Integrated Primary Care Information (IPCI)

First published: 01/02/2024

Last updated: 26/11/2025

Data source | Human | Primary care medical records

Administrative details

Administrative details

Data source ID

42618

Data source acronym

IPCI

Data holder

Department of Medical Informatics - Health Data Science, Erasmus Medical Center (ErasmusMC)

Data source type

Primary care medical records

Main financial support

European public funding

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

DARWIN EU Data Partner

Data source website

https://ipci.nl

Contact details

Tineke de Ben ipci@erasmusmc.nl

Main

ipci@erasmusmc.nl

Data source regions and languages

Data source countries

Netherlands

Data source languages

Dutch

Data source establishment

Data source established

01/01/1992

Data source time span

First collection: 01/01/1992

The date when data started to be collected or extracted.

Last collection: 01/07/2025

If data collection in the data source has ceased, the date new records last entered the data source.

Publications

Data source publications

James G, Collin E, Lawrance M, Mueller A, Podhorna J, Zaremba-Pechmann L, Rijnbeek P, van der Lei J, Avillach P, Pedersen L, Ansell D, Pasqua A, Mosseveld M, Grosdidier S, Gungabissoon U, Egger P, Stewart R, Celis-Morales C, Alexander M, Novak G, Gordon MF. Treatment pathway analysis of newly diagnosed dementia patients in four electronic health record databases in Europe. Social Psychiatry and Psychiatric Epidemiology. [Article]. 2021;56(3):409-16. doi: 10.1007/s00127-020-01872-2

Berencsi K, Sami A, Ali MS, Marinier K, Deltour N, Perez-Gutthann S, Pedersen L, Rijnbeek P, Van der Lei J, Lapi F, Simonetti M, Reyes C, Sturkenboom MCJM, Prieto-Alhambra D. Impact of risk minimisation measures on the use of strontium ranelate in Europe: a multi-national cohort study in 5 EU countries by the EU-ADR Alliance. Osteoporosis International. [Article]. 2020;31(4):721-55. doi: 10.1007/s00198-019-05181-6. PubMed PMID: 31696274. Q2.

Engelkes M, de Ridder MA, Svensson E, Berencsi K, Prieto-Alhambra D, Lapi F, Giaquinto C, Picelli G, Boudiaf N, Albers FC, Cockle SM, Bradford ES, Suruki RY, Brusselle GG, Rijnbeek PR, Sturkenboom MC, Verhamme KM. Multinational cohort study of mortality in patients with asthma and severe asthma. Respiratory Medicine. [Article]. 2020;165. doi: 10.1016/j.rmed.2020.105919

Data Resource Profile: The Integrated Primary Care Information (IPCI) database, The Netherlands

Studies

List of studies that have been conducted using the data source

Risk of cardiac valve disorders associated with the use of biphosphonates (Cardiac valve disorders and biphosphonate use)

Patterns and Determinants of Use of Oral Contraceptives in the European Union (Use of OC in the EU)

Arrhythmogenic Potential of Drugs (ARITMO) project

Safety Evaluation of Adverse Reactions in Diabetes - Drug utilisation studies (SAFEGUARD)

Safety Evaluation of Adverse Reactions in Diabetes - Comparative studies (SAFEGUARD)

Testing new approaches to monitoring benefit/risk with pertussis vaccines as test case: Incidence rates of pertussis and pertussis related outcomes of whole-cell pertussis and acellular pertussis vaccines in pre-school children (benefit study on pertussis vaccination)

Identification of type 2 diabetes cases in a set of databases participating to the EMIF project

European Program of Post-Authorization Safety Studies for Protelos®/Osseor® through EU-ADR Alliance

EMIF Use Case 17 - Investigating the relationship in paediatric population between dosing of antibiotics (prescribed, dispensed or administered) and patient’s weight. (EMIF UC17)

Estimating prevalence and incidence of acute myocardial infarction in a set of heterogeneous sources of observational health data collaborating in the EMIF Platform

Utilisation disease-modifying anti-rheumatic drugs (DMARDs) used for the treatment of rheumatoid arthritis: protocol for a multi-database real-world cohort study

Hydroxychloroquine safety and potential efficacy as an antiviral prophylaxis in light of potential wide-spread use in COVID-19: a multinational, large-scale network cohort and self-controlled case series study

Multinational database cohort study to assess RMP specified safety outcomes in association with indacaterol/glycopyrronium bromide in Europe

European non-interventional post-authorization safety study related to serious cardiovascular events of myocardial infarction and stroke, and all-cause mortality for romosozumab by the EU-ADR Alliance

