Responders would like assistance in future care delivery through: Clinical toolkit: 63% n=20, Service commissioning toolkit: 43% n=14, Training: 43% n=14, Workshops: 47% n=15. Potential low cost/cost neutral approaches to systems change, cultural change, education and sharing of resource were discussed (see image).

Questions	Comments/Discussion	Potential Solutions	Potential Outcomes/Actions
1. How to fund additional activity or support staff required for AYA service?	<ul style="list-style-type: none">These patients are already being seen in the service so no additional activity needs to be accounted forRestructuring the service allows for a more streamlined and efficient use of services	<ul style="list-style-type: none">Restructuring the clinics into aged matched cohortsSlightly longer time slots (40mins New, 30mins Follow up)Support services - physiotherapy/ psychology run in parallel for "One stop shop clinics"A key worker (nurse/youth worker) has demonstrated significant improvements through helping to sign post to relevant support services	<ul style="list-style-type: none">Improves patient engagement, self management and self advocacyShould reduce follow up/acute admissions/ disease flares / non-attendance ratesEnvisage this to be cost neutral once unmet need and increasing population base is addressed
2. How do we convince the department and managers there is a need for age appropriate care?	<ul style="list-style-type: none">District General Hospital - Not enough patients to cohort a whole clinicProblems with out-patient capacityTrust need incentive from commissionersCentralised appointments do not allow flexibility (patients have flares or last minute coursework/ exams/work / social commitments).	<ul style="list-style-type: none">Dedicate the first hour (2-3 patients) of a clinic to AYA cohortBoning or weekend clinics to accommodate additional roomsPathway coordinator. One center has reduced non-attendance rates by 10% as this allows flexibility/urgent appointments to be re-scheduled without routinely overbooking clinics.	<ul style="list-style-type: none">Engage in dialogue with commissioners/ community services early eg. Lambeth & Southwark commissioners are moving towards population based commissioning modelBusiness case for a patient-pathway coordinator.
3. What resources are available to support clinicians / direct patients to?	<ul style="list-style-type: none">General lack of recognition within organisations about importance of supporting young adults through the process of a chronic health condition.Importance of sharing resource throughout the RAYA network	<ul style="list-style-type: none">Improve training and understanding of age appropriate careModification of registrar training curriculum to encompass age appropriate careRegional website to share resourceCollaboration with existing AYA networks	<ul style="list-style-type: none">Summary of resources and training e-modulesWebsite /app would require a web-master to manage and update regularly (Could this be patient led)Shape of training: Curriculum wording has been modified to encompass age appropriate care and submitted to training body
4. What is the benchmark standard of good practice for AYA patients we should be aspiring to?	<ul style="list-style-type: none">Models of care will need to be fluid, flexible and based on local needs	<ul style="list-style-type: none">Complex patients may need referral to a tertiary center or a Hub and Spoke model may work better for more district general hospitals.	<ul style="list-style-type: none">NICE, CQC and EUAR guidance are useful resourcesFuture RAYA meetings could be a platform for peer review and complex case discussion

Conclusions: Improving outcomes for AYA patients through delivering age appropriate care and self advocacy has driven global strategy and guidelines. Our survey identifies that the majority of rheumatologists agree with this, however there is room for improvement regarding awareness and implementation of current guidance.

Financial constraints and whole population healthcare delivery has limited change. A systematic, unified approach within regions may help to effect change. There is a demand for the development of clinical and commissioning toolkits and training/workshops to help facilitate this.

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THU0664 TREATMENT ADHERENCE TO CONVENTIONAL AND BIOLOGIC DISEASE MODIFYING ANTIRHEUMATIC DRUGS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: While treatment with conventional or biologic disease-modifying antirheumatic drugs (DMARDs) is highly effective in preventing radiographic progression and improving long-term functional outcome among patients with rheumatoid arthritis (RA), patient adherence to DMARD treatment is required for these positive effects. Suboptimal medication adherence has been repeatedly noted in patients with chronic medical conditions including RA.

Objectives: To examine patient adherence to different DMARDs for RA in a real-world setting.

Methods: We conducted a population-based cohort study using claims data from a US commercial health plan (Optum Clinformatics™ Datamart 2004–2015) and Medicaid (2000–2010). Eligible patients were those aged between 18 and 65 years and had at least two visits, 7–365 days apart, coded for RA (ICD-9: 714.xx). We then identified patients who newly started a conventional or biologic DMARD. The index date was the first dispensing date of conventional or biologic DMARDs after a 12 month continuous enrollment period. We examined patient demographics, clinical characteristics and health care utilisation factors specific to DMARDs types and their adherence to conventional or biologic DMARDs. All patients were required to be continuously enrolled for at least 1 year after the index date. Patients' adherence to each DMARD was measured using the proportion of days covered (PDC) calculated as the number of days supplied divided by 365 days post-index.

