Sickle cell disease (SCD) is a genetic disease impacting ∼300,000 newborns annually, worldwide. SCD main treatment for vaso-occlusive crises prevention is hydroxycarbamide (HC). Currently, allogenic stem cell transplantation (HSCT) is the only curative treatment, but only few patients are eligible. French real-life data on SCD are scarce and its public health impact seems underestimated.

Objectives: To describe SCD epidemiology and economic burden using data from the French échantillon généraliste des bénéficiaires (EGB).

**INTRODUCTION**

EGB population N=732,164

SCD population 2011-2018 n=318

SCD subgroup 2016-2018 n=153 (2%)

SCD subgroup ≥6 months follow-up n=151 Mean follow-up (SD): 30.9 (8.8) months

**METHODS**

Observational, longitudinal, retrospective, real-world study based on data from EG.

**Epidemiology**

Patients with SCD aged ≥12 years between 2011 and 2018. Patients with sickle-cell trait were excluded.

**Economic burden**

Subgroup of patients between 2016 and 2018

**Follow-up** ≥6 months and up to 3 years after index date

**Index date** January 1° 2016 or first date among hospitalization, Long duration disease (LDD) or SCD-related treatment

**Extrapolation**

To the overall French population based on demographic data from French national statistics institute (INSEE).

**RESULTS**

Almost 20,000 patients with SCD aged ≥12 years in 2018, constantly increasing by ∼10% each year since 2011.

**DATA**

Echantillon Généraliste des Bénéficiaires (EGB)

1/97th representative sample of French population in terms of age, gender and geographical distribution

EGB gathers data from more than 700,000 individuals covered by a health insurance scheme

**CODES**

Algorithms and codes for disease identification

SCD: ≥1 hospitalization or LDD* with ICD-10 code D57 Sickle-cell disorders and/or ≥1 dispensation of HC

*LDD is an administrative status for chronic disease granting full coverage

Sickle-cell trait: ICD-10 code D57.3 Sickle-cell trait

**CODES**

Almost 20,000 patients with SCD aged ≥12 years in 2018, constantly increasing by ∼10% each year since 2011.

**CONTROLS**

For economic burden assessment, SCD patients were matched to controls from general population using a 1:3 ratio:

- Matching variables: age, gender, CMUC status and geographical region of residence
- Control censoring: controls were censored at the time of patient death if applicable

**CONCLUSION**

When extrapolated to the expected SCD population in France in 2018 (n=19,502), mean annual overcost of SCD patients aged ≥12 years is estimated to be around €146,000,000 when compared to general population.