Downloaded from http://ard.bmj.com/ on February 6, 2016 - Published by group.bmj.com

References: 1. Guccione AA, et al. The effects of specific medical conditions on the functional limitations of elders in the Framingham Study. Am J Public Health 1994;84:351.
2. Holden MA, et al. Physical therapists' use of therapeutic exercise for patients with clinical knee osteoarthritis in the United kingdom: in line with current recommendations? Phys Ther 2008;88:1109-21.
3. Walsh NE, et al. Evidence based guidelines and current practice for physiotherapy management of knee osteoarthritis. Musculoskeletal Care 2009;7:45-56.
Disclosure of Interest: None Declared

AB0778 A LONGITUDINAL STUDY OF THE CLINICAL EFFECTS OF CONVENTIONAL AND BIOLOGIC DISEASE MODIFYING ANTI-RHEUMATIC DRUGS IN AUSTRALIAN RHEUMATOLOGY PRACTICE

L. Roberts[1], K. Tymms[2], J. de Jager[3], G. Littlejohn[4], H. Griffiths[5], D. Nicholls[6], P. Bird[7], J. Hill[8], P. McCloud[8], J. Zochling[9] and OPAL Consortium. *[1]JCU Clinical School, Townsville, [2]Canberra Rheumatology, Canberra, [3]Olser House, Southport, [4]Monash Medical Centre, Clayton, [5]Barwon Rheumatology Service, Geelong, [6]Coast Joint Care, Maroochydore, [7]Combined Rheumatology Practice, [8]McCloud Consulting Group, Sydney, [9]Menzies Research Institute Tasmania, Hobart, Australia*

Background: The treat-to-target approach in Rheumatoid Arthritis (RA) is broadly accepted, however, outside of trial settings, little is known of the therapeutic impact that a new DMARD/bDMARD prescription has on moving patients from a high/moderate disease activity (HMDA) state to low disease activity or remission.
Objectives: To observe the effect of a change in DMARD/bDMARD prescription on disease outcome.
Methods: The CEDAR Study is a longitudinal observational study conducted by the OPAL QUMI (Optimising Patient outcomes in Australian rheumatoLogy–Quality Use of Medicines Initiative) consortium. Using a clinical audit program, de-identified and routinely collected clinical data from routine practice was sourced from 20 participating rheumatology practices comprising 42 rheumatologists from across Australia. Patients were included if they had baseline and 6 month (4.5-7.5 month) DAS28-ESRs following the initiation of a DMARD/bDMARD either as monotherapy or in addition to their stable previous therapy. A linear mixed model was used determine the change over time and all medications with adequate sample sizes were included. The percentage reduction of patients in the HMDA category was summarized.
Results: Of the 9570 screened RA patients, 3103 met the inclusion criteria; 73% female, mean age 62 years, median disease duration 7 years, and 30% had used a bDMARD. All 7 medications were significantly associated with clinically modest reductions in mean DAS28 (Table) with the range of mean DAS reduction being 0.20-0.78. At 6 months, the percentage of patients who moved from a HMDA category to low disease activity or remission ranged from 7% for etanercept & adalimumab to 19% for tocilizumab.

	DAS28 ESR Scores				Proportion of Patients with HMDA		
Treatment	n	Month-0 mean(SEM)	Month-6 mean(SEM)	P value	HMDA baseline n(%)	HMDA month6 n(%)	Reduction in HMDA %
Methotrexate	1439	3.21(0.038)	2.94(0.034)	<0.001	645(45)	513(36)	9
Hydroxychloroquine	447	3.39(0.067)	3.07(0.064)	<0.001	225(50)	178(40)	10
Leflunomide	380	3.56(0.076)	3.17(0.072)	<0.001	210(55)	157(41)	14
Adalimumab	270	3.07(0.081)	2.87(0.067)	0.007	116(43)	96(36)	7
Sulfasalazine	251	3.60(0.096)	3.20(0.089)	<0.001	141(56)	109(44)	12
Etanercept	225	3.26(0.089)	2.99(0.076)	<0.001	115(45)	97(38)	7
Tocilizumab	91	2.96(0.182)	2.18(0.114)	<0.001	29(32)	12(13)	19

