adherence to treatment recommendation (ATR) and recidivism before the 15th day after the day of consultation (need of further consultation due to the same medical problem). Registries included those generated along the first 12 months after the end of the courses.
Results: The TT group generated 175 registries while PBL generated 219. Both groups were formed by 20 non rheumatology second year residents. Proportion of AITR were 73.3 and 60.2% for BLT and TT groups, respectively ($P<0.001$). Considering only the registries generated in the first trimester after the courses, those proportions were respectively 80.2 and 79.5%. Proportion of ATR were 69.9 and 55.7%, respectively ($P<0.001$), however when considering only registries generated in the first trimester those proportions were 77.1 and 76.9%, respectively. Global recidivism rate (number of patients who need a further consultation due to the same medical problem or due to the side effects of their treatment among all patients attended) at the first 15th day since the first assessment was 8.7% in the PBL group and 17.5% in the TT group ($P<0.001$). At the end of both courses a survey to the students were performed. The satisfaction index –measured by a 0–10 progressive ordinal scale- were 9.1 SD 1.3 for the PBL model and 8.2 SD 1.4 for the TT model ($P<0.05$).
Conclusions: The pedagogical PBL teaching method shows a better academic impact in terms of concept retention and appliance into the medical practice along the time. In our opinion and according to our experience, most programs of education on transversal topics of rheumatology should be taught using the PBL method.
Disclosure of Interest: None declared
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OP0067 DEVELOPMENT AND VALIDATION OF A MODEL TO FACILITATE RECOGNITION OF ARTHRITIS BY GENERAL PRACTITIONERS

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Background: Early initiation of treatment of rheumatoid arthritis is strongly associated with an improved outcome, but requires the early identification of arthritis. Physical examination of joints is crucial to this end, but is difficult for general practitioners (GPs) who have little experience. Another difficulty is that GPs see many persons with musculoskeletal symptoms per year but only few patients with clinical arthritis. To promote early recognition of arthritis, the Early Arthritis *Recognition* Clinic (EA*R*C) was initiated in Leiden, the Netherlands in 2010. GPs were instructed to refer to this clinic in case of doubt on the presence of arthritis (and not to wait and see, or to perform additional laboratory tests). At this clinic, patients filled out a form with questions on their symptoms and were seen by a rheumatologist in a short visit that comprised a full joint examination. As reported previously, this clinic importantly improved the early identification of arthritis and RA (1), but this approach may not be easily implemented in other centres or regions.
Objectives: To assess if a combination of symptoms and signs that are easy to assess can differentiate patients with and without clinical arthritis at joint examination.
Methods: 1,288 patients in whom GPs doubted on the presence of arthritis visited the EA*R*C between 2010 and 2015. Reported symptoms and signs were studied with the presence of synovitis (joint examination by experienced rheumatologist) as outcome. Multivariable logistic regression was used. A model was derived in 644 patients, and validated in the second set of 644 patients.
Results: 41% of the patients who visited the EARC had arthritis at examination. Age (per year OR 1.02; 95% CI 1.01–1.03), male sex (OR 1.8; 95% CI 1.3–2.7), symptom duration (4–12 weeks OR 3.83; 95% CI 2.22–6.60), morning stiffness >60 min (OR 1.7; 95% CI 0.9–2.9), difficulty with making a fist (OR 1.6; 95% CI 0.97–2.5), number of tender joints (1–3 tender joints OR 9.7; 95% CI 1.1–81.8) and self-reported swollen joints (OR 3.5; 95% CI 1.8–7.0) were associated with the presence of arthritis in multivariable analysis. The AUC was 0.75 (SE 0.02) in the derivation set and 0.71 (SE 0.02) in the validation set. To facilitate application in practice, a simplified model was made. This consisted of 7 variables and the total score ranged between 0–7. The AUC was 0.73 (SE 0.02). Depending on the cut-off, the PPV of the simplified model ranged between 41 and 74% and the NPV between 100 and 62%. With a cut-off of 4, the NPV was 86%, PPV 49%, specificity 35%, and sensitivity 91%.
Conclusions: A set of clinical characteristics that can be easily assessed by GPs had a reasonable discriminative ability for clinical arthritis, and can be applied by GPs in case of doubt on the presence of arthritis. This model requires further validation in general practices, but may lead to a tool that could assist GPs in their decision making regarding referral or ordering additional tests for patients with suspected early arthritis.
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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.2981

