Optimum Patient Care Research Database

First published: 01/02/2024

Last updated: 23/05/2025

Data source   Human   Other   Primary care medical records

Administrative details

Administrative details

Data source ID

11192

Data source acronym

OPCRD

Data holder

Optimum Patient Care (OPC)

Data source type

Other

Primary care medical records

Data source type, other

Patient reported outcomes (questionnaires)

Main financial support

Funding by own institution

Funding from industry or contract research

Care setting

Primary care – GP, community pharmacist level

Data source qualification

If the data source has successfully undergone a formal qualification process (e.g., from the EMA, ISO or other certifications), this should be described.

Yes

Description of the qualification

ISO27001,9001; EHDEN OMOP

Data source website

https://www.opcrd.co.uk

Contact details

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Data source regions and languages

Data source countries

United Kingdom

United Kingdom (Northern Ireland)

Data source languages

English

Data source establishment

Data source established

15/06/2010

Data source time span

First collection: 13/02/2008

The date when data started to be collected or extracted.

Publications

Data source publications

Defining clinical subtypes of adult asthma using electronic health records: Analysis of a large UK primary care database with external validation

Ethnic Differences in Severe Asthma Clinical Care and Outcomes: An Analysis of United Kingdom Primary and Specialist Care

Impact of COVID-19 pandemic on asthma exacerbations: Retrospective cohort study of over 500,000 patients in a national English primary care database

Observational UK cohort study to describe intermittent oral corticosteroid prescribing patterns and their association with adverse outcomes in asthma

Data-Resource Profile: United Kingdom Optimum Patient Care Research Database

Studies

List of studies that have been conducted using the data source

Underuse of beta-blockers in patients with heart failure and COPD

Real life effectiveness and cost impact evaluation of fixed dose combination fluticasone propionate/formoterol (Flutiform®) compared to fluticasone propionate/salmeterol (Seretide®) (eFFectiveness)

Inhaled Corticosteroid and Real Life unlicensed Spacer Use (stage 1) (ICARUS 1)

Incidence of oral thrush in COPD patients prescribed ICS as part of ICS/LABA therapy

Benefits of high dose ICS in patients with asthma and high blood eosinophil counts

Real-life effectiveness evaluation of budesonide/formoterol (BF) Spiromax for the management of asthma and COPD

ICARUS: Inhaled Corticosteroid And Real life Unlicensed Spacer use – stage 2 (ICARUS 2)

Burden of disease in patients with COPD and high blood eosinophil counts (High eosinophils and COPD)

Training requirements to master inhaler devices available in real-life clinical practice (TMID)

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

Effectiveness of triple therapy vs. dual bronchodilation in COPD (Effectiveness of triple therapy in COPD)

Decline In lung-function Among Patients with chronic obstructive Lung disease On maintenance therapy (DIAPLO)

Real world glycemic effectiveness of linagliptin (Tradjenta®) among type 2 diabetes mellitus adults by age and renal function.

Exogenous sex steroid hormones and asthma in females: a population-based retrospective cohort study using primary care data

Asthma and Type 2 Comorbidities - Real-life Characterisation of Patients with Active Asthma and Type 2 Asthma Comorbidities

Investigating the possible role of BLood eosinophil counts in guiding ANti-inflammatory treatment of COPD exAcerbations (BLANCA)

The role of adherence to inhaled corticosteroids in the relationship between blood eosinophilia and asthma control

Asthma management in France and the United Kingdom

Studying the value of fractional exhaled Nitric Oxide and blood eosinophils as biomarkers in predicting which patients will suffer from more frequent asthma exacerbations, and evaluating the subsequent healthcare resource utilisation (Assessing RIsk of exAcerbation (ARIA))

Evaluation of the undertreatment and disease outcomes for patients with coexisting Heart Failure and Chronic Obstructive Pulmonary Disease

Historical matched-cohort study assessing whether the use of inhaled corticosteroids shortens time to first diagnosis or accelerates the progression of side effects compared to non-ICS therapies in patients with Chronic Obstructive Pulmonary Disease. (ICS use in COPD patients and risk of side effects)

Epidemiological trends of Alpha1-antitrypsin deficiency (AATD) in the UK: prevalence and incidence from 1990 to 2015

Use of degarelix among patients with prostate cancer in daily practice

Evaluation of Current Implementation of BTS/NICE Clinical Quality Standards In Community Acquired Pneumonia (CAP): A UK retrospective follow-up study

IDENTIFYING OPPORTUNITIES FOR EARLIER DIAGNOSIS OF IDIOPATHIC PULMONARY FIBROSIS IN ROUTINE CARE IN THE UK: A RETROSPECTIVE CLINICAL COHORT STUDY (OPPORTUNITIES FOR EARLIER IPF DIAGNOSIS)