Conclusions: In a large cohort of unselected community RA patients sourced from across Australia, the initiation of a DMARD/bDMARD was associated with a small but significant reduction in disease activity after 6 months. Improvements in disease activity were substantially smaller than improvements reported in randomized controlled trials of the same medications. Possible explanations include: that community patients, in comparison to trial patients, have more refractory disease; are less adherent; are treated less aggressively perhaps because of comorbidities; and/or have less rigorous follow up. Selection bias may be present in this observational study making inferences drawn from medication comparisons unreliable. Nevertheless, leflunomide and tocilizumab appeared to confer the largest benefit amongst the studied DMARDs and bDMARDs respectively.
Acknowledgements: OPAL QUMI is supported by Roche Products Pty Ltd (Australia). Medical writing provided by Dr Joseline Ojaimi from Roche Products.
Disclosure of Interest: None Declared

AB0779 IDENTIFYING POTENTIALLY NON-ADHERENT RHEUMATOLOGY PATIENTS: APPLICATION OF THE COMPLIANCE-QUESTIONNAIRE-RHEUMATOLOGY

M. Ingham[1], S. Bolge[1], L. Kopenhafer[1]. *[1]Janssen Scientific Affairs, LLC, Horsham, United States*

Background: The 19 item Compliance-Questionnaire-Rheumatology (CQR)[1] is an open access questionnaire that was developed by Rheumatologists in the Netherlands, to predict the potential for non-adherence specifically in Rheumatology patients. It was validated against gold standard compliance measures. The questionnaire item bank was developed from the literature, home interviews and focus groups. Responses are provided on a 4-point Likert scale delineated by strength of agreement (don't agree at all, don't agree, agree, agree very much).
Objectives: To quantify the proportion of respondents that would fall into each adherence risk category when administered on a large scale and to assess the potential for further validation of the questionnaire.
Methods: Patients self-reporting a diagnosis of rheumatoid arthritis (RA) and residing in the United States completed a self-administered, internet-based questionnaire in Fall 2011, which included the CQR. CQR data were analysed using an automated analytical tool provided by the developers. Based on the validation paper, individual raw CQR questions are weighted to produce adjusted total summary scores for each patient, which can then be compared to validated cutoff values for specified levels of desired compliance ranging from 50-95%, to establish whether the patient is or is not likely to be non-compliant. Different weights exist depending on whether the user is interested in the potential for "correct dosing" compliance (the percentage of days the correct number of doses were taken) or dose "taking" compliance (the percentage of prescribed doses taken).
Results: Survey respondents were 76.2% female, 86.2% Caucasian, with mean age 56.4 years. At the 90%, 80%, and 50% minimum thresholds for "correct dosing" compliance, 99.2%, 83.8% and 66.1% of patients were identified as potentially non-compliant respectively. The respective percentages for dose "taking" compliance, based on the same minimum thresholds, were 91.3%, 67.6% and 16.5% of patients.
Conclusions: Depending on desired compliance thresholds, at least 60% of self-reported RA patients demonstrate attributes identifying them as potentially non-compliant with treatment, based on taking the correct daily dose. Fewer patients were identified as potentially non-compliant based on taking the correct number of prescribed doses overall. This instrument may be useful in streaming patients into adherence programs, identifying appropriate patients for specific treatments or improving patient/physician discourse during shared decision making discussions. Future work should look at validating against other common adherence measures and fine tuning patient attributes most likely to lead to non-compliance.
References: [1] de Klerk et al; *Development of a Questionnaire to Investigate Patient Compliance with Antirheumatic Drug Therapy,* 1999. The Journal of Rheumatology; v26(12): pp2635-41.v
Disclosure of Interest: M. Ingham Employee of: Janssen Scientific Affairs, LLC, S. Bolge Employee of: Janssen Scientific Affairs, LLC, L. Kopenhafer Consultant for: Janssen Scientific Affairs, LLC

AB0780 COST UTILITY ANALYSIS OF TOTAL KNEE REPLACEMENT IN OBESE PATIENTS WITH OSTEOARTHRITIS. PROSPECTIVE STUDY WITH 12 MONTHS FOLLOW UP

M. Nuñez[1], E. Nuñez[2], S. Sastre[3], J. Segur[3], L. Lozano[3], C. Nicodemo[4], F. Maculé[3], A. Sauló[5]. *[1]Rheumatology And Idibaps Area 1, Hospital Clinic, [2]SAP Suport al Diagnòstic i al Tractament, Institut Català de la Salut, [3]Orthopedic Surgery and IDIBAPS, Hospital Clinic, [4]Economia Aplicada, Universitat Autónoma de Barcelona, [5]Rheumatology, Hospital Clinic, Barcelona, Spain*

