development of a questionnaire for assessment of these perceptions on a wider scale and a comparative investigation of the experiences of clinical professionals.

Disclosure statement: All authors have declared no conflicts of interest.
Background: Current Rheumatological training for junior doctors in UK is variable during medical school and limited at SpR level. Aiming to assess medical students exposure to Rheumatology during medical school, we surveyed perception of rheumatology training at FY1 and FY2 level, an online survey was conducted which was designed and distributed via www.surveymonkey.com to all (31) UK medical schools through e-mail to educational directors.

Methods: The questionnaire addressed to 4th, 5th and 6th (where existed) year medical students had 10 questions; 5 questions were related to demographics and 5 focused upon undergraduate exposure to Rheumatology and student’s perception of undertaking rheumatological training as part of their foundation years rotations. The questionnaire was piloted for 2 weeks at Bart’s and the London, before being distributed electronically. Following piloting, amendments were made to the questionnaire. The survey was available online as a web-link which was active over two months (from mid-August to mid-October 2009).

Results: A total of 254 medical students replied from 11 different medical schools, out of a total 31 across the UK. These were: London (Bart’s and the London (35.8%), Imperial College, St George’s, Oxford (17.3%), Dundee (16.9%), Leicester (10.6%), Bristol (9.8%), East Anglia, Leeds, Hull York and Sheffield. The majority (92.9%) belonged to the 22-28 age group. They were 177 females and 77 males (2.2:1). The majority (59.8%) were in 5th year, (5.9% year 6) and 89.4% were undergraduates while 10.6% were graduate entry programme (GEP) students. One-fifth (20.9%) of those who replied had received no exposure at all in Rheumatology. Most (61.4%) had 3 weeks exposure and 13.4% had 6 weeks. Interestingly few medical schools offer 9 and 12 weeks exposure.

Nearly half of the medical students (47.2%) would like to do rheumatology as part of their FY1/FY2 rotation and 44.9% would like to do more FY1/FY2 posts available in rheumatology. However, when asked to choose six specialties most useful for FY1/FY2 training, from a total of 21, the top 6 preferred by most students were: acute medicine (76%), emergency medicine (66.9%), surgery (53.9%), general paediatrics (48.8%) and cardiology (46.9%). Rheumatology was amongst the bottom 3 specialties, attracting only 9.4% followed by oncology (8.3%) and ophthalmology (7.1%).

Conclusions: There is great variability in the undergraduate rheumatology teaching across the UK, having medical schools who do not offer any rheumatology exposure at all.

Medical students would like more posts in rheumatology during the FY1/FY2 years and nearly half of the students from those replied in this survey would consider rheumatology as one of their rotation during FY1/FY2 years. Rheumatology however is not considered among the most useful specialties if students have to choose the 6 most useful during FY1/FY2.

Disclosure statement: All authors have declared no conflicts of interest.

292. INTEGRATING PAEDIATRIC MUSCULOSKELETAL (pMSK) CLINICAL SKILLS INTO UNDERGRADUATE TEACHING: BARRIERS AND CHALLENGES

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Background: Studies demonstrate that doctors involved in the care of children report low confidence in their pMSK clinical skills and show poor clinical performance, with known paucity of pMSK teaching in medical training contributory. The adult Gait, Arms, Legs, Spine (GALS) screening examination, now taught in medical schools, has improved confidence and performance in adult MSK clinical skills and it is hoped that the paediatric GALS (pGALS) screen will produce similar improvement. Newcastle University introduced pGALS into the Child Health curriculum in 2007 with all students receiving an examination DVD. Our aim was to gather feedback on pMSK teaching and highlight areas to support teachers.

Methods: A pre-tested anonymized questionnaire (Survey Monkey software) sent to all paediatric consultants and junior medical staff via a central database maintained by the Postgraduate School of Paediatrics. Content related to delivery and format of pMSK teaching including pGALS and need for further support. Response rate was optimized through e-mail reminders. The study has University approval as an audit of teaching practice and exempted from ethical approval.

