Results: A total of 100 questionnaires were given out, with return rate of 98%. Female:male ratio was 3.8:1, mean age 55±17. Most patients were treated for RA (24%), Psoriatic arthritis (20%), Ankylosing spondylitis (14%) and others, see figure 1. Regarding immunosuppression 16% were on biologics and 78% on DMARDs. Most were on methotrexate (26%), Prednisolone (16%), hydroxychloroquine (12%), sulfasalazine (12%) whereas biologics were <10 % each (see figure 1).

With regards to vaccination for influenza, overall 47% had received the vaccine (see table 1). Of those who did not take the vaccine 35% had an allergy or did not believe it was effective, but 65% were not offered the vaccine. A total of 52% commented that a health professional had discussed influenza vaccination with them, 42% mentioned that this was never discussed and 6% were unsure. In RA population uptake was 48% compared to 44% 10 years ago (p=0.81).

Regarding pneumovax 29% commented that a health professional had discussed pneumococcal vaccination and only 28% had received the vaccine. Of those who did not take the vaccine 12% had an allergy or did not believe it was effective, and 83% were not aware that the vaccine existed or were not offered the vaccine. In RA population uptake was 61% compared to 62% 10 years ago (p=0.62).

RA patients had better vaccination than psoriatic patients for influenza (p=0.03), but not pneumovax (p=0.52).

UPTAKE OF VACCINE	Influenza vaccination	Pneumonia vaccination
All patients -2017	47%	28%
RA patients- 2007	62%	44%
RA patients- 2017	16/23 (61%)	11/23 (48%)
Psoriatic Arthritis	6/18 (33%)	6/18 (33%)
Prednisolone	10/14 (71%)	9/14 (64%)
Methotrexate	14/22 (63%)	11/19 (58%)

Conclusions: Although this is a small audit conducted in a routine rheumatology clinic in the UK, it is of concern that with increased patient education seen in the last 10 years, vaccination for influenza and pneumococcus has not improved. Perhaps healthcare professionals are not discussing this with the patients sufficiently. Further patient and healthcare involvement is required to reverse the declining trend and protect our patients.

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FRI0618 CONCORDANCE WITH LATEST GUIDELINES FOR DMARD SCREENING AND MONITORING IN SECONDARY CARE

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Background: DMARDs need to be prescribed safely. Screening and monitoring for toxicity is essential when using these medications. The British Society of

Rheumatology (BSR) has recently published guidance on screening and monitoring of non-biologic DMARDs.

Objectives: The aim of this audit was to assess current practice on synthetic DMARD screening and monitoring within our rheumatology department, in a secondary care setting, using the BSR 2017 guidelines as the standard of care.

Methods: 81 consecutive adult patients who were started on synthetic DMARDs in 2016 were recruited. The data required was collected from case notes and isoft clinical manager after obtaining data protection clearance. DMARDs included Hydroxychloroquine (HCQ), Methotrexate (MTX), Sulfasalazine (SSA), Azathioprine (AZA) and Leflunomide (Lef). Baseline screening was assessed by checking for documentation of height, weight, baseline blood tests including virology and documentation of known lung disease and smoking with the relevant investigations when necessary. Specialist nurse referral and content of consultation was assessed for discussion regarding fertility/pregnancy when relevant, intercurrent illnesses and vaccinations. Drug-specific screening and monitoring included folic acid prescription (FA) for MTX, TPMT testing for AZA, ophthalmic review for HCQ as well as weight and blood pressure (BP) monitoring for Lef. Finally all patients were checked for regular blood monitoring at weeks 2,4,6 and every 3 months thereafter with the exception of SSA & HCQ monotherapy. Calibri (Body)

Results: Weight and height were not documented in 50.6% and 66.7% of patients respectively. Baseline blood tests were present in all but 1 patient with the exception of virology. The latter was present in 6.2% of cases only. Smoking status was assessed in 92.6% of cases. CXR and pulmonary function tests were warranted for 9 patients but were only done in 4 cases. 98.8% of patients were referred to the specialist nurse for DMARD education. Discussion on fertility and pregnancy, where applicable, was discussed in 95% of cases, vaccinations in 97.5% of cases and advice regarding management of intercurrent illnesses in 2.5% of cases. Drug monitoring at 2, 4 and 6 weeks was done in 33.3%, 90.1% and 80.2% of cases respectively. BP and weight were checked for all patients on Lef whilst blood monitoring for SSA monotherapy persisted after 1 year in 80% of cases. Drug specific recommendations including FA prescription, TPMT testing and ophthalmic reviews were done in all patients.

Conclusions: This audit showed a high level of concordance with the BSR monitoring guidelines for synthetic DMARDs. Aspects that require improvement have been highlighted. By ensuring that there is proper documentation of all aspects pertaining to the work-up prior to starting a patient on a DMARD, one can then introduce screening and monitoring schedules targeted at the prevention and early detection of adverse treatment outcomes.