Background: Knee osteoarthritis is one of the most prevalent diseases in developed countries. When symptoms are severe and affect the quality of life, total knee replacement (TKR) is often recommended. Economic evaluation (EE)of treatments used in order to promote more efficient use of resources is advised. In processes such as TKR, where quality of life is the most important clinical outcome to assess, cost-utility analysis, which allows comparison of two treatment alternatives in terms of costs and benefits and which uses quality-adjusted life years (QALYs), is the preferred type of EE. In Spain, an incremental cost of between € 8,400 and € 44,200 per QALY gained is generally accepted (Abellan JM et al).
Objectives: To estimate the cost-utility of TKR in patientsdiagnosedwith knee osteoarthritis and obesity, compared with non-intervention.
Methods: Cost-utility evaluation from the social perspective, with all relative costs was taken into account, regardless of the financer. 71 patients undergoing TKR were prospectively studied for 12months. Variables: Sociodemographicand clinical. Health-related quality of life (HRQOL) was assessed using the WOMAC and SF-36 and QALYs by the Short Form6D (SF-6D) index. The baseline total cost of the economic resources used due to the knee process included direct medical and non-medical and indirect costs. The total post-TKR cost included the cost of surgery (operating room, hospital stay,technicalprocedures and physiotherapy). Resources used were collected during the six months before and 6-12 months after TKR.
Results: 71 patients, mean age 67.48 years (SD 8.6), 66 female, BMI 38.71 (SD 4.5) were included. Mean difference between scores at baseline and at 12

Downloaded from http://ard.bmj.com/ on February 6, 2016 - Published by group.bmj.com

months was 33.14 points (95% CI 28.56 to 37.72, in the WOMAC total index (p <0.001) and 10.38 points (95% CI 7.97 to 12.80) in the physical component SF-36, (p <0.001) and 1.57 (95% CI -5.2 to 2.04) in the mental component SF-36 (p = 0.388). 12 months after TKR, patients gained a mean of 0.11 QALYS, compared with non-intervened patients.
Mean direct non-medical costswere € 3,329 (SD 4,079) at baseline vs. € 2,901 (SD 4,885) at 12 months (p = 0.371), mean indirect costs were € 335 (SD 1,750) vs. € 90 (SD 322), p = 0.299, and mean direct medical costs were € 375 (SD 174) vs. € 173 (SD 78)without the cost of surgery, p <0.001. The mean incremental cost-utility was € 32,358 per QALY gained (P25: € -16,470; P50: €13,049: P75: € 44,706) when TKR was carried out.
Conclusions: Quality of life improved significantly after TKR. The costs, borne by patients and their families were similar at baseline and at 12 months after TKR. The analysis shows TKR has an acceptable cost-utility ratio from the accepted Spanish perspective in the first 12 months after surgery.
References: Abellán JM et al. La medición de la calidad de los estudios de evaluación económica. Propuesta de 'checklist' y guía de uso para la toma de decisiones. Rev Esp Salud Pública 2009;83:71-84
Acknowledgements: This study was funded by Spanish Ministry of Health grant FIS PS09/01148
Disclosure of Interest: None Declared

AB0781 CLINICAL PERIODONTAL DISEASE PREDICTS THE FUTURE DEVELOPMENT OF CHRONIC INFLAMMATORY ARTHRITIS

M. Hashimoto[1], T. Yamazaki[2], M. Hamaguchi[3], T. Morimoto[4], M. Yamori[2], K. Asai[2], Y. Isobe[2], M. Mori[5], T. Matsuo[5], M. Furu[1], H. Ito[1], T. Fujii[1], C. Terao[6], K. Yamamoto[7], W. Yamamoto[8], K. Bessho[2], T. Mimori[1,5].