Results: The overall response rate was 83/175 (47%) mainly consultants (47/83, 56.6%) and training doctors (32/83, 38.5%). Respondents were mainly hospital-based (61/83, 73.4%). Most divulged undergraduate teaching at the bedside (73/83, 88%) or outpatient clinics (65/83, 78.3%), many also lead seminars (54/83, 65.1%) and lectures (29/83, 34.9%). Most were aware of pGALS (65/83, 79.3%), albeit fewer actually taught pGALS (28/83, 33%). Of those teaching pGALS this was mostly within a seminar with students watching the DVD (17/28, 60.7%), sometimes with accompanying lecture (10/28, 35.7%) or practice on each other (12/28, 42%), Clinical pMSK teaching involved examining patients at the bedside (16/28, 57%) or out-patients (13/28, 46.3%).

Of those teaching pGALS, the majority (19/28, 67.9%) were more confident in teaching other bodily systems rather than pMSK with exceptions of eyes and skin. They requested increased access to children as part of their MSK conditions (26/28, 92.8%), guidance on both pMSK clinical skills (10/28, 34.5%) and teaching content. Of those not teaching pGALS (52/83, 92.6%), reasons cited were lack of awareness about pGALS (14/52, 26.9%), poor self-confidence in pMSK skills (9/52, 17.3%), no access to pMSK patients (8/52, 15.4%) and personal preference (6/52, 11.5%).

Conclusions: Introduction of pGALS has led to pMSK teaching in seminars and clinical environments. However this is delivered by a large number of doctors not confident in their clinical skills or pMSK teaching. Identified barriers to pMSK teaching need addressed, including development of supplementary educational resources, mentorship of those learning to use it. After this single education session feedback was positive and the majority of the doctors would like to be involved in teaching pMSK skills and facilitated access to children with MSK conditions.

Disclosure statement: All authors have declared no conflicts of interest.

293. IMPROVING THE RELIABILITY OF DAS28 MEASUREMENT: USING MUSCULOSKELETAL ULTRASOUND TO FACilitATE TRAINING

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Background: Measurement of the Disease Activity Score (DAS28) is a key part of the assessment of patients with rheumatoid arthritis in routine clinical practice and clinical trials. The reliability of the score is dependent on the assessment of swollen and tender joints, which has significant inter-observer variability. The results of education sessions aimed at reducing this have been disappointing. Musculoskeletal ultrasound (MSUS) is more sensitive than clinical examination in detecting synovitis and has been shown to have better inter-observer reliability. We hypothesized that MSUS-informed joint scoring would improve the reliability of the DAS28.

Methods: 20 attendees of the 2009 BSR Core Course took part in an education session with the objective of improving the reliability of the DAS28. 16 rheumatology trainees, 2 physios, 1 GP and 1 specialist nurse participated. 9 subjects were assessed in total; each was examined by BT and a clinical gold-standard DAS28 score calculated. MSUS examination also identified synovitic joints. The attendees scored the first 5 patients (Round 1) and then received feedback on their technique, including the results of MSUS for each of the patients. They then scored the final 4 subjects (Round 2).

Results: In Round 1, the 5 subjects were assessed by each of the 20 participants—a total of 100 measurements. In Round 2, 1 of the 4 subjects left the session early; therefore there were only 74 measurements. The discrepancy between the gold-standard and the participants’ score for tender joints, swollen joints and DAS28 score was calculated for each measurement.

The results are given in the Table. There was no improvement in the number of calculation errors, or in the assessment of tender joints. There was a trend towards improvement in the swollen joint count and the DAS28 score. The number of discrepancies which would have influenced treatment decisions based on thresholds of 3.2 and 5.1 reduced significantly from 28% to 9% (P = 0.0037, Fisher’s exact test). Where subjects had few tender joints, the number of swollen joints was often underscored by participants. Where subjects had many tender joints, an overestimation of the number of swollen joints often occurred.