OP0068 PRACTICES PARTICIPATING IN THE ACR'S RHEUMATOLOGY INFORMATICS SYSTEM FOR EFFECTIVENESS (RISE) NATIONAL REGISTRY SHOW IMPROVEMENTS IN QUALITY OF CARE

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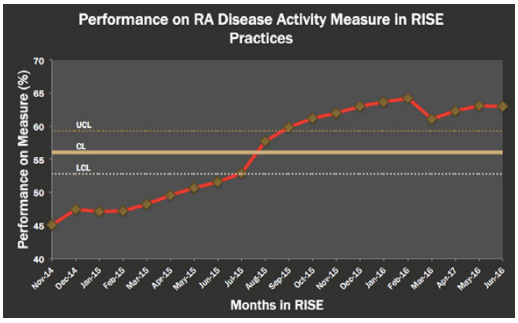
Background: The ACR launched the RISE registry in 2014 to facilitate quality improvement on a national scale. The registry passively extracts electronic health record (EHR) data from rheumatology practices, aggregates and analyzes these data centrally, and feeds performance on quality measures back to clinicians using a web-based dashboard.
Objectives: We used data from RISE to 1) examine variation in performance on quality measures across practices, and 2) evaluate trends in measure performance over time.
Methods: RISE's informatics platform continuously collects data from the EHRs of participating practices, allowing centralized aggregation and analysis of quality measures. We analyzed data collected between July 1, 2014-July 1, 2016 on all patients seen by 294 clinicians across 63 practices. Measures in the areas of rheumatoid arthritis, drug safety, preventive care and gout were examined. Performance on quality measures, defined as the percentage of eligible patients receiving recommended care, was examined at the practice level. To examine trends in performance over time, we took the subset of practices that continuously participated in RISE since its inception (n=44), and developed 1) control charts and 2) logistic regression models, in which the outcome was practice-level performance each month and the predictor was time.
Results: Data from 289,812 patients was examined. Mean (SD) age was 59 (16) years, 75% were female, 21% were racial/ethnic minorities, and 37% had public insurance. Most rheumatologists were in a group practice (73%); 25% were in solo practice and 2% part of a larger health system. Performance on measures varied significantly across practices (Table). The largest gaps were observed for gout and preventive care. For 4 of 5 measures for which the Medicare program has set national benchmarks, average performance of RISE practices exceeded targets. Of 11 measures, performance improved over time on 5 measures ($p<0.05$ in logistic models; see Figure for example control chart), was at goal on 4 measures, and saw no improvement on 2 measures (BMI screening and urate target).



Conclusions: We found significant variation in performance on quality measures across RISE practices, with the largest gaps seen in gout care and preventive care. Some practices have achieved a very high level of performance. Over time, RISE practices demonstrated improvement in over half of the measures

Abstract OP0068 – Table 1

Electronic Quality Measure (eCQM)	Measure denominator (N)	Average performance across patients (%)	Average practice-level performance (percentile)		CMS benchmark
			50th	100th	
RA: Assessment of Disease Activity	63,472	52.1	56.1	100	
RA: Functional Status Assessment	63,472	50.0	56.1	100	
RA: DMARD	63,472	90.1	91.4	98.2	9.0
Drug Safety: TB screening pre-biologic	7,842	61.1	66.6	95.7	9.0
Drug Safety: ≥1 High-Risk Medication in Elderly*	101,820	4.7	2.8	0	89.7
Drug Safety: ≥2 High-Risk Medications in Elderly*	101,820	0.1	0	0	57.8
Preventive Care: Tobacco screening and counseling	219,415	85.3	89.3	99.8	68.5
Preventive Care: BMI documentation, follow-up plan	154,501	26.4	26.7	50.7	
Preventive Care: Blood pressure management	30,607	70.0	63.2	100	

*Lower number indicates higher performance.

examined. As rheumatologists aim to improve quality of care, RISE will, by design, allow participants to measure, benchmark, and continuously monitor performance improvement.

