with autoimmune inflammatory rheumatic diseases. *Ann Rheum Dis* 2011;70:414–22.

- [2] MTT Nguyen, H Lindegaard, O Hendricks & N Friis-Møller. Factors associated with influenza and pneumococcal vaccine uptake among rheumatoid arthritis patients in Denmark invited to participate in a pneumococcal vaccine trial (Immunovax_RA), *Scandinavian Journal of Rheumatology* 2017;1–8.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4109

AB1142

TREATMENT COSTS OF SELECTED RHEUMATIC DISEASES IN SUB-SAHARAN AFRICA: A CASE FOR IMPROVED INSURANCE COVERAGE FOR AFRICAN PATIENTS

A. Akpabio¹, C. Nga², I. Umoh¹, O. Ita¹. ¹University of Uyo Teaching Hospital, Internal Medicine, Uyo, Nigeria; ²University of Uyo Teaching Hospital, Uyo, Nigeria

Background: Rheumatic diseases lead to substantial economic costs¹ especially in resource-poor settings like sub-Saharan Africa (SSA).² Annual direct cost of lupus treatment ranges from \$13,735–20,926 /patient in the US to £3231(\$4232)/patient in the UK.^{1,3}

Data is rare for SSA and Nigeria in particular where the minimum wage is N30,000 (\$83/mth) with only 5% of citizens covered by health insurance.^{4,5} The scheme excludes some medications and certain procedures are grossly underfunded. Cost-of-illness studies are invaluable in planning and policy development. They typically include: direct, indirect and intangible costs.⁶

Objectives: To compare total costs of some rheumatic diseases, highlight underfunded therapies and push for wider insurance coverage of rheumatic diseases.

Methods: A cross-sectional study from the University of Uyo Teaching Hospital - Nigeria using data of 252 clinic patients (20 lupus, 27 rheumatoid arthritis, 25 gout and 180 osteoarthritis). Direct costs were estimated using the hospital pricelist while indirect costs were estimated using the human capital method. Statistical analysis was done with $p < 0.05$.

Results: Females were the majority except for gout patients (44%). Most lupus patients were unemployed (75%) and had the highest annual total cost (N472,800–2,240,400) compared with the others. Key medications excluded from insurance are shown in table 2.

TABLE 1. COST-OF-ILLNESS COMPARISON OF SELECTED RHEUMATIC DISEASES

	Lupus (n=20)	RA(n=27)	Gout(n=25)	OA(n=180)
Age (years)	33.9 ± 11.4	43.4 ± 14.3	57.4 ± 9.6	59.7 ± 9.1
Female n (%)	24(95)	25(92)	11(44)	157(87)
Average Duration of illness (years)	4(1-11)	3.5(2-10)	3 (0.2-8)	4(0.1-20)
Unemployed n (%)	15(75.0)	19(70.3)	12(48.0)	62(34.4)
Workdays missed/mth	7	5	2	3
Direct costs (N'000)				
Total /mth (stable)	32.4	27	19.75	18
Total /yr (stable)	388.8	324	237	216
Total /mth (severe)	179.7	155.6	32.5	23
Total /yr (severe)	2,156.4	1,867.2	390	276
Indirect costs				
Productivity loss/mth	7	5	2	3
Productivity loss/yr	84	60	24	36
Total costs/mth	39.4 – 186.7	32 – 160.6	21.75 – 34.5	21 – 26
Total costs/yr	472.8 – 2,240.4	384 – 1,927.2	261 – 414	252 – 312

1\$ = 360 Nigerian Naira (NGN), 1€ = NGN 402 as at 31/1/2020. Costs quoted in thousands of Naira.

Table 2. Uninsured treatments.

MMF
Methotrexate
Sulphasalazine
Azathioprine
HCC
Febuxostat
Colchicine
Rituximab
Arthroplasty (N100,000*)
Dialysis (6 sessions)
Renal transplant

Conclusion: Total annual cost of lupus treatment in Nigeria is quite high ranging from (NGN 472,800–2,242,400) [\$1313– 6228] for mild to severe disease. This contrasts with a mean annual national income of \$1,000 given that 75% of lupus

patients are unemployed. Expanded insurance coverage for rheumatic drugs will further reduce the enormous treatment burden and improve outcomes.