Conclusions: This study highlights the poor reliability of the DAS28 score in inexperienced hands and the need for ongoing training and mentoring of those learning to use it. After this single education session measurement and calculation errors remained. While the clinically significant discrepancies in the DAS28 score were reduced there were no significant changes in other outcomes. In addition, it appears that inexperienced scorers may be unduly influenced by the number of tender joints when assessing the number of swollen joints. This would be a worthwhile focus in future education sessions.
Disclosure statement: All authors have declared no conflicts of interest.

294. UNDERGRADUATE TEACHING IN RHEUMATOLOGY OUTPATIENTS: STUDENTS’ EXPERIENCES AND PERCEPTIONS

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Background: Outpatient clinics play a key role in educating undergraduates. In rheumatology, where medical advances have dramatically reduced the number of in-patients, this is especially important. Clinics also provide students with a wide variety of experiences, reflecting the needs of the medical curriculum. Little is known of students’ actual experiences and perceptions of teaching in outpatient clinics, which is divided amongst multiple hospitals in the region. We wished to examine the different approaches used by educators in clinics and the students’ views on these modes of teaching, with a view to producing best practice guidelines.

Methods: A questionnaire was distributed amongst 55 fourth-year medical students currently undertaking their musculoskeletal medicine block. Rheumatology comprises 1–2 weeks of a 5 week placement, with students allocated to one of six hospitals. Students were asked about their experiences in rheumatology outpatient clinics (OPC), their views on how they were taught, how they would like to be taught and their overall confidence in taking a history and examining a patient with a rheumatological condition. They were also asked about their views on the patient’s experience, specifically whether the patient could decline having the student present and whether they felt the patient’s satisfaction was altered as a result of the student being present.

Results: 44 questionnaires were completed (80% response rate). Students attended between 0.5 to 8 clinics each, with significant variation between hospitals ($P = 0.018$). A third of students surveyed described passive participation in OPC clinics, whilst 20% had the opportunity to see patients on their own and present their findings. 18% were observed performing joint examinations. The OPC setting was felt to contribute to their knowledge (86%) and increase students’ confidence in history taking (68%) and examination skills (52%). Where students were able to participate actively, their confidence outcomes were much greater ($P = 0.000$). Student-run supervised clinics were cited as an example of a good learning experience.

No student felt their presence in clinic was detrimental to the consultation and patient satisfaction, although 28% felt patients were not able to decline their presence.

Conclusions: The time dedicated to teaching students in OPC in rheumatology varies greatly across the region and a variety of approaches to teaching are applied. Knowledge levels are increased but of the key curriculum outcome criteria, confidence in taking a history and performing examinations appears to be linked to active participation, rather than passive observation. However, there is a perceived lack of opportunity for patients to decline students in the consultation, implying that timely consent needs to be gained, giving patients the opportunity to have time alone with the doctor. Best practice guidance for teaching medical students in OPC needs to incorporate these important observations.

Disclosure statement: All authors have declared no conflicts of interest.

295. A QUALITATIVE SURVEY OF THE IMAGES USED ON THE ARC OSTEOMALACIA MIND-MAP IN RELATION TO CULTURAL BACKGROUND

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Background: The ARC has produced a Mind-Map derived from the booklet for Osteomalacia. Part of the purpose of this was to make information more accessible to people whose first language was not English. Translations of a short version of the booklet into: Bengali; Gujarati; Hindi; Punjabi and Urdu, have been produced and evaluated. Images are particularly susceptible to variations in cultural interpretation and we were interested to explore the appropriateness of the images on the original Map in terms of their meaning and any offence caused for English speaking and the other languages used. We have taken the language spoken as a guide to the culture from which participants came.

Methods: Participants were identified in a convenient sample from contacts with the various communities in Newcastle; Barnsley and London. They were given samples of the images from the Mind-Map and were asked to comment on meaning to them, suitability and likelihood of causing offence to people from their culture and were asked to offer alternative illustrations. 10 English speakers, 6 Bengali; 10 Gujarati; 10 Hindi; 10 Punjabi and 10 Urdu speakers were recruited ($n = 56$).

