Healthcare resource utilisation and associated costs in patients with eosinophilic granulomatosis with polyangiitis (EGPA) in England: a retrospective observational cohort study

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Table S1. Patient selection process

	N (%)
All patients in the database	50,433,854
With an acceptable patient's data quality flag	41,199,168
All unique patients in the database[a]	40,781,058
Contributing at least one day within study period	27,256,823
All patients in the database with an EGPA diagnosis code	2374
All unique patients in the database with an EGPA diagnosis code[a]	2349 (100.0)
Exclusion criteria (applied in a cascade manner)[b]	
With an acceptable patient's data-quality flag[a]	2045 (87.1)
Eligible for linkage with HES-APC, HES-Outpatient, HES-A&E and ONS	1980 (84.3)
With an EGPA diagnosed in the study period	1532 (65.2)
Contributing at least 1 day in the CPRD database after index date[c]	823 (35.0)
Without exclusion diagnosis[d] after EGPA diagnosis	729 (31.0)
More than 12 months look-back period before and inclusive of index date	670 (28.5)
Prevalent cohort	670 (28.5)
Exclusion criteria	
First record of EGPA diagnosis before 2006	184 (7.8)
Incident cohort	486 (20.7)

[a]GPs considered as duplicated by CPRD were excluded; [b]Inclusions applied in a cascade manner; [c]Index date must be included in the CPRD validated period; [d]Wegener's granulomatosis or GPA, MPA, polyarteritis nodosa, Takayasu's arteritis and giant cell arteritis
A&E, Accident and Emergency; **APC,** admitted patient care; **CPRD,** Clinical Practice Research Datalink; **EGPA,** eosinophilic granulomatosis with polyangiitis; **GP,** general practitioner; **GPA,** granulomatosis with polyangiitis; **HES,** Hospital Episodes Statistics; **MPA,** microscopic polyangiitis; **ONS,** Office for National Statistics

Table S2. Baseline demographics, clinical characteristics, year of ID and follow-up duration

Baseline demographics and clinical characteristics	Incident EGPA cohort (N=486)
Age at ID, years, mean (SD)	57.9 (15.2)
Age at ID, years, median (range)	60.0 (12.0–91.0)
Age ≥65 years at ID, n (%)	176 (36.2)
Female, n (%)	244 (50.2)
Follow-up duration from ID, years, mean (SD)	5.4 (3.7)
Follow-up duration from ID, years, median (range)	4.8 (0.0–14.0)
FFS at ID, n (%)	
1996 version	
0	371 (76.3)
1	99 (20.4)
2+	16 (3.3)
2009 version	
0	127 (26.1)
1	217 (44.7)
2+	142 (29.2)
Ethnicity, n (%)	
White	417 (88.3)
Asian	31 (6.6)
Black	17 (3.6)
Mixed/other[a]	7 (1.5)
Missing	14 (2.9)
Social deprivation (IMD score), n (%)	
Quintile 1 (least deprived)	125 (25.7)
Quintile 2	108 (22.2)
Quintile 3	91 (18.7)
Quintile 4	83 (17.1)
Quintile 5 (most deprived)	79 (16.3)
Geographical region, n (%)	
North East	13 (2.7)
North West	101 (20.8)
Yorkshire and The Humber	14 (2.9)
East Midlands	7 (1.4)
West Midlands	78 (16.0)
East of England	34 (7.0)
London	83 (17.1)
South East	105 (21.6)
South West	51 (10.5)
Year of ID, n (%)	
2006	33 (6.8)
2007	39 (8.0)
2008	30 (6.2)
2009	32 (6.6)
2010	34 (7.0)
2011	27 (5.6)
2012	42 (8.6)
2013	51 (10.5)
2014	48 (9.9)
2015	39 (8.0)
2016	36 (7.4)
2017	42 (8.6)
2018	31 (6.4)
2019[b]	<5 (<1.0)

[a]The mixed ethnicity group was combined with the other ethnicity group owing to small numbers; [b]Follow-up ended on 28 February 2020, but recruitment ended on 28 February 2019

EGPA, eosinophilic granulomatosis with polyangiitis; **FFS,** Five Factor Score; **ID,** index date; **IMD,** Index of Multiple Deprivation; **SD,** standard deviation

Table S3. FFS at ID

Score/components	Incident EGPA cohort (N=486)
FFS (1996 version), n (%)	
0	371 (76.3)
1	99 (20.4)
2+	16 (3.3)
Components, n (%)	
Proteinuria	48 (9.9)
Severe GI involvement	30 (6.2)
CNS involvement	22 (4.5)
Creatininaemia peak >140 µmol/L	20 (4.1)
Cardiomyopathy	14 (2.9)