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OP0069 THE BURDEN OF ANKYLOSING SPONDYLITIS: A POPULATION BASED STUDY

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Background: Ankylosing spondylitis (AS) is an inflammatory rheumatic disease with musculoskeletal and systemic manifestations. Because AS is typically diagnosed before the age of 40 years and follows a chronic progressive course, its impact on the patient is life-long. In addition to the burden on the individual patient, that on the society is also increasing cumulatively every year [1]. The burden of AS is not confined to healthcare cost spent due to back pain and stiffness of the disease itself [2–4], but also encompass extra-articular manifestation (EAM), comorbidities, disability, and mortality contributed from AS [5].
Objectives: This study aimed to evaluate the disability, mortality, and healthcare cost for quantifying the burden of AS.
Methods: We conducted a nationwide population-based study based on national health insurance data in Korea. The patients with incident AS (n=1111) were identified with controls (n=5555) who were matched by age, sex, income, and geographic region from the year 2003 to 2013. EAMs, comorbidities, mortality and type and severity of disabilities were presented as incidence rate and compared to the controls as incidence rate ratios (IRRs). Annual health expenditure per patient was analyzed by the year and relation to AS.
Results: During the follow-up, 28% of patients in this cohort experienced any kind of EAM. More comorbidities with Charlson comorbidity index ≥3 (OR 2.18, 95% CI 1.91 to 2.48) were significantly associated. Disability rate was higher than controls regardless of causes and severity (OR 2.94, 95% CI 2.48 to 3.48). Crude IRRs for mortality was not significantly increased, but by multivariate analysis, older age at diagnosis (≥45 years old) (OR 10.53, 95% CI 4.31 to 25.68) was most strongly related to increased disability and mortality rates (Fig.1). Biologic agents elevated annual health expenditures of AS but decreased AS unrelated costs (mean 1112 vs 877 USD, p=0.0068) (Fig.2).

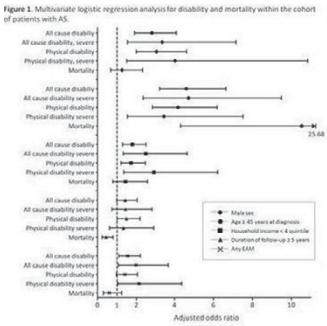

Figure 1. Multivariate logistic regression analysis for disability and mortality within the cohort of patients with AS.

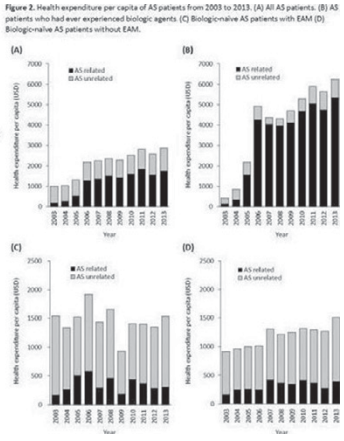

Figure 2. Health expenditure per capita of AS patients from 2003 to 2013. (A) All AS patients. (B) AS patients who had ever experienced biologic agents (C) Biologic-naive AS patients with EAM (D) Biologic-naive AS patients without EAM.

Conclusions: Along with demographic factors, systemic consequences such as EAMs and other comorbidities were associated with increased disabilities and healthcare expenditures in AS. Older age at diagnosis was significantly associated with increased mortality rates.