Results: Only 3 images were thought by some to possibly cause offence and phrased as “may offend someone”. They were the drawing of the Burqa (4/56); The old lady in bed (1/56) and the Blood taking (2/56). The suggestion for the Burqa was from a variety of the ethnic minorities pointing to the religious implications. Alternative clothing worn in their culture such as the Salwar Kameez, was suggested as an alternative. The old lady was thought to be possibly offensive to elderly people and making it clear she was indoors out of the sun was suggested. The offence of the blood letting was the misconception that this represented illicit drug taking.

Appropriateness responses divided into those that seemed generic and would apply to the illustrations in general and those that were more culture specific. The general comments were that the bone metabolism was confusing (31/56) (0/10 for English); the muscle weakness looked like knee pain (16/56); the bending and cracking bone looked like a “dog’s bone” (22/56) and that the bone pain man looked like he had toothache (21/56). Other suggestions for clarifying some images were also made.

The culturally specific comments were in relation to the depiction of food with 4/20 Gujarati and Hindi speakers saying that the picture should represent what they eat, e.g. a vegetarian diet. Comments on the Burqa are discussed above.

Conclusions: The images on the current Osteomalacia Mind-Map are largely appropriate and have little capacity to offend. However, some may be improved upon in terms of conveying the meaning and some should be changed for the specific cultural audience. It is planned to produce translated Mind-Maps with some new images to be packaged in interactive electronic format for use by people from all of the cultures.

Disclosure statement: All authors have declared no conflicts of interest.

296. HOW CAN RHEUMATOLOGY SPECIALIST TRAINING BE SUPPORTED IN THE WORKPLACE?

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Background: In recent years rheumatology trainees have faced increased demands, such as shortened working h, increasing service requirements and restructuring of specialist training. Formal training programmes have been established in an attempt to support trainees more effectively. However, support for informal work-based learning, which may be fundamental to training development, has been relatively neglected. The aims of this study were to gain a better understanding of work-based learning within rheumatology specialist training and then to use this understanding to improve support for learning in the workplace.

Methods: The study was set in rheumatology departments in the North West and West Midlands Deaneries. We used multiple qualitative research methods to gain different perspectives on informal learning processes.

1) Rheumatology specialist trainees and consultant supervisors kept an audio-diary in which they recorded perceived educational experiences and opportunities.

2) This ‘insider’ perspective was contrasted with an ‘outsider’ perspective by direct observation (by the investigators) of trainees in practice. We purposively sampled across several rheumatology departments and trainees, examining ward rounds, out-patient clinics and clinical procedures.

3) Themes emerging from audio-diaries were explored further in natural groups of clinical teams.

Analysis was carried out iteratively with data collection.

Results: A constant comparative method was used to analyse 26 audio diaries, 50 h of observation and 4 group discussions. We found
that learning opportunities and experiences were an integral part of service and inextricably linked to individual patient cases. Learning was supported through informal, socially mediated processes, which included the sharing of tacit knowledge and tacit processes. Team exchange, feedback on practice and a continuous adaptation of practice. These processes were influenced by four principal factors: time pressure, level of case complexity, team culture and trainee seniority. The audio-diary, in addition to being a valuable method of data collection, proved to be a positive educational intervention: trainees reported an enhancement of their learning whilst keeping the diary.

Conclusions: We have found that learning and work are inseparable in this time pressured environment. Clinicians can take simple measures to facilitate learning, such as expressing their clinical reasoning more openly in patient records and sharing thought processes through regular team exchange. For a day to day life support learning at work effectively, we suggest it: be centred around the patient case and be linked to service related activities through work artefacts, e.g. patient records.

Disclosure statement: All authors have declared no conflicts of interest.

297. UNDERSTANDING LIFE WITH RHEUMATOID ARTHRITIS: A LIFESTYLE SURVEY TO EXPLORE THE PATIENT’S PERSPECTIVE

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Background: Patient education is a crucial part of the management of rheumatoid arthritis (RA). An understanding and insight into a patient’s perspective regarding general life style issues can help develop or improve on existing patient education programmes. We present preliminary data from our detailed survey of patients with RA covering a range of issues affecting day to day life.