EUROPEAN NON-INTERVENTIONAL POST-AUTHORIZATION SAFETY STUDY RELATED TO ADHERENCE TO THE RISK MINIMIZATION MEASURES FOR ROMOSOZUMAB BY THE EU-ADR ALLIANCE

EUROPEAN NON-INTERVENTIONAL POST AUTHORIZATION SAFETY STUDY RELATED TO SERIOUS INFECTIONS FOR ROMOSOZUMAB BY THE EU ADR ALLIANCE

VALIDATION STUDY PROTOCOL (OP0007) FOR THE EUROPEAN NON-INTERVENTIONAL POST- AUTHORIZATION SAFETY STUDY RELATED TO SERIOUS CARDIOVASCULAR EVENTS OF MYOCARDIAL INFARCTION AND STROKE AND ALL-CAUSE MORTALITY FOR ROMOSOZUMAB BY THE EU-ADR ALLIANCE (OP0004) AND EUROPEAN NON-INTERVENTIONAL POST-AUTHORIZATION SAFETY STUDY RELATED TO SERIOUS INFECTIONS FOR ROMOSOZUMAB BY THE EU-ADR ALLIANCE (OP0006)

Multinational, multi-database cohort study to assess adverse cardiovascular and cerebrovascular outcomes and mortality in association with inhaled NVA237 in Europe (NVA237 PASS)

Multinational, multi-database drug utilization study of inhaled NVA237 in Europe (NVA237 DUS)

Ranitidine and other histamine H2-receptor antagonists – a drug utilisation study

Project Sc(y)lla: SARS-Cov-2 Large-scale Longitudinal Analyses on the comparative safety and effectiveness of treatments under evaluation for COVID-19 across an international observational data network

Multinational, multi-database drug utilization study of indacaterol/glycopyrronium bromide in Europe

Drug utilisation studies using data mapped to the OMOP Common Data Model: a proof of concept study assessing respiratory drug use in patients with asthma or COPD

Study of exposure and use patterns of alternatives to ranitidine-containing medicines in patients treated with ranitidine (Ranitidine)

DARWIN EU® Characterization of patients with chronic hepatitis B and C

Natural history of coagulopathy and use of anti-thrombotic agents in COVID-19 patients and persons vaccinated against SARS-CoV-2

Systemic glucocorticoids in the treatment of COVID-19 and risks of adverse outcomes in COVID-19 patients in the primary and secondary care setting (Corticosteroids in COVID19)

ASSOCIATION BETWEEN THROMBOSIS WITH THROMBOCYTOPENIA SYNDROME (TTS) OR THROMBOEMBOLIC EVENTS, AND COVID-19 VACCINES

DARWIN EU® Prevalence of rare blood cancers in Europe

DARWIN EU® Drug utilisation of valproate-containing medicinal products in women of childbearing potential

DARWIN EU® DUS of Antibiotics in the ‘Watch’ category of the WHO AWaRe classification of antibiotics for evaluation and monitoring of use

DARWIN EU® - Background rates of serious adverse events to contextualise safety assessments in clinical trials and non-interventional studies in adolescent and adult patients with severe asthma

Utilization of antidementia treatments: a large multinational-network population-based study.

DARWIN EU® Drug utilization study of prescription opioids

DARWIN EU® EHDS Use Case: Natural history of coagulopathy in COVID-19 patients and persons vaccinated against SARS-CoV-2 in the context of the OMICRON variant

DARWIN EU® Drug utilisation study of medicines with prokinetic properties in children and adults diagnosed with gastroparesis

EHDS2 Pilot Use Case: Natural history of coagulopathy in COVID-19 patients and persons vaccinated against SARS-CoV-2 during the Omicron period.

Incidence, prevalence, and characterisation of medicines with suggested drug shortages in Europe

DARWIN EU® Rates of occurrence of treatment-related intercurrent events in patients with major depressive disorder

DARWIN EU® Effectiveness of COVID-19 vaccines on severe COVID-19 and post acute outcomes of SARS-CoV-2 infection

Monitoring the effectiveness of risk minimisation in patients treated with pioglitazone-containing products

DARWIN EU® Comparing direct and indirect methods to estimate prevalence of chronic diseases using real-world data

DARWIN EU® – Frailty and polypharmacy among adults with selected cancers at the time of diagnosis

DARWIN EU® – Trends in utilisation of Attention-Deficit Hyperactivity Disorder (ADHD) Medications

DARWIN EU® - Drug Utilisation Study on GLP-1 Receptor Agonists

DARWIN EU® - Drug utilisation study on medicinal use of cannabis flos

DARWIN EU® - Background incidence rates of selected vaccine adverse events of special interest (AESIs) in Europe