Results: We identified a total of 77,999 RA patients (37 018 in Optum and 40 981 in Medicaid) who started a conventional or biologic DMARD. Of those, 28 332 initiated methotrexate, 27 157 hydroxychloroquine, 6505 sulfasalazine, 2773 leflunomide and 19 381 biologic DMARDs. Table 1 shows patients' adherence specific to DMARD types. Overall, adherence was better in patients enrolled in Optum (i.

e., a commercial health plan) than Medicaid. Except for infliximab given only intravenously, the PDC for the 1 year after initiating a conventional or biologic DMARD ranged from 30.99% (sulfasalazine in Medicaid) to 60.84% (abatacept in Optum).

Abstract THU0664 – Table 1. Adherence to DMARDs in patients with RA: Proportion of days covered for 1 year

	Optum	Medicaid
Mean (SD) in percentage		
Conventional DMARDs		
Methotrexate	58.13 (31.39)	44.00 (29.58)
Hydroxychloroquine	50.87 (31.72)	39.79 (28.71)
Sulfasalazine	36.59 (29.46)	30.99 (25.65)
Leflunomide	48.54 (32.09)	41.72 (30.62)
Biologic DMARDs		
Abatacept	60.84 (30.36)	49.70 (31.51)
Adalimumab	53.02 (29.60)	49.09 (29.01)
Certolizumab	49.53 (29.10)	39.54 (27.91)
Etanercept	52.71 (29.37)	50.00 (29.25)
Golimumab	51.10 (28.92)	48.36 (26.82)
Infliximab *	74.39 (28.65)	60.69 (30.63)
Tocilizumab	57.95 (27.77)	-

*assumed infliximab was given every 8 weeks.

Conclusions: In this large population-based cohort of RA patients enrolled in a commercial health plan or Medicaid, the 1 year medication adherence is generally low regardless of type of DMARDs. While adherence is better in the commercial health plan cohort than Medicaid, other factors predicting medication adherence need to be determined further. There is a strong need for future research examining the impact of medication adherence on long-term RA-related clinical outcomes.

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THU0665 PHARMACOVIGILANCE SURVEILLANCE OF AUTOIMMUNE DISEASES INDUCED BY BIOLOGICAL AGENTS: A REVIEW OF 16123 CASES (AEBIOGEAS-SEMI REGISTRY)

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Objectives: The increasing use of biological agents has been linked with the paradoxical development of autoimmune processes. The scenario has dramatically change in recent years due to the increased number of biologics used in daily practice and the emerging use of biologics in patients with solid cancers.

Methods: In 2006, the Study Group on Autoimmune Diseases (GEAS) of the Spanish Society of Internal Medicine created the BIOGEAS project, a multicenter study devoted to collecting data on the use and safety of biological agents in adult patients. The aeBIOGEAS Registry (autoimmune events) was designed to collect data on autoimmune diseases secondary to the use of biologic agents, with the aim of formulating a standardised, consensual protocol for these patients, through a systematic and yearly MEDLINE search. We present the updated results of the aeBIOGEAS Registry (cases collected until Dec 31, 2017).

Results: The aeBIOGEAS Registry currently includes 16 123 cases of more than 50 different systemic and organ-specific triggered autoimmune diseases related to the administration of 46 different biological molecules in patients with inflammatory diseases (9907 cases, overwhelmingly rheumatic diseases in 8639) and cancer (6216 cases, overwhelmingly solid neoplasia in 5955). The main biological agents identified consisted of anti-TNF agents in 9514 cases (mainly adalimumab in 4147, infliximab in 3028 and etanercept in 1648), checkpoint inhibitors in 5264 (overwhelmingly the CTL4 inhibitor ipilimumab in 4980 cases), tyrosine kinase inhibitors in 952 (mainly imatinib in 377 cases) and B-cell targeted therapies in

298 cases. Organ-specific classification of triggered autoimmune diseases included cutaneous (n=7140), digestive (n=2323), endocrine (n=1701), pulmonary (n=1683), systemic/rheumatic (n=1230), neurological (n=1172), ocular (n=349), cardiac (n=322), haematological (n=106) and renal (n=96) diseases. The most frequently reported induced individual autoimmune diseases were psoriasis (n=6401), enterocolitis (n=1947), interstitial lung diseases (n=1680), thyroiditis (n=1076), hypophysitis (n=492), demyelinating CNS diseases (n=452), peripheral neuropathies (n=431), lupus (n=371), vasculitis (n=339), uveitis (n=298), vitiligo (n=256) and sarcoidosis (n=185).

Conclusions: The number and diversity of induced autoimmune disorders is increasing exponentially in parallel with the increased use of biological therapies in neoplastic diseases, which are currently representing 40% of reported cases. Management of these biologic-induced autoimmune diseases will be an increasing multidisciplinary clinical challenge in the daily practice in the next years.