Characterising Patient Pathways to the Diagnosis of Idiopathic Pulmonary Fibrosis: Real World Data Study

Burden of cough in primary care

Effectiveness of Dymista® in patients with allergic rhinitis and asthma

Impact of obstructive sleep apnea diagnosis on healthcare resource utilization in patients with obstructive lung disease

Validation of real-life asthma research endpoints (Real-life asthma endpoint validation)

COMPARABILITY OF POPULATION DEFINITIONS WITHIN & BETWEEN GLOBAL DATABASES – DEVELOPING TOOLS FOR OBSERVATIONAL RESEARCH (ACO Population Definitions)

A prediction model for future exacerbation risk in children

Longitudinal systemic corticosteroid utilization in the UK, 1990-2018

Eosinophilic asthma phenotypes and associated clinical outcomes

Effectiveness of Fostair® (ICS/LABA) vs. dual bronchodilation (LABA/LAMA) in COPD (FELICITI)

The Impact of Exacerbation Burden on Lung Function Trajectory in a Broad Asthma Population and Severe Asthma Population (Exacerbation and lung

Development, validation, utility and economic assessment of a flexible, individualized risk prediction e-tool for exacerbation in patients with severe asthma (Severe asthma risk prediction)

Drug utilisation and incident rates of adverse events in children with sialorrhoea who are treated with glycopyrronium (Glyco Sialorrhoea)

Impact of COVID-19 on Asthma Exacerbations (Asthma Attacks During COVID-19)

Predicting Asthma Attacks in Primary Care with Machine Learning

Development of a predictive model algorithm to identify patients with hypophosphatasia, using Optimum Patient Care Record Database in United Kingdom

An observational cohort study to describe intermittent OCS utilisation and its association with adverse outcomes and healthcare resource use and costs in asthma using the OPCRD and CPRD databases. (The burden of intermittent OCS use in asthma)

Twenty years of COPD primary care: Patterns of management of high-risk COPD and opportunities for optimising care in the United Kingdom 2000-2019: Study Protocol (CONQUEST UK Opportunity Analysis)

A retrospective observational study on characteristics, treatment patterns, and healthcare resource use of patients with xerostomia in primary care settings using Optimum Patient Care Research Database in United Kingdom.

Characteristics, Treatment and Healthcare Resource Utilisation in Patients diagnosed with Neuropathic or Chronic Pain Using Primary Care Electronic Health Records in the United Kingdom (UK)

Determining the prevalence of severe asthma in children in UK primary care

A retrospective observational study on effectiveness of influenza vaccine Supemtek® compared to other vaccines in adults aged 18 years and above in the United Kingdom – a feasibility study

Closing the loop for Fabry disease and Pompe disease in the UK (RARE)

Real-world use of Breztri/Trixeo for the management of COPD in a UK primary care population

The UK nationwide cardiorespiratory impact of the COVID-19 pandemic

Cardiopulmonary risk model for patients with chronic obstructive pulmonary disease

Exacerbation history in COPD patients prior to diagnosis and subsequent treatment and outcomes

Redefining severe asthma to high-risk asthma: Analysis of real-world data to investigate patients who are at high risk of exacerbations, worsening of symptoms, and a loss of asthma control over time.

Patient characteristics and treatment pathways in patients with COPD initiated on ICS/LABA/LAMA and LABA/LAMA treatment

Understanding high-risk COPD: Analysis of real-world data to investigate characteristics and outcomes in patients with high-risk COPD. (OPRI 2306: High Risk COPD)

AI-powered stratification of autoimmune diseases

Breathlessness Rapid Evaluation and THErapy (BREATHE)

Depicting real-life treatment journeys for patients affected with an immune-inflammatory condition and treated with methotrexate

OPCRD ADEPT application Study Protocol

Disease trajectory and treatment escalation in severe asthma: A retrospective analysis of data from the Optimum Patient Care Research Database (OPCRD)

The development and evaluation of prognostic models to predict biologic eligibility in asthma

Validity of using prescription records to identify patient comorbidities

Assessing the impact of earlier access to biologics on remission and natural course of asthma (GLEAM)

Assessing the cost-effectiveness of Smartinhaler technology in primary care: a health economic decision Model in school-Aged children (SMART-MOD)

FLAIR: Fostair vs Symbicort: CLinical effectiveness of anti-inflammatory reliever therapies (AIR): a non-inferiority study

Phenotyping Asthma Exacerbations in primary care: an electronic medical record study (PHASE)

Prevalence and healthcare utilization of eosinophilic chronic obstructive pulmonary disease in the UK – an observational data linkage study

Lifetime prevalence of Type 2 comorbidities in patients with COPD: especially those with higher eosinophilic counts

Data elements collected

The data source contains the following information

Disease information

Does the data source collect information with a focus on a specific disease? This might be a patient registry or other similar initiatives.