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FRI0619 PREDICTORS AND TEMPORAL TREND OF SEASONAL INFLUENZA VACCINATION IN AUTO-IMMUNE RHEUMATIC DISEASES IN THE UK: A NATIONWIDE PROSPECTIVE COHORT STUDY

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Background: Autoimmune rheumatic diseases (AIRDs) are associated with an increased risk of influenza and its complications which may be compounded by the use of potent disease modifying anti-rheumatic drugs (DMARDs). In the United Kingdom, seasonal influenza vaccination (SIV) is recommended for people older than 65 years, and for those at a higher risk of influenza due to underlying diseases or immunosuppressive treatment. Understanding SIV uptake in AIRD patients on DMARDs could identify subsets who need targeted effort to optimise SIV uptake in this group.

Objectives: To [1] examine temporal trends in uptake of SIV; [2] explore disease and demographic factors associated with receiving the SIV; and [3] calculate the proportion of people with AIRDs who are vaccinated in time before the seasonal flu virus circulates.

Methods: 32,751 people with AIRDs prescribed DMARDs between 2006 and 2016 were identified from the Clinical Practice Research Datalink (CPRD). CPRD is one of the world's largest prospective databases of primary care records, and includes primary-care medical, prescription and immunisation data on 8% of the UK population at any one time. The proportion of eligible cases vaccinated between 01/September of one year and 31/March of the next year (flu-season) was calculated and stratified by age, presence of additional indications for vaccination, AIRD type, and number of DMARDs prescribed. We used Joinpoint regression analysis to determine the temporal trend in SIV uptake while Poisson regression with robust error variance was used to examine the univariate and multivariate association between age, sex, AIRD type, additional indication for being vaccinated, total number of different DMARDs prescribed in the 12-month period with receiving SIV. The analysis was conducted in the open source Joinpoint regression software and Stata-MP.

Results: SIV uptake was high in those ≥ 65 years old (82.3% and 80.7% in 2006–07 and 2015–16 respectively). However, it was significantly lower in other age groups, but improved over time with 51.9% and 61.9% in the 45–64 year age group, and 32.3% and 50.1% in the <45 year age group being vaccinated in 2006–07 and 2015–16 respectively. While 64.9% of the vaccinations in those ≥ 65 years old occurred by the 3rd November (week 9 in Graph 1), in time to mount a protective immune response before the influenza activity becomes substantial in the UK, only 38.9% in the 45–64 year and 26.2% in the <45-year age group without any other reason for vaccination received SIV before this date (Graph 1). Men, those without additional indications for vaccination, and those on single DMARDs were significantly less likely to be vaccinated.

Yearly vaccination uptake was determined from 1 September (A) to 31st March of the next year (C). B indicates the point when influenza activity normally starts to become substantial in the UK.

Conclusions: The uptake of SIV is low in the under 65s, and many do not get vaccinated in time to confer immunity. Additional effort is required to promote the timely uptake of SIV in this population. To our knowledge, this is the first study to assess temporal trends in uptake of SIV among AIRDs and to compare uptake across different AIRDs.

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FRI0620

LOW EDUCATIONAL ATTAINMENT IS ASSOCIATED WITH POOR PATIENT STATUS AT THE INITIAL VISIT OF PATIENTS WITH RHEUMATOID ARTHRITIS (RA) OR OSTEOARTHRITIS (OA) AT THE INITIAL VISIT TO A RHEUMATOLOGY SETTING, WITH SIMILAR PATTERNS IN PATIENTS WITH EITHER DIAGNOSIS

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Background: Low educational attainment is associated with a higher prevalence, morbidity, and mortality of many diseases, including rheumatoid arthritis (RA) (J Chronic Dis 1985; 38:973–84) and osteoarthritis (OA) (J Clin Epidemiol 1992;45:139–47). These associations often are attributed to limited access of disadvantaged people to medical services (Ann Intern Med 1998;129:412–6), although some have suggested that these differences are explained primarily by differences in patient self-management (Ann Intern Med 1998;129:406–11).

Objectives: To study clinical status of patients with RA or OA, all of whom had access to rheumatology care, at their initial visit.

Methods: All patients with all diagnoses seen at an academic rheumatology site complete a self-report multidimensional health assessment questionnaire (MDHAQ) at each visit. MDHAQ includes 3 0–10 scales for physical function (FN), pain (PN) and global assessment (PATGL), compiled into a 0–30 routine assessment of patient index data (RAPID3). Patient-reported FN, PN, PATGL and RAPID3 were compared in new patients with a primary diagnosis of either RA (n=66) or OA (n=66) at a first visit in 3 groups according to years of formal education, <12, 12, and >12 years, using analysis of variance (ANOVA).

