

# Exploring differences in asthma disease severity and pathways: variation by ethnicity and socioeconomic status

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Study

Planned

## Administrative details

### PURI

<https://redirect.ema.europa.eu/resource/32483>

### EU PAS number

EUPAS32482

### Study ID

32483

### DARWIN EU® study

No

### Study countries

☐ United Kingdom

## Study description

This is a retrospective cohort study using data from English general practices registered with the OPCRd. The specific aims are to:

- Explore differences in asthma severity, asthma control and asthma phenotype by ethnic and socioeconomic groups
- Explore patterns of medication usage and healthcare utilisation (scheduled and unscheduled) for asthma in different ethnic and socioeconomic groups
- To identify determinants of asthma severity in different ethnic and socioeconomic groups
- Investigate disparities in referral patterns for patients from different ethnic and socioeconomic groups

tnicity will be identified from GP ad/or HES records. Socioeconomic Status will be measured using Index of Multiple Deprivation. Asthma severity (assessed using medications), lung function, blood eosinophils, medication adherence, healthcare utilisation and specialist referral will be ascertained from GP records. Descriptive statistics will be calculated for the entire cohort and for each ethnic and socioeconomic group separately. Multivariable analysis accounting for differences in demographic and lifestyle factors (e.g. BMI, Smoking) will be conducted using appropriate regression models.

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## Study status

Planned

# Research institutions and networks

## Institutions

**Queen's University Belfast**

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## Contact details

### Study institution contact

Busby John

Study contact

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### Primary lead investigator

Busby John

Primary lead investigator

## Study timelines

### Date when funding contract was signed

Planned: 28/11/2019

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### Study start date

Planned: 06/01/2020

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### Date of final study report

Planned: 01/07/2020

## Sources of funding

- Other

## More details on funding

No external funding

## Regulatory

**Was the study required by a regulatory body?**

No

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**Is the study required by a Risk Management Plan (RMP)?**

Not applicable

## Methodological aspects

### Study type

### Study type list

**Study type:**

Non-interventional study

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**Scope of the study:**

Disease epidemiology

**Main study objective:**

- Explore differences in asthma severity, control and phenotype by ethnic and socioeconomic groups
- Explore patterns of medication usage and healthcare

utilisation in different ethnic and socioeconomic groups• Identify determinants of asthma severity in different ethnic and socioeconomic groups• Identify disparities in referrals for patients from different ethnic and socioeconomic groups

## Study Design

### **Non-interventional study design**

Cohort

## Study drug and medical condition

### **Medical condition to be studied**

Asthma

## Population studied

### **Age groups**

Adults (18 to < 46 years)

Adults (46 to < 65 years)

Adults (65 to < 75 years)

Adults (75 to < 85 years)

Adults (85 years and over)

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### **Estimated number of subjects**

100000

## Study design details

## Outcomes

Asthma severity will be ascertained using medication prescription data. Patients will be categorised according to the treatment steps described by GINA, Lung function measurements, Blood eosinophil counts, Hospital admissions, A&E attendances, GP consultations, Asthma exacerbations, Maintenance medication adherence, Time to treatment escalation, Time to specialist referral

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## Data analysis plan

**Descriptive statistics:** Descriptive statistics will be calculated for the entire cohort and separately for each ethnic and socioeconomic group. **Severity prevalence:** appropriate 95% confidence intervals calculated using the multinomial distribution. **Multivariable analysis** will be conducted using ordinal logistic regression. **Care pathways:** The number of hospital admissions, A&E attendances, GP consultations and asthma exacerbations will be analysed using Poisson regression. Lung function measurements, blood eosinophil counts and the prescription possession ratio will be analysed using linear regression. Patients who have their treatment escalated following a loss of control will be investigated using logistic regression. The time between eligibility for specialist referral and attendance will be analysed using Cox regression. Unadjusted analyses and adjusted analysis (accounting for difference in demographics, lifestyle factors etc.) will be presented

## Data management

## Data sources

**Data source(s)**

Optimum Patient Care Research Database

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**Data source(s), other**

Optimum Patient Care Research Database (OPCRD)

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**Data sources (types)**

[Electronic healthcare records \(EHR\)](#)

## Use of a Common Data Model (CDM)

**CDM mapping**

No

## Data quality specifications

**Check conformance**

Unknown

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**Check completeness**

Unknown

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**Check stability**

Unknown

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**Check logical consistency**

Unknown

## Data characterisation

**Data characterisation conducted**

No