Yes

Disease details

Anxiety

Depression

Eczema

Asthma

Rhinitis

Lower respiratory tract infection

Chronic kidney disease

Disease details (other)

General Cardiovascular Disease, Ischaemic Heart Disease, GERD, Chronic Kidney Disease, COPD

Rare diseases

Are rare diseases captured? In the European Union a rare disease is one that affects no more than 5 people in 10,000.

Yes

Pregnancy and/or neonates

Does the data source collect information on pregnant women and/or neonatal subpopulation (under 28 days of age)?

Yes

Hospital admission and/or discharge

No

ICU admission

Is information on intensive care unit admission available?

No

Cause of death

Captured

Cause of death vocabulary

Read

SNOMED

Prescriptions of medicines

Captured

Prescriptions vocabulary

other

RxNorm

Prescriptions vocabulary, other

SNOMED

Dispensing of medicines

Captured

Dispensing vocabulary

other

RxNorm

Dispensing vocabulary, other

SNOMED

Advanced therapy medicinal products (ATMP)

Is information on advanced therapy medicinal products included? A medicinal product for human use that is either a gene therapy medicinal product, a somatic cell therapy product or a tissue engineered products as defined in Regulation (EC) No 1394/2007 [Reg (EC) No 1394/2007 Art 1(1)].

Yes

Contraception

Is information on the use of any type of contraception (oral, injectable, devices etc.) available?

Yes

Indication for use

Does the data source capture information on the therapeutic indication for the use of medicinal products?

Captured

Indication vocabulary

Read

SNOMED

Medical devices

Is information on medicinal devices (e.g., pens, syringes, inhalers) available?

Yes

Administration of vaccines

Yes

Procedures

Does the data source capture information on procedures (e.g., diagnostic tests, therapeutic, surgical interventions)?

Captured

Procedures vocabulary

Read

SNOMED

Healthcare provider

Is information on the person providing healthcare (e.g., physician, pharmacist, specialist) available? The healthcare provider refers to individual health professionals or a health facility organisation licensed to provide health care diagnosis and treatment services including medication, surgery and medical devices.

Yes

Clinical measurements

Is information on clinical measurements (e.g., BMI, blood pressure, height) available?

Yes

Genetic data

Are data related to genotyping, genome sequencing available?

Not Captured

Biomarker data

Does the data source capture biomarker information? The term "biomarker" refers to a broad subcategory of medical signs (objective indications of medical state observed from outside the patient), which can be measured accurately and reproducibly. For example, haematological assays, infectious disease markers or metabolomic biomarkers.

Captured

Biomarker data vocabulary

Other

Biomarker vocabulary, other

SNOMED

Patient-reported outcomes

Is information on patient-reported outcomes (e.g., quality of life) available?

Yes

Patient-generated data

Is patient-generated information (e.g., from wearable devices) available?

Yes

Units of healthcare utilisation

Are units of healthcare utilisation (e.g., number of visits to GP per year, number of hospital days) available or can they be derived? Units of healthcare utilisation refer to the quantification of the use of services for the purpose of preventing or curing health problems.

Yes

Unique identifier for persons

Are patients uniquely identified in the data source?

Yes

Diagnostic codes

Captured

Diagnosis / medical event vocabulary

Read

SNOMED

Medicinal product information

Captured

Medicinal product information collected

Brand name

Dose

Formulation

Package size

Strength

Medicinal product vocabulary

dm+d

RxNorm

Quality of life measurements

Captured

Quality of life measurements vocabulary

other

Quality of life measurements, other

SNOMED

Lifestyle factors

Captured

Lifestyle factors

Alcohol use

Diet

Frequency of exercise

Tobacco use

Sociodemographic information

Captured

Sociodemographic information collected

Age

Country of origin

Deprivation index

Ethnicity

Gender

Health area

Marital status

Quantitative descriptors

Population Qualitative Data

Population age groups

Paediatric Population (< 18 years)

Preterm newborn infants (0 – 27 days)

Term newborn infants (0 – 27 days)

Infants and toddlers (28 days – 23 months)

Children (2 to < 12 years)

Adolescents (12 to < 18 years)

Adults (18 to < 46 years)

Adults (46 to < 65 years)

Elderly (≥ 65 years)

Adults (65 to < 75 years)

Adults (75 to < 85 years)

Adults (85 years and over)

Estimated percentage of the population covered by the data source in the catchment area

24,929,556 (unique) / 69,502,702 (total) = 35% (population size)

12,257,203 / 69,502,702 (total) = 17% (population size)

(source: https://www.worldometers.info/world-population/uk-population/)

Description of the population covered by the data source in the catchment area whose data are not collected (e.g., people who are registered only for private care)

All population at each consented practice site with an opt-out code and the population of sites not consented into the OPC network.