References:

- Slawsky KS et al. A structured literature review of the direct costs of Adult SLE in the US. *Arthritis Care Res* 2011;63(9): 1224–32.
- Adelowo OO. Connective tissue diseases: challenges of management among Nigerians. *Annals of Health Research*. 2016; 2(2):60–65.
- Khamashta M et al. The cost of care of SLE in the UK: Annual direct costs for adult SLE patients with active autoantibody disease. *Lupus* 2013;23(3):273–83
- Uzochukwu BSC et al. Health care financing in Nigeria: Implications for achieving universal health coverage. *Nigerian Journal of Clinical Practice*. 2015;18(4):437–44.
- Nigerian National Minimum Wage. <https://tradingeconomics.com/nigeria/minimum-wages> Accessed (31/01/2020).
- Zhu TY et al. Cost of illness studies in systemic lupus erythematosus: a systematic review. *Arthritis Care Res*. 63: 751–760

Acknowledgments: All study participants, Drs Marvelous Ibanga and Eke Ogudu.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.6434

AB1143

BURDEN OF GLUCOCORTICOIDS AMONG RHEUMATOID ARTHRITIS PATIENTS AT DIFFERENT STAGES OF DISEASE-MODIFYING ANTIRHEUMATIC DRUG MANAGEMENT

R. K. Dore¹, J. Antonova², M. Gorritz³, L. Chang², H. Xie³, M. C. Genovese⁴.

¹Robin K. Dore, MD, private practice, Tustin, United States of America; ²Gilead Sciences, Inc., Foster City, United States of America; ³IQVIA, Plymouth Meeting, United States of America; ⁴Stanford University, Division of Immunology and Rheumatology, Stanford, United States of America

Background: EULAR and ACR guidelines recommend a treat-to-target approach for patients with RA including regular assessments of disease activity. Glucocorticoids are commonly used to control inflammation associated with uncontrolled disease. However, patients using glucocorticoids may develop short- and long-term side effects.

Objectives: To examine the real-world use of glucocorticoids among patients with RA who are disease-modifying antirheumatic drug (DMARD)-naïve or failing their first conventional synthetic DMARD (csDMARD) or biologic DMARD (bDMARD).

Methods: From a large US health claims database, this study included adults with ≥2 RA claims ≥30 days apart who started (index date [ID], 1/1/2012–3/31/2017) a first DMARD (DMARD-naïve) or patients who newly initiated a csDMARD and then switched to or added another DMARD (csDMARD switchers), and patients who initiated a first bDMARD and then switched to another bDMARD or Janus kinase inhibitor (JAKi; bDMARD switchers). All patients had continuous enrollment 1-year before and ≥1 year after ID and were evaluated for pre- and post-ID use of glucocorticoids (oral or injectable), prednisone equivalent dose (PED), and duration of exposure ≥30 days.

Results: The study included 28,201 patients in the DMARD-naïve cohort, 7,816 csDMARD switchers, and 4,656 bDMARD switchers (median age 54 years for all, 73%–78% female).

Among DMARD-naïve patients, 66.5% used glucocorticoids during the pre-ID period (Figure 1) and 61.2% had >7.5mg/day PED, 21.2% had >30mg/day PED, and 21.2% had ≥30 days of exposure to glucocorticoids (Figure 2). Post-ID, 69.4% of patients used glucocorticoids, while 54.7% had >7.5mg/day PED, 13.5% had >30mg/day PED, and 44.9% had ≥30 days of exposure to glucocorticoids.

Among csDMARD switchers, 84.5% of patients used glucocorticoids during the pre-ID period (Figure 1), and 73.4% had >7.5mg/day PED, 16.0% had >30mg/day PED, and 56.4% had ≥30 days of exposure to glucocorticoids (Figure 2). During the post-ID treatment, 74.1% of patients used glucocorticoids, 56.2% had >7.5mg/day PED, 14.4% had >30mg/day PED, and 45.8% had ≥30 days of exposure to glucocorticoids.

Among bDMARD switchers, 85.1% of patients used glucocorticoids in the pre-ID period (Figure 1), and 70.2% had >7.5mg/day PED, 17.4% had >30mg/day PED, and 55.2% had ≥30 days of exposure to glucocorticoids (Figure 2). During post-ID treatment, 75.4% of patients used glucocorticoids and 59.7% of patients had >7.5mg/day PED, 16.7% had >30mg/day PED, and 45.6% had ≥30 days of exposure to glucocorticoids.

Figure 1. Prednisone-equivalent dose use by cohort

bDMARD, biologic disease-modifying antirheumatic drug; csDMARD, conventional synthetic disease-modifying antirheumatic drug; DMARD, disease-modifying antirheumatic drug.