Methods: An anonymous survey was carried out in the rheumatology outpatient setting over a 6 month period in the form of a questionnaire. The survey questionnaire was developed by our multidisciplinary team along with patient representatives. All patients with a diagnosis of RA who were taking methotrexate were given the questionnaire. The survey included questions on disease duration, age, sex, sexual health, smoking, alcohol, exercise, work and use of complementary therapies. Aim of the study was to improve our understanding of patient’s perception and areas which need further intervention for patient education.

Results: 200 consecutive patients completed the survey. 64.5% were female. The majority were in age group over 60 years. 42% of the patients had been diagnosed with RA between last 1-5 years. 54% were married; 13.5% single; 12% widowed; 10.5% divorced and 9.5% separated. 22% had no formal qualification; 26% GCSE level; 18% A level; 16.5% held a diploma and 17.5% a degree. 52% exercised apart from their job or house work; 83% had restriction of their physical activities/hobbies due to RA; however 35% still considered them as physically active. Interestingly, we found that 43% felt that RA patients should do no more than gentle exercise; this group was mostly females aged over 51 years, who were diagnosed with RA in last 1–5 years. 35% responded that RA patients should do moderate exercise; this group was composed mostly of females aged over 61 years, with GCSE level or more education. 18% felt that RA patients should not exercise; this group was composed mostly of males aged over 61 years. 64% felt RA affected their self image. 66% patients felt RA had adverse effect on their sexual activity, largely due to physical difficulty and tiredness. Just over 63% consumed alcohol; mostly in form of wine; under 10 units a week; the majority felt they drink as they enjoy it but a few to cope with arthritis. 56.5% felt it is safe to drink alcohol with methotrexate; just over 55% felt under 10 units a week as safe intake. 29.1% patients on occasions missed their methotrexate as they wanted to have few more drinks.

Conclusions: This survey has identified some important issues that affect a patient with RA on a day to day basis. The detailed data from the survey showing some interesting patient attitudes are to be published in the full article. This information and insight into a patient’s perspective would serve as a valuable resource for patient education.

Disclosure statement: All authors have declared no conflicts of interest.

298. PATIENT ATTITUDES TOWARDS MEDICAL STUDENT TRAINING IN AN OUTPATIENT RHEUMATOLOGY CLINIC

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Background: Medical student teaching is being increasingly delivered in ambulatory care settings. However, little is known about patient’s views of their interactions with students in outpatient clinics and how they feel this interaction affects the consultation process.

Methods: We developed a questionnaire to examine patient’s views of medical students in clinic and how this changed the patient’s perception of the doctor patient relationship during the consultation. Secondly, we determined the patient’s perceptions of learning opportunities for the student and ultimately how these experiences may be improved. We distributed the survey to 44 adult patients attending Rheumatology outpatient teaching clinics.

Results: Consent was obtained from all patients who were seen by a student, however in 45% of patients this was only after entering the consultation room. Despite 98% of patients being given sufficient time to agree to the students presence in the consultation, 25% felt they could not ask the student to leave during the consultation. 39% of patients felt they received more time during the consultation as a result of the presence of a student, in contrast to 7% who believed they received less attention.

34% of patients stated they would have been happy to see the student on their own prior to their consultation, however in 45% of patients this was only occurred on 3 occasions. 95% of patients would have agreed to have a physical examination by the medical student, but this was reported to have occurred in only 54% of consultations. 69% of patients employed their interactions with the student. 87% of patients believed that their interaction with student improved the students understanding of their condition and 46% of patients felt their own knowledge of their condition was enhanced.

Conclusions: Patients attending a Rheumatology outpatient clinic generally view the presence of students in the consultation as a positive experience with educational benefits to both parties. To optimize the learning experience for both parties there are several areas that can be improved. Valid consent must be obtained from all patients with advance notice of the presence of a student and allowing the patient the opportunity to request time alone with the physician.