Family linkage

Family linkage available in the data source permanently or can be created on an ad hoc basis

Ad hoc

Population

Population size

24929556

Active population size

12257203

Population by age group

Age group	Population size	Active population size

Paediatric Population (< 18 years)	3236414	2175352
Infants and toddlers (28 days – 23 months)	178735	157253
Children (2 to < 12 years)	1786375	1226053
Adolescents (12 to < 18 years)	1271304	792046
Adults (18 to < 46 years)	8685186	4209224
Adults (46 to < 65 years)	5024328	2756841
Elderly (≥ 65 years)	6041663	2192339
Adults (65 to < 75 years)	1964030	1109556
Adults (75 to < 85 years)	1610538	773961
Adults (85 years and over)	2467095	308822

Median observation time

Median time (years) between first and last available records for unique individuals captured in the data source

31.00

Median time (years) between first and last available records for unique active individuals (alive and currently registered) capt

29.00

Data flows and management

Access and validation

Governance details

Documents or webpages that describe the overall governance of the data source and processes and procedures for data capture and management, data quality check and validation results (governing data access or utilisation for research purposes).

https://www.opcrd.optimumpatientcare.org/data-transparency

Biospecimen access

Are biospecimens available in the data source (e.g., tissue samples)?

No

Access to subject details

Can individual patients/practitioners/practices included in the data source be contacted?

Yes

Description of data collection

The process of collecting data - Secure software tools are installed at participating practices to extract and de-identify patient data from electronic health records. Patient reported data is also collected through paper and electronic patient questionnaires administered at participating practices.

Event triggering registration

Event triggering registration of a person in the data source

Practice registration

Event triggering de-registration of a person in the data source

Death

Practice deregistration

Event triggering creation of a record in the data source

patient healthcare activity: appointment, clinical procedure, prescribing, etc.

Data source linkage

Linkage

Is the data source described created by the linkage of other data sources (prelinked data source) and/or can the data source be linked to other data source on an ad-hoc basis?

Yes

Linkage description, possible linkage

Primary care data from OPCRD can be linked to other health care datasets under appropriate approvals and practice consent. Deterministic linkage can be performed using direct identifiers and also using non-identifiable information.

Linked data sources

Pre linked

Is the data source described created by the linkage of other data sources?

No

Data source, other

Hospital Episode Statistics (HES) - England (provided by NHS Digital)

Linkage strategy

Deterministic

Linkage variable

NHS number, date of birth, sex

Linkage completeness

Proof of concept completed 2022; REC and CAG approvals completed; awaiting NHS Digital approval for regular linkage.

Pre linked

Is the data source described created by the linkage of other data sources?

No

Data source, other

Patient Episode Database for Wales (PEDW) - Wales (provided by Digital Health and Care Wales)

Linkage strategy

Deterministic

Linkage variable

Pseudonymised NHS number, hashing algorithm applied

Linkage completeness

Proof of concept completed 2022; pending DHCW approvals for regular linkage

Pre linked

Is the data source described created by the linkage of other data sources?

No

Data source, other

Scottish Morbidity Records (SMR) - Scotland (provided by Public Health Scotland)

Linkage strategy

Deterministic

Linkage variable

Pseudonymised CHI number, hashing algorithm applied

Linkage completeness

Proof of concept completed 2022; pending PHS approvals for regular linkage

Pre linked

Is the data source described created by the linkage of other data sources?

No

Data source, other

UK severe and difficult to treat asthma registry

https://thorax.bmj.com/content/76/3/220

Linkage strategy

Probabilistic

Linkage variable

Age/year of birth, sex, other variables in EMR

Linkage completeness

Proof of concept completed; regular probabilistic linkage can be undertaken for UKSAR approved projects.

Data management specifications that apply for the data source

Data source refresh

Monthly

Informed consent for use of data for research

Not Required

Possibility of data validation

Can validity of the data in the data source be verified (e.g., access to original medical charts)?

Yes

Data source preservation

Are records preserved in the data source indefinitely?

Yes

Approval for publication

Is an approval needed for publishing the results of a study using the data source?

Yes

Data source last refresh

13/05/2025

Common Data Model (CDM) mapping

CDM mapping

Has the data source been converted (ETL-ed) to a common data model?

Yes

CDM Mappings

CDM name

OMOP

CDM website

https://www.ohdsi.org/Data-standardization/

Data source ETL CDM version

5.3

Data source ETL frequency

1,00 month

Data source ETL status

Completed