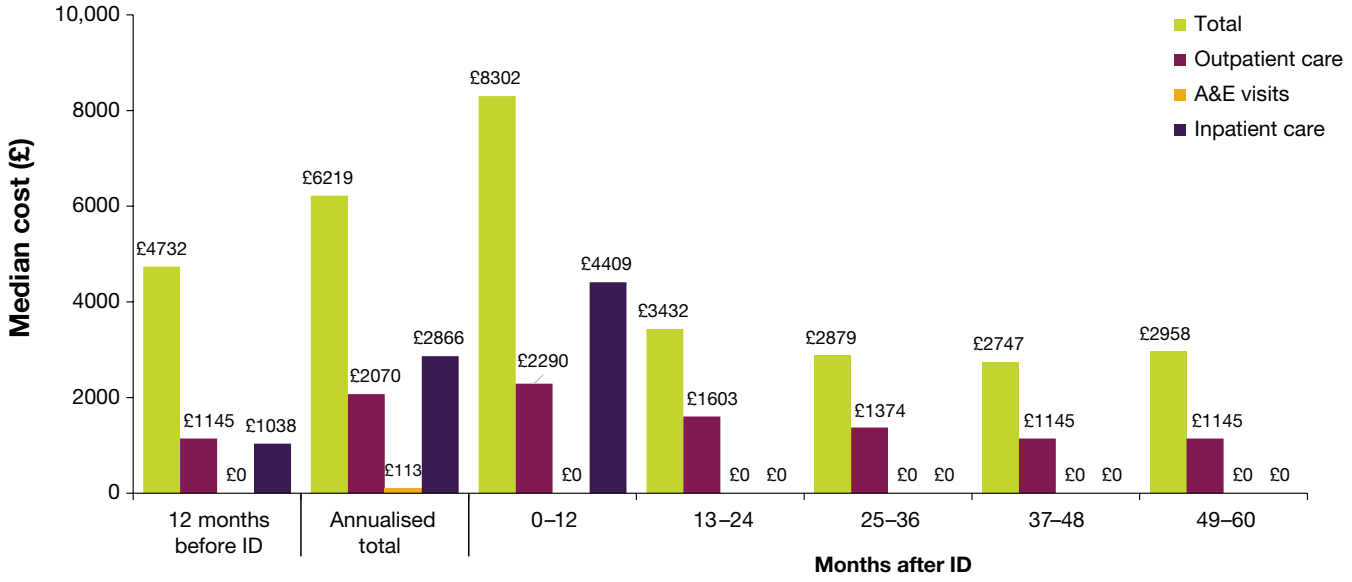
CNS, central nervous system; **EGPA,** eosinophilic granulomatosis with polyangiitis; **FFS,** Five Factor Score; **GI,** gastrointestinal; **ID,** index date

Table S4. Total follow-up in person-years[a]

Year of ID/sex	Incident EGPA cases, n	Total follow-up, person-years
2006	**33**	**11,147,115.5**
Male	18	5,607,094.8
Female	15	5,540,020.8
2007	**39**	**11,352,392.3**
Male	20	5,706,523.6
Female	19	5,645,868.7
2008	**30**	**11,551,818.3**
Male	9	5,802,606.9
Female	21	5,749,211.4
2009	**32**	**11,675,705.7**
Male	18	5,861,061.6
Female	14	5,814,644.1
2010	**34**	**11,840,840.6**
Male	20	5,943,162.0
Female	14	5,897,678.6
2011	**27**	**11,991,690.3**
Male	17	6,008,680.6
Female	10	5,983,009.7
2012	**42**	**12,207,961.7**
Male	17	6,110,847.8
Female	25	6,097,113.9
2013	**51**	**12,166,242.3**
Male	31	6,085,585.3
Female	20	6,080,657.0
2014	**48**	**12,266,341.7**
Male	18	6,143,777.9
Female	30	6,122,563.8
2015	**39**	**12,503,046.9**
Male	19	6,262,472.7
Female	20	6,240,574.2
2016	**36**	**12,801,523.8**
Male	17	6,412,311.8
Female	19	6,389,212.0
2017	**42**	**13,047,546.0**
Male	24	6,538,628.6
Female	18	6,508,917.4
2018	**31**	**13,287,831.8**
Male	14	6,663,096.8
Female	17	6,624,735.1
2019	**<5**	**2,159,652.9**
Male	0	1,082,844.5
Female	<5	1,076,808.3

[a]Over the total study period (2006–2019), there were 486 incident EGPA cases (male, n=242; female, n=244). Total follow-up for all patients was 159,999,709.8 person-years; for males and females, respectively, it was 80,228,694.9 and 79,771,014.9 person-years. Follow-up ended up on 28 February 2020 (recruitment having ended on 28 February 2019)
EGPA, eosinophilic granulomatosis with polyangiitis; **ID,** index date

Figure S1. Annual all-cause costs



Patients with data, n =	486	486	486	436	392	327	283

A&E, Accident and Emergency; **ID**, index date