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OP0070 THE ROLE OF INDIVIDUAL AND COUNTRY-LEVEL SOCIO-ECONOMIC FACTORS IN WORK PARTICIPATION IN PATIENTS WITH SPONDYLOARTHRITIS ACROSS 22 COUNTRIES WORLDWIDE: RESULTS FROM THE COMOSPA STUDY

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Background: Spondyloarthritis (SpA) carries substantial financial costs, including direct costs (use of medical services and treatments) and indirect costs (loss of work productivity). While disease related factors have been repeatedly shown to be associated with work outcomes, information on the role of educational attainment and the economic wealth of the patients' country of residence is scarce.
Objectives: To explore the role of individual and country level socio-economic (SE) factors on employment, absenteeism and presenteeism across 22 countries.
Methods: Patients with a clinical diagnosis of SpA, fulfilling the ASAS SpA criteria and in working age (≤65 years old) from COMOSPA were included. Outcomes explored were employment-status, absenteeism and presenteeism according to the Work Productivity and Activity Impairment Specific Health Problem (WPAI-SHP) questionnaire. Absenteeism and presenteeism were assessed in employed patients. Multilevel logistic (for work status) and linear (for absenteeism and presenteeism) regression models with random intercept for country were constructed. Independent contribution of individual (education) and country level socio-economic factors (country healthcare expenditures and gross domestic product (GDP) (all low vs medium/high tertiles) were assessed in models adjusted for clinical factors.
Results: In total 3,114 patients from 22 countries were included (mean (SD) age 40.9 (11.8) years; 66% males; and 63% employed). Of these, 89% had axial SpA and 11% a peripheral SpA. Unadjusted employment rates ranged from 28% (Colombia) to 83% (Canada). After adjustment for relevant socio-demographic and clinical variables, differences between countries in work status persisted (Figure).

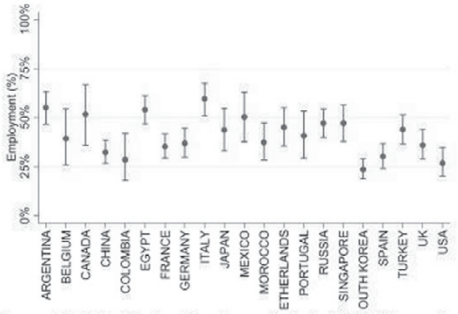

Figure – Adjusted estimates of employment rate (and 95%CI) by country derived from final multivariable, two-level model for work status, adjusted for health expenditure per capita (in USD), socio-demographic and clinical

Table – Impact of individual and country SE factors on work outcomes, in two-level models adjusted for socio-demographic and clinical variables

Independent predictors	Outcome		
	Work status (employed vs not) (N=2,897)	Absenteeism (0-100%) (N=1,619)	Presenteeism (0-100%) (N=1,497)
	OR (95% CI)	β (95% CI)	β (95% CI)
Country health expenditure per capita (US dollars)	2.42 (1.53;3.81)	-3.42 (-13.07;6.23)	-4.53 (-8.90;-0.17)
Age (years)	0.98 (0.97;0.99)	-0.04 (-0.17;0.09)**	-0.20 (-0.31;-0.10)
Gender (ref: Female)	2.26 (1.88;2.72)	-4.38 (-7.28;-1.49)	-4.30 (-6.59;-2.01)
Education (ref: Primary school or less)			
-Secondary	2.35 (1.77;3.11)	-5.42 (-10.45;-0.40)	-3.09 (-7.03;0.85)
-University	3.90 (2.91;5.24)	-7.25 (-12.33;-2.27)	-7.48 (-11.44;-3.51)
Marital status (ref: single)			
-married/living together;	2.28 (1.83;2.85)	¥	£
-divorced	2.37 (1.54;3.67)		
-widower	2.00 (0.84;4.73)		
RDCI (0-9)	0.83 (0.84;0.91)	¥	2.43 (1.21;3.66)
ASDAS-CRP	¥	3.83 (2.17;5.50)	7.43 (6.12;8.74)
BASFI (0-10)	0.98 (0.98;0.98)	0.13 (0.05;0.20)	0.45 (0.39;0.51)

RDCI=Rheumatic Disease Comorbidity Index; ASDAS-CRP= Ankylosing Spondylitis Disease Activity Score; BASFI=Bath Ankylosing Spondylitis Functional Index;
¥ Not selected during multivariable regression analysis (p ≥0.05).
£ Not selected during univariable analysis (p>0.20)