Most patients perceived that their presence in clinic was valued and increased the learning opportunities for the student. However, patients are happy to play a greater role as a teaching resource than currently utilized, allowing more students to perform observed physical examinations and to consult with patients independently prior to physician review. However, such activities are limited by the time and space available for patient consultations. Planning of teaching sessions in the ambulatory setting should include prior notification to patients of patient presence in clinic and adequate facilities to allow effective teaching and consultations to be performed.

Disclosure statement: All authors have declared no conflicts of interest.

299. COMMUNICATION SKILLS FOR DOCTOR AND PATIENT: USE OF A CLINIC SPECIFIC INVITATION LETTER IN RHEUMATOLOGY OUTPATIENTS

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Background: A lot of emphasis has been placed on the communication skills for the medical students, trainees and established doctors. The aim is to improve the exchange of valuable information in the management of the patient. Doctor–Patient encounter is a two-way dialogue therefore, one would presume that preparing and educating the patient for this encounter should also enhance the quality of the consultation. This prospective study in a rheumatology outpatient setting examined this theory.

Methods: Over a 6 month period, 110 consecutive patients (71% female) attending the clinic for the first time were included. The trainee doctors and the consultant agreed to follow the Calgary-Cambridge system for all consultations over the study period to ensure similar structure. All patients received a usual generic invitation letter from the hospital specifying the date, time and name of the clinic. We developed a brief letter specific for the rheumatology
Poster Viewing III

Friday 23 April 2010, 08:30-10:00

301. THE POPULATION PREVALENCE OF FOOT AND ANKLE PAIN OVER THE AGE OF 45 YEARS: A SYSTEMATIC REVIEW

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Background: Compared with the knee, hip and hand, there has been relatively little research on the occurrence of symptomatic osteoarthritis (OA) of the foot and ankle in the general population. Our starting point was to systematically review international population prevalence estimates of foot and ankle pain in adults aged 45 years and older—the age at which clinical OA typically emerges.

Methods: The search strategy included electronic databases (PubMed, EMBASE, AMED, CINAHL, Cochrane, PEDro and SportDiscus: inception to Oct 2009) and bibliographies of all potentially eligible studies and selected review articles. Full-text English language articles were included if they used a population sample frame, cross-sectional design or analysis and reported prevalence estimates for foot and/or ankle pain in adults aged over 45 years. Eligibility criteria were applied by two independent reviewers to titles, abstracts and full-text articles with consensus meeting to resolve disagreements. Where necessary authors were contacted to obtain additional data. Methodological quality was assessed using an agreed checklist. The following data were extracted from each article: study design, population and sampling characteristics, case definition of pain and prevalence estimates for each definition of foot and ankle pain, overall and for each age and gender stratum. Where possible, CIs were calculated for each prevalence estimate together with odds ratios for age- and gender-strata within each study. A best estimate of the prevalence of foot/ankle pain was obtained by narrowing the synthesis to methodologically sound studies that used a clinically meaningful and comparable case definition.

Results: Of 5554 abstracts, 28 articles based on 27 studies were eligible (12 Europe, 5 Australia, 4 Asia, 3 North America, 3 Scandinavia), providing a total 254 prevalence estimates based on different case definitions and population substrata. Seven studies provided separate foot and ankle pain estimates. With few exceptions, the prevalence of foot pain and ankle pain increased with age for men and women. In all age strata over 45 years, the prevalence of foot pain and ankle pain tended to be higher in women than in men (median OR: 1.4, IQR: 1.2, 1.8). Based on 8 studies, the best estimate for the prevalence of foot/ankle pain on most days in adults aged 45 years and older was 10–20% for males and 15–30% for females.

Conclusions: Frequent foot/ankle pain is common in middle and old age and likely to co-occur with other joint pains. The contribution of OA to this common, disabling symptom remains unclear and represents an important area for future research.

Disclosure statement: All authors have declared no conflicts of interest.

Epidemiology