DARWIN EU® - Suicidality following exposure to doxycycline

DARWIN EU® - Incidence of suicidality in patients with specific chronic skin conditions

DARWIN EU® - Azathioprine - user characteristics

DARWIN EU® - Antipsychotic prescribing in the general population in Europe: a descriptive analysis of trends and patient characteristics

DARWIN EU® - Antipsychotic prescribing in people with dementia in Europe: a descriptive analysis of trends and patient characteristics

DARWIN EU® -Drug utilisation of salbutamol products for inhalation and therapeutic alternative inhalation products

DARWIN EU® - Suicidality incidence rates in adult male patients and in patients treated with finasteride and dutasteride

DARWIN EU® - Characterising the use of JAK inhibitors in Europe: a Drug Utilisation Study

DARWIN EU® - Characterisation of exposure to acitretin and purpura and related conditions

DARWIN EU® – Incidence rates of venous thromboembolic events in patients with selected cancers

DARWIN EU® – Monitoring prescription of medicines for public health emergencies at risk of shortages

DARWIN EU® - RR1 Drug Utilisation Study of prescription opioids

DARWIN EU® – Paracetamol prescribing and paracetamol overdose in Europe: a descriptive analysis of trends and patient characteristics

DARWIN EU® - Drug Utilisation Study on Antibiotics in the ‘Watch’ category of the WHO AWaRe classification of antibiotics for evaluation and monitoring of use

DARWIN EU® - Descriptive study of tetanus immunoglobulin use and tetanus-prone wounds in Europe

DARWIN EU® - RR Childhood hypertension and sartans prescribing in children

DARWIN EU® - Feasibility of studies on early (pre-symptomatic) stages of type 1 diabetes mellitus in the DARWIN EU® network

DARWIN EU® - Characterisation of aliskiren users

DARWIN EU® - Time to onset of thromboembolic events in adults with selected types of cancer

DARWIN EU® - Treatment characterisation and post-diagnosis outcomes in Alzheimer’s disease

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.

No

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

Yes

ICU admission

Is information on intensive care unit admission available?

Yes

Cause of death

Captured

Cause of death vocabulary

Not coded (Free text)

Prescriptions of medicines

Captured

Prescriptions vocabulary

ATC

other

Prescriptions vocabulary, other

G-Standard/Z-index

Dispensing of medicines

Captured

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)].

No

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

ICPC-1

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

ICPC-1

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.

Not Captured

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?

No

Diagnostic codes

Captured

Diagnosis / medical event vocabulary

ICPC-1

Medicinal product information

Captured

Medicinal product information collected

Brand name

Dose

Package size

Route of administration

Strength

Medicinal product vocabulary

ATC

Z-index (G-standard)

Quality of life measurements

Not Captured

Lifestyle factors

Captured

Lifestyle factors

Alcohol use

Tobacco use

Sociodemographic information

Captured

Sociodemographic information collected

Age

Deprivation index

Gender

Other

Sociodemographic information other

Urbanisation

Quantitative descriptors

Population Qualitative Data

Population age groups

Paediatric Population (< 18 years)

Neonate

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)

Adult and elderly population (≥18 years)

Adults (18 to < 65 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

On 2025-07-01, The Netherlands had about 18,000,000 million citizens and in IPCI we had 1,268,681 active patients. That means the coverage is 7.05 %.

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)

GP practices included in the IPCI database are mainly located in the central part of the country, including the most
densely populated area (the ‘Randstad’) but also non-urban
areas. The IPCI database is a dynamic database in which
patients are included from their registration at the GP practice until death or leaving the practice.

Population

Population size

3291856

Active population size

1268681

Population by age group

Age group	Population size	Active population size
Paediatric Population (< 18 years)	784887	242039
Term newborn infants (0 – 27 days)	234135	767
Infants and toddlers (28 days – 23 months)	64533	21527
Children (2 to < 12 years)	308579	134891
Adolescents (12 to < 18 years)	177640	84854
Adults (18 to < 46 years)	1164072	437199
Adults (46 to < 65 years)	695379	322687
Elderly (≥ 65 years)	647518	266756
Adults (65 to < 75 years)	302940	140593
Adults (75 to < 85 years)	225629	96893
Adults (85 years and over)	118949	29270

Median observation time

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

4.50

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

6.08

Data flows and management

Access and validation

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?

No

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

Loss to follow up

Practice deregistration

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?

No

Data management specifications that apply for the data source

Data source refresh

Every 6 months

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?

No

Approval for publication

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

Yes

Data source last refresh

01/07/2025

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

5.4

Data source ETL frequency

6,00 months

Data source ETL status

Completed