Figure 2. Pre-index and post-index glucocorticoid use by cohort

bDMARD, biologic disease-modifying antirheumatic drug; csDMARD, conventional synthetic disease-modifying antirheumatic drug; DMARD, disease-modifying antirheumatic drug.

Conclusion: Real world glucocorticoid use was high in all categories of DMARD-treated RA patients, at baseline and during their next treatment, suggesting ongoing medical needs. Glucocorticoid doses exceeded 7.5 mg/day for most patients. In addition, many patients had ≥30 days exposure to glucocorticoids, posing an additional safety risk.

Disclosure of Interests: Robin K Dore Grant/research support from: AbbVie, Amgen, Biogen, Bristol-Myers Squibb, Eli Lilly and Co., Gilead Sciences, Inc., GlaxoSmithKline, Myriad, Novartis, Pfizer, Radius, Regeneron, Sanofi, and UCB., Consultant of: AbbVie, Amgen, Biogen, Bristol-Myers Squibb, Eli Lilly and Co., Gilead Sciences, Inc., GlaxoSmithKline, Myriad, Novartis, Pfizer, Radius, Regeneron, Sanofi, and UCB., Janya Antonova Employee of: Gilead Sciences, Inc., Magdaliz Gorritz Consultant of: Gilead Sciences, Inc., Lawrence Chang Consultant of: Gilead Sciences, Inc., Handing Xie Consultant of: Gilead Sciences, Inc., Mark C. Genovese Grant/research support from: AbbVie, Eli Lilly and Company, EMD Merck Serono, Galapagos, Genentech/Roche, Gilead Sciences, Inc., GSK, Novartis, Pfizer Inc., RPharm, Sanofi Genzyme, Consultant of: AbbVie, Eli Lilly and Company, EMD Merck Serono, Genentech/Roche, Gilead Sciences, Inc., GSK, Novartis, RPharm, Sanofi Genzyme

DOI: 10.1136/annrheumdis-2020-eular.3776

AB1144 DAILY CLINICAL CARE OF PATIENTS WITH MUSCULOSKELETAL COMPLAINTS – HOW HELPFUL IS A TRIAGE SYSTEM FOR EARLY RECOGNITION OF INFLAMMATORY RHEUMATIC DISEASES?

X. Baraliakos¹, I. Redeker², M. Zacharopoulou¹, S. Tsiami¹, K. Tsiaousi¹, D. Morzeck¹, J. Braun¹. ¹Rheumazentrum Ruhrgebiet Herne, Ruhr-University Bochum, Herne, Germany; ²German Rheumatism research center, Berlin, Germany

Background: Early diagnosis and treatment are important for the management of inflammatory rheumatic diseases (RMD). However, the availability of rheumatologists is limited in most European countries and selection strategies lack sensitivity and/or specificity.

Objectives: To evaluate a triage strategy that offers the possibility to see patients within 4 weeks for short term appointments in order to check the probability of an inflammatory RMD and the necessity to further evaluate the patients in due time.

Methods: Physician's and patient's information who called our tertiary rheumatology department's outpatient clinic for a date in the triage system were included in this analysis. The time to first appointment as assessed by a nurse (Step 1), the short evaluation by a rheumatologist in the triage (Step 2) and the patient's complaints and the diagnoses after an extensive diagnostic evaluation (Step 3) were documented.

Results: In a period of 9 months in 2018, a total of 982 patients presented. A total of 62 patients (6.3%) were considered urgent (appointment within 3 days), while 240 (24.4%) were appointed within 4 weeks at Step 2. Of the former 46 (19.2%), and of the latter 151 patients (62.9%) were diagnosed with inflammatory RMD at Step 3. In total, 334 patients (34.0%) were diagnosed with inflammatory RMD at Step 3, including 126 with RA (37.7%), 71 with axSpA/PsA (21.3%), 95 with connective tissue disease/vasculitis (28.4%) and 20 with gout (6.0%). The diagnosis suspected in Step 2 was confirmed in Step 3 in 77.9% of cases. In 217 patients, the diagnosis suspected in Step 2 was not confirmed in Step 3. Of them, 34 (15.7%) had unclear findings at Step 2 but an inflammatory RMD was found at Step 3, while 148 (68.2%) had a suspected inflammatory RMD at Step 2 but this was not confirmed at Step 3. The most frequent musculoskeletal complaint at the time point of referral was pain in small peripheral joints (hands and/or feet) in 858 patients (87.4%), in large peripheral joints (knees, shoulders and/or hips) in 780 patients (79.4%) and back pain in 682 patients (69.5%). Fever, night sweats and unclear weight loss was reported by 50 patients (5.1%), while 210 patients (24.5%) presented with findings suspicious of inflammatory RMD such as elevated CRP of unclear origin, and 43 patients (4.8%) because of a threat of organ damage such as unclear elevation of creatinine, as reported by the referring physician. In addition, 167 patients (17.0%) had received glucocorticoids prior to referral, 87 (52.1%) of which finally did not receive the diagnosis of inflammatory RMD at Step 3, while 737 patients (75.1%) were receiving NSAIDs prior to referral.