[1]Department of the Control for Rheumatic Diseases, [2]Department of Oral and Maxillofacial Surgery, Graduate School of Medicine, Kyoto University, Kyoto, [3]Department of Experimental Immunology, Immunology Frontier Research Center, Osaka University, [4]Center for General Internal Medicine and Emergency Care, Kinki University School of Medicine, Osaka, [5]Department of Rheumatology and Clinical Immunology, [6]Center for genomic medicine, Graduate School of Medicine, Kyoto University, Kyoto, [7]Department of Information Governance, National Cerebral and Cardiovascular Center, Osaka, [8]Department of Health Information Management, Kurashiki Sweet Hospital, Kurashiki, Japan

Background: Recent reports suggest the correlation between rheumatoid arthritis (RA) and periodontal disease (PD). However, it is not clear whether PD affects the disease activity of arthritis or the future introduction of methotrexate (MTX) treatment in non-treated, undifferentiated arthritis patients.
Objectives: To study whether PD affects arthritis activity and introduction of MTX treatment in non-treated, undifferentiated arthritis patients. We also investigated the relationship between a representative periodontal bacteria, *Porphyromonas gingivalis (Pg),* and arthritis activity or anti-citrullinated protein (CCP) antibody.
Methods: We conducted a prospective cohort study in Kyoto University Hospital, Japan. We consequently enrolled patients who first visited the Rheumatic Disease Center without prior use of anti-rheumatic drugs or corticosteroids from May in 2011 to October in 2012. Arthritis disease activity (SDAI etc.) as well as anti-CCP antibody was systemically investigated by rheumatologists. Clinical parameters of PD (pocket depth, etc.) and subgingival plaque samples were collected by dentists and *Pg* genomic DNA was determined by Taqman q-PCR. Clinical PD was defined as maximal pocket depth more than 4 mm. We followed up all patients until January 2013.
Results: We enrolled 103 patients, and 11 patients with osteoarthritis 4 patients with remaining teeth less than 10 teeth were excluded from the analysis. PD was associated with higher arthritis disease activity (SDAI 12.9±1.3 in PD group vs 7.3±1.3 in non-PD group, p=0.017), even adjusted for age, sex, smoking, or tooth brushing habit (effect size 0.11, p=0.004). Presence of PD in the first visit was a risk factor for the introduction of MTX treatment in the clinical course (Log-rank p=0.013, Hazard risk 2.77 (95%CI 1.23-6.25)). Although the amount of *Pg* was associated with pocket depth, it did not correlate with SDAI (10.7±1.6 in PD group vs 10.7±1.3 in non-PD group) or introduction of MTX treatment (Log-rank p=0.72). Either clinical PD or *Pg* did not correlate with anti-CCP antibody titers in this cohort.
Conclusions: Clinical PD, but not the presence of *Pg,* was significantly associated with arthritis activity and predicts the future development of chronic inflammatory arthritis that requires MTX.
Disclosure of Interest: None Declared

AB0782 INDIRECT COSTS ASSOCIATED WITH ANKYLOSING SPONDYLITIS IN TURKEY

N. Akkoc[1], H. Direskeneli[2], H. Erdem[3], A. Gul[4], Y. Kabasakal[5], S. Kiraz[6], B. Durguner[7], O. Başer[8,9], V. Hamuryudan[10]. *[1]Division of Rheumatology, Dokuz Eylul University Faculty of Medicine, Izmir, [2] Division of Rheumatology, Marmara.University Faculty of Medicine, Istanbul, [3]Division of Rheumatology, Gülhane Military Medical Academy, Ankara, [4]Division of Rheumatology, İstanbul University Istanbul Faculty of Medicine, Istanbul, [5]Division of Rheumatology, Ege University Faculty of Medicine, Izmir, [6]Division of Rheumatology, Hacettepe University Faculty of Medicine, Ankara, [7]Pfizer Pharmaceuticals, [8]STATinMED Research, Istanbul, Turkey, [9]Internal Medicine, The University of Michigan , Ann Arbor, MI, United States, [10]Division of Rheumatology, İstanbul University Cerrahpasa Faculty of Medicine, Istanbul, Turkey*