Results: Mean MDHAQ scores were quite similar in OA vs RA, and varied similarly according to education level (table 1). In all patients, mean RAPID3 was 15.4 in OA vs 15.3 in RA; in those with <12 years, 18.2 in OA vs 19.8 in RA; in those with 12 years, 15.9 in OA vs 16.0 in RA; in those with >12 years, 14.0 in OA vs 13.7 in RA (p=0.11 for OA, p=0.04 for RA) (table 1). FN scores were 3.9 in both groups with <12, 3.3 in both groups with 12, and 2.3 in OA vs 2.4 in RA patients with >12 years of education (p=0.02 for OA, p=0.08 for RA). PN scores were 7.3 and 8.5 for OA vs RA with <12 years, 7.1 and 6.2 for OA vs RA with 12 years, and 6.7 vs 5.9 for OA vs RA patients with >12 years of education (p=0.69 for OA, p=0.02 for RA). PATGL was 7.0 vs 7.4 for OA vs RA with <12 years, 5.5 and 6.5 for OA vs RA with 12 years, and 5.1 and 5.4 in OA vs RA patients with >12 years of education (p=0.14 for OA, p=0.12 for RA).

Table 1 Mean & standard deviation (SD) for 0–10 physical function, pain, patient global assessment and 0–30 RAPID3 of patients with RA or OA at first visit, by formal education level

OA – measures	Total N=66	Groups by level of education (years)			p
		<12 (n=12)	12 (n=21)	>12 (n=33)	
Function (0–10)	2.9 (2.0)	3.9 (1.5)	3.3 (2.3)	2.3 (1.7)	0.02
Pain (0–10)	6.9 (2.3)	7.3 (1.7)	7.1 (2.4)	6.7 (2.5)	0.69
PATGL (0–10)	5.6 (2.9)	7.0 (2.1)	5.5 (3.1)	5.1 (2.9)	0.14
RAPID3 (0–30)	15.4 (6.0)	18.2 (3.9)	15.9 (6.8)	14.0 (5.9)	0.11
RA – measures	Total N=66	Groups by level of education (years)			p*
		<12 (n=12)	12 (n=21)	>12 (n=33)	
Function (0–10)	2.9 (2.2)	3.9 (3.0)	3.3 (2.1)	2.4 (1.8)	0.08
Pain (0–10)	6.4 (2.9)	8.5 (1.5)	6.2 (3.4)	5.9 (2.7)	0.02
PATGL (0–10)	6.0 (3.0)	7.4 (3.1)	6.5 (3.3)	5.4 (2.8)	0.12
RAPID3 0–30)	15.3 (7.2)	19.8 (6.3)	16.0 (8.1)	13.7 (6.5)	0.04

Conclusions: Low education was associated with RAPID3 and all component scores similarly in RA and OA. Differences according to formal education level were greater than by diagnosis, which were negligible. These variations do not appear attributable to differences in access to medical services.

Disclosure of Interest: J. Schmukler: None declared, I. Castrejon: None declared, T. Pincus Shareholder of: Dr. Pincus holds a copyright and trademark on MDHAQ and RAPID3 for which he receives royalties and license fees. All revenue is used to support further development of quantitative questionnaire measures for patients and doctors in clinical rheumatology care., J. Block: None declared

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FRI0621

HOSPITAL ADMISSIONS AND READMISSIONS IN PATIENTS WITH RHEUMATOID ARTHRITIS. ASSOCIATED FACTORS AND DIRECT HEALTH-CARE COSTS IN A THIRD LEVEL UNIVERSITY HOSPITAL

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Background: In last years, the direct health-care costs derived from admissions and readmissions to Rheumatology departments of patients with Rheumatoid Arthritis (RA) have diminished. Presumably, the higher survival rate and the amount of comorbidities of these patients have derived in an increased of admissions and direct costs to other medical and surgical departments.

Objectives: To describe the admission and readmission causes of all patients with RA admitted during 2015 and 2016 and to identify factors associated to readmission. Finally to estimate the costs derived from these events in the same period.

Methods: All electronic medical reports were revised; demographic, medical and therapeutic data, as well as diagnosis at discharge were collected. A descriptive analysis followed by a logistic regression analysis were done to identify readmission-associated variables. Financial analysis was done by calculating the price of the stay according to established in 2015-scale.

Results: 240 admissions of 158 patients were found. Mean age 63.8 years, 69% women and mean evolution of RA of 13.1 years. At admission, 53% were on oral steroids and 45% with synthetic DMARD. Admissions were mainly distributed in Internal Medicine department (26%). Infections were the most frequent admission cause (33%), followed by cardiovascular events (20%) and oncological processes (13%). Forty-nine patients (31%) were readmitted, 47% due to infections. Age (OR/year 1.02 CI 95% 1.00–1.04), diabetes (OR 2.1 CI 95% 1.1–4.4) and chronic kidney disease (OR 3.3 CI 95% 1.0–10.2) were the associated risk factors. There were a total of 2172 days of stay with an estimated cost of 530420 euros and 783 days of stay due to readmissions with a total cost of 203218 euros. Departments which generated more costs either for admissions or readmissions were Oncology (65064 euros/19585 euros respectively) and Intensive Care (68011 euros/42651