Conclusion: In this prospective evaluation of a triage system where all patients were pre-screened by a nurse and were seen within 4 weeks by a rheumatologist, clinical differentiation could be performed timely due to a successfully structured triage system. The initially suspected diagnosis was finally confirmed in ≥75% of cases, while ≥1/3 of patients had a definite inflammatory RMD.

This work was supported by an unrestricted Grant from Abbvie

Disclosure of Interests: Xenofon Baraliakos Grant/research support from: Grant/research support from: AbbVie, BMS, Celgene, Chugai, Merck, Novartis, Pfizer, UCB and Werfen, Consultant of: AbbVie, BMS, Celgene, Chugai, Merck, Novartis, Pfizer, UCB and Werfen, Speakers bureau: AbbVie, BMS, Celgene, Chugai, Merck, Novartis, Pfizer, UCB and Werfen, Imke Redeker: None declared, Maria Zacharopoulou: None declared, Styliani Tsiami: None declared, Konstantia Tsiaousi: None declared, Doris Morzeck: None declared, Juergen Braun Grant/research support from: AbbVie (Abbott), Amgen, BMS, Boehringer, Celgene, Celltrion, Centocor, Chugai, Eli Lilly and Company, Medac, MSD (Schering Plough), Mundipharma, Novartis, Pfizer (Wyeth), Roche, Sanofi-Aventis, and UCB Pharma, Consultant of: AbbVie (Abbott), Amgen, BMS, Boehringer, Celgene, Celltrion, Centocor, Chugai, EBEWE Pharma, Eli Lilly and Company, Medac, MSD (Schering-Plough), Mundipharma, Novartis, Pfizer (Wyeth), Roche, Sanofi-Aventis, and UCB Pharma, Speakers bureau: AbbVie (Abbott), Amgen, BMS, Boehringer, Celgene, Celltrion, Centocor, Chugai, EBEWE Pharma, Eli Lilly and Company, Medac, MSD (Schering-Plough), Mundipharma, Novartis, Pfizer (Wyeth), Roche, Sanofi-Aventis, and UCB Pharma

DOI: 10.1136/annrheumdis-2020-eular.6529

AB1145

PREScription PATTERNS AND DISEASE ACTIVITY IN PORTUGUESE WOMEN OF CHILDBEARING AGE WITH RHEUMATOID ARTHRITIS, PSORIATIC ARTHRITIS, ANKYLOSING SPONDYLITIS AND JUVENILE IDIOPATHIC ARTHRITIS

S. C. Barreira^{1,2}, A. R. Cruz-Machado^{1,2}, A. L. Fernandes³, I. Genrinho⁴, G. Sequeira³, P. Monteiro⁴, J. E. Fonseca^{1,2}. ¹Hospital de Santa Maria, Centro Hospitalar e Universitário de Lisboa Norte, Serviço de Reumatologia e Doenças Ósseas Metabólicas, Lisboa, Portugal; ²Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Centro Académico de Medicina de Lisboa, Portugal, Unidade de Investigação em Reumatologia, Lisboa, Portugal; ³Centro Hospitalar Universitário do Algarve, Serviço de Reumatologia, Faro, Portugal; ⁴Centro Hospitalar Tondela-Viseu, Unidade de Reumatologia, Viseu, Portugal

Background: Disease activity (DA) at conception is one of the main predictors of pregnancy outcomes in women of childbearing age (WoCBA) with rheumatic diseases. Teratogenicity and unawareness about pregnancy compatibility of some disease-modifying anti-rheumatic drugs might limit the choice of treatment in WoCBA.

Objectives: To assess differences in prescription patterns between WoCBA with rheumatoid arthritis (RA), psoriatic arthritis (PsA), ankylosing spondylitis (AS) and juvenile idiopathic arthritis (JIA) and comparator groups, namely