Background: The musculoskeletal symptoms, as well as extra-articular manifestations of ankylosing spondylitis (AS) decrease quality of life and productivity and result in significant direct and indirect costs, with the latter being even higher than the former. However, data on the economic burden of AS in Turkey are scarce.
Objectives: To describe indirect resource utilization for AS patients attending at rheumatology outpatient clinics of tertiary health centers in Turkey over a 1-year period and to identify demographic factors and clinical assessment measures associated with indirect costs.
Methods: Medical records of 650 prevalent AS patients attending rheumatology outpatient clinics in seven tertiary healthcare hospitals nationwide were examined to assess annual indirect healthcare costs. Eligible patients were age ≥18 and diagnosed with AS for at least 12 months. We assessed relevant indirect cost-related variables and activities, and actual costs. Multivariate regression was used to determine the effects of demographic factors and clinical assessment measures on indirect costs. The Pearson correlation matrix and the association between disease assessment measures and indirect costs were assessed.
Results: Mean (±SD) patient age was 40.1± 11.33 years, with 35% of the patients being female. 55% were employees, of which 59% had employer permission to miss work due to AS, costing patients an average €412 annually due to workday loss as calculated based on income level. 2% of the patients had other AS-related consultations not covered by insurance (acupuncture, homeopathic, other), bringing their average annual burden to €2,482. 10.46% of the AS patients incurred additional AS-related costs (e.g. need for new car, apartment, special equipment), spending an additional €1,978 per year. 6.92% of the patients required caregivers, costing €546 annually. Multivariate regression showed that age and gender played no significant role related to the increase in indirect costs. Patients needing AS related equipments reported significantly higher Global Disease Activity (GDA), visual analog scale (VAS), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and lower EuroQoL health status (EQ-5D) scores
Conclusions: AS represents a considerable economic burden to Turkish Society. Studies assessing chronic disease costs, especially in developing nations, are important to determine efficient allocation of the limited resources in such regions.
Acknowledgements: This study was sponsored by Pfizer Turkey
Disclosure of Interest: N. Akkoc: None Declared, H. Direskeneli: None Declared, H. Erdem: None Declared, A. Gul: None Declared, Y. Kabasakal: None Declared, S. Kiraz: None Declared, B. Durguner Employee of: Pfizer, O. Başer: None Declared, V. Hamuryudan: None Declared

AB0783 MEDICAL COSTS ASSOCIATED WITH RHEUMATOID ARTHRITIS IN TURKEY: AN ANALYSIS OF REAL-WORLD DATA

O. Baser[1,2], A. Burkan[3], E. Baser[4], R. Koselerli[3], E. Ertugay[3], A. Altinbas[5].
[1]STATinMED Research, Istanbul, Turkey, [2]Rheumatology Division, The University of Michigan, Ann Arbor, United States, [3]Social Security Institution, Ankara, [4]Programmer, STATinMED Research, Istanbul, [5]Gastroenterology Clinic, Dıskapı Yıldırım Beyazıt Education and Research Hospital, Ankara, Turkey

Background: Health Transformation Programme implementation by the Turkish Ministry of Health resulted in significant health system changes in Turkey.[1] Recognizing the importance of information technology and health technology assessment, Turkey invested in stronger systems and data collection. MEDULA, a nationwide integrated system between health insurance and healthcare providers, was built to collect e-invoice information electronically in 2007. Rheumatoid arthritis (RA) costs in Turkey were analyzed for the first time using real-world data.
Objectives: Estimate and identify medical cost determinants associated with RA in Turkey using nationwide real-world data.
Methods: Data was obtained from MEDULA (2009-2011). Adult RA patients (ages 18-99) were identified (01JUN2010-31DEC2010), and were required to have two RA diagnoses ≥60 days apart, and were grouped as prevalent and incident cases. The first RA claim date was designated as the index date. Healthcare costs were examined following the index date. Descriptive and multivariate analyses are provided. Pharmacy, outpatient and inpatient claims were compiled. Generalized linear models were used to calculate expected annual costs after controlling for age, gender, region, comorbid conditions and medication.
Results: A total of 2,613 patients met all inclusion criteria (693 incident; 1,920 prevalent patients). Prevalent patients were older, less likely to reside in the Marmara region, had higher comorbidity index scores and were more likely to be prescribed non-steroidal anti-inflammatory drugs, biologics and disease-modifying anti-rheumatic drugs relative to incident patients. Average annual costs were €2,000 (incident) and €2,386 (prevalent), due to pharmacy costs (73%, incident; 60%, prevalent). For both groups, inpatient and outpatient costs were mostly due to physician costs. Costs did not significantly differ in terms of age or region, prior comorbid conditions and medication use significantly affected cost estimation.

Downloaded from http://ard.bmj.com/ on February 6, 2016 - Published by group.bmj.com



AB0780 Cost utility analysis of total knee replacement in obese patients with osteoarthritis. prospective study with 12 months follow up

M. Nuñez, E. Nuñez, S. Sastre, J. Segur, L. Lozano, C. Nicodemo, F. Maculé and A. Sauló

Ann Rheum Dis 2013 72: A1028-A1029
doi: 10.1136/annrheumdis-2013-eular.3102

Updated information and services can be found at:
http://ard.bmj.com/content/72/Suppl_3/A1028.3

These include:

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/