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THU0666 COSTS ASSOCIATED WITH SWITCHING SUBCUTANEOUS TUMOUR NECROSIS FACTOR- α INHIBITOR IN THE TREATMENT OF IMMUNE-MEDIATED RHEUMATIC DISEASE

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Background: Few studies have investigated the costs associated with switching subcutaneous tumour necrosis factor- α inhibitor (SC-TNFi) in the treatment of immune-mediated rheumatic disease (IMRD; rheumatoid arthritis, ankylosing spondylitis, and psoriatic arthritis),¹⁻² and to our knowledge no studies have been performed in a European setting.

Objectives: The objective of this retrospective observational study was to explore costs of health care resource utilisation (HCRU) associated with switching SC-TNFi in patients with IMRD in Sweden.

Methods: Using data from Swedish Health Data Registers, adult, treatment naïve IMRD patients filling prescriptions between May 1st 2010 and December 31st 2015 for any of the currently available SC-TNFi (adalimumab, etanercept, certolizumab, and golimumab) were included. Prescriber specialty and department were used to exclude patients with SC-TNFi treatment unrelated to IMRD. A switch was defined as a filled prescription for a subsequent SC-TNFi within 60 days of first line discontinuation. HCRU, including non-DMARD medication, inpatient and specialised outpatient care, was captured 12 months pre- and post-treatment initiation. Eligible patients had at least 12 months follow-up, and were either persistent throughout or switched treatment during the follow-up period. The analysis was performed on a propensity score matched (PSM) cohort.

Figure 1. Total Cost of Health Care Resource Utilization

Abstract THU0666 – Figure 1 Total. cost of health care resource utilisation

Results: In total, 6213 eligible patients were identified, of which 5092 were persistent with their index therapy throughout the follow-up period while 1120 patients switched SC-TNFi. The PSM cohort was derived as “Persistent” vs. “Switched” with a total of 1120 matched pairs. Patients switching therapy had higher total

HCRU costs during the baseline period and maintained their average cost during the follow-up period (figure 1), whereas persistent patients decreased their average costs from the baseline period to the follow-up period. The average yearly cost during baseline and follow-up was USD 4,512 vs USD 4,690 for patients switching SC-TNFi, and USD 3,630 vs USD 2,662 for persistent patients. This corresponds to a difference in difference of USD 1,146 (p<0.001).

Conclusions: Similar to previous findings,³⁻⁴ patients switching maintained their higher costs, while persistent patients decreased their costs from baseline to the follow-up period. This further highlights the notion that persistence may not only serve as a marker for drug effectiveness, safety, and treatment satisfaction, but also for reduced HCRU and costs.

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THU0667 DISEASE, WORK AND PERSONAL RELATED FACTORS ASSOCIATED WITH PRESENTEEISM IN PATIENTS WITH RHEUMATOID ARTHRITIS: RESULTS FROM THE NATIONAL RHEUMATOID ARTHRITIS SOCIETY SURVEY (NRAS)

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Background: At-work productivity loss (i.e. presenteeism) is a major problem for patients with rheumatoid arthritis (RA) and employers and could be a marker of long-term absenteeism. To develop interventions to prevent presenteeism, a better understanding of which factors are associated with presenteeism is needed.

Objectives: To assess the association between disease and work related factors with presenteeism.

Methods: A large survey about employment amongst patients with RA was conducted in the UK using an online platform and inviting NRAS members and non-members to participate. Patients completed the multi-item Workplace Activity Limitation Scale (WALS; range 0–36 worst score), a measure of presenteeism. Other job related questions included: occupation (NS-SEC coding), job demand questions, help from colleagues (categorised into: always/often, sometimes, rarely/never) and a patient acceptable state questionnaire about work (PASS). Patients also completed the disease specific RAID questionnaire (score 0–10=worst score). Univariable and multivariable linear regression analyses were performed to assess the association between the disease and job related factors and presenteeism, adjusting for age and gender.

Results: 891 respondents were in paid work at the time of the survey (51.5% working for others, 33.1% self-employed and 15.4% on temporary sick leave). The majority of participants were women (91.5%) and 4.9% were aged 16–30, 69.2% 31–54% and 25.8% aged 55–74 years. Over half (51.5%) had a higher managerial, administrative or professional occupations, 33.1% an intermediate occupation, and 15.4% a routine/manual occupation. Mean (SD) RAID score was 5.2 (2.2). 58.2% rated their current job performance somewhat/much worse than before the onset of their arthritis. In univariable regression analyses greater disease activity, less control, lower support from colleagues and being in a unacceptable disease state (PASS) were associated with higher levels of presenteeism. In multivariable analysis, disease activity, ability to influence work and a unacceptable disease state remained statistically significantly associated with presenteeism.