Figure 1. Search strategy 1 and 2 according to the PICOT framework.

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AB1178 AN AUDIT OF ORIGINATOR ADALIMUMAB TO BIOSIMILAR SWITCH IN TWO HOSPITALS

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Background: Biological drugs have revolutionized the treatment of immune-mediated inflammatory diseases (IMIDs). Current guidelines reserve these drugs for patients with severe refractory disease.

Biologic drugs are expensive, but as they reach patent expiry, the introduction of lower-cost biosimilars reduces their impact on health care budgets. It is estimated that NHS England could save £300 million by 2021 following the recent launch of adalimumab biosimilars [1]. As part of this process, there has been a mandatory switch of originator adalimumab to biosimilar adalimumab throughout the U.K.

Objectives: To evaluate the impact of the switch to biosimilar adalimumab in individuals with inflammatory arthritis at two NHS trusts in the East of England and calculate the proportion and reasons for switch back to originator adalimumab or a second biosimilar at 12 weeks.

Methods: Both hospitals ran dedicated 'switch' clinics. All patient records were reviewed retrospectively.

Results: 855 patients with different IMID switched from originator to biosimilar over 13 months. At 12 weeks, 730 patients (85%) maintained the switch, 71 patients (8.7%) switched back to the originator, and 54 patients (6.3%) switched to other biosimilars of the same drug.

Table 1. Primary outcome analysis of switching from originator to adalimumab biosimilar

Diagnosis	Total patient switched from originator	Average duration (year) of use of originator before bio switch (for patients continue using bio switch)	Total patients continuing (At 12 weeks)	Average duration (year) of use of originator before bio switch (for patients switched back to originator)	Total patients switched back to originator or other biosimilar
Rheumatoid Arthritis	356	7.9	314 (88%)	4.9	42 (12%)
Axial Spondyloarthritis	260	6.4	213 (82%)	4.5	47 (18%)
Psoriatic Arthritis	218	5.9	187 (86%)	2.9	31 (14%)
Juvenile Arthritis	16	3.7	14 (88%)	4.5	2 (12%)
Others	5	2.2	2 (40%)	0.8	3 (60%)
Total	855	7.0	730 (85%)	4.2	125 (15%)

Table 2. Reasons for back to originator or another biosimilar

Reasons for back to originator or another biosimilar			
Number back for Intolerance		Number back for Inefficacy	
Painful injection	69	BASDAI/Spinal Pain	13
Pain/Others	19	TJC, SJC, VAS	4
Rash/Allergic reaction	5	DAS	3
Headache	5	PsARC	2
Nausea	4	No Detail	1
Total	102	Total	23
%	82%	%	18%

Conclusion: Switching to a biosimilar was successful in the vast majority of patients and is associated with significant saving. The list prices for originator Adalimumab is £9,155/person/year and £8,238/person/year for biosimilar Adalimumab respectively [2]. By switching we will save approximately £719,402 per annum (9.2% cost reduction).

References:

- [1] NHS England. NHS set to save record £300 million on the NHS's highest drug spend 2018 [cited 2018 November 30]. <https://www.england.nhs.uk/2018/11/nhs-set-to-save-record-300-million-on-the-nhss-highest-drug-spend/>
- [2] <https://bnf.nice.org.uk/medicinal-forms/adalimumab.html>

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AB1179 EMERGENCY DEPARTMENT LENGTH OF STAY FOR PATIENTS WITH ACUTE GOUT

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Background: Emergency department (ED) visits for acute gout increased by approximately 20% between 2006 and 2014 in the United States. (1) Reducing ED length of stay (LOS) can help improve health outcomes, and reduce ED crowding and cost of care for patients with gout.

Objectives: The aim of our study was to assess ED LOS and to identify factors associated with prolonged ED LOS in patients with acute gout.

Methods: In this retrospective analysis, we included the first ED visit of adult patients (>18

years) with acute gout who presented to the 3 EDs affiliated with Lifespan Health Systems, the largest healthcare provider in Rhode Island. Our study period was 3/30/2015 to 9/30/2017.

We calculated ED LOS as the time spent by patients in the ED until they were discharged. Patients presenting to the ED and subsequently admitted to the hospital were excluded given the differential effect of systems factors in these patients. We assessed the following factors' association with being in the upper quartile of ED LOS: (a) Patient factors – demographics, comorbidities and clinical presentation of gout (number of joints involved, severity as gauged by an ED triage nurse on a scale of 1 to 5; 1 being the worst) and (b) systems factors – time of day, day of the week, and time of year at presentation to the ED, teaching versus non-teaching hospital setting, and performing an arthrocentesis. We performed univariate and multivariable analyses to identify factors associated with prolonged ED LOS in patients with acute gout.

Results: A total of 355 patients (mean age 56.6 ± 16.03 years, 81.3% males) were included. The median ED LOS was 2.65 hours (1.75, 4.3 hours). A quarter of the patients spent more than 4.3 hours in the ED; the national average across all medical illnesses being 3.7 hours (2). In the univariate analysis, older age (> 65 years), comorbidities (hypertension, congestive heart failure), worse ED severity score, procedural delays, and teaching hospital setting were associated with being in the upper quartile of ED LOS. In a multivariable analysis, age >65 years, procedural delays, and worse ED acuity score continued to be associated with longer ED LOS.

Conclusion: In our study settings, patients with acute gout spent a longer time in the ED than the national median of 120-150 minutes. (2) We noted that older age and higher acuity score in addition to procedural delays led to longer length of stay in the ED. The results of our study should guide future interventions to reduce ED LOS for patients with acute gout.