

EFEMERIS

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Data source

Human

Administrative healthcare records (e.g., claims)

Other

Pharmacy dispensing records

Administrative details

Administrative details

Data source ID

46436

Data source acronym

EFEMERIS

Data holder

[University Toulouse III](#)

Data source type

Administrative healthcare records (e.g., claims)

Other

Pharmacy dispensing records

Data source type, other

Data on pregnant women, children health until 24 months and pregnancy terminations

Main financial support

National, regional, or municipal public funding

Care setting

Hospital inpatient care

Primary care – GP, community pharmacist level

Primary care – specialist level (e.g. paediatricians)

Secondary care – specialist level (ambulatory)

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.

No

Data source website

<http://www.efemeris.fr/>

Contact details

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Main

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Data source regions and languages

Data source countries

France

Data source languages

French

Data source regions

Haute-Garonne

Occitanie

Data source establishment

Data source established

15/06/2004

Data source time span

First collection: 01/07/2004

The date when data started to be collected or extracted.

Last collection: 31/12/2020

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

Publications

Data source publications

[Interest of the trajectory method for the evaluation of outcomes after in utero drug exposure: example of anxiolytics and hypnotics. Hurault-Delarue C, Chouquet C, Savy N, Lacroix I, Beau AB, Montastruc JL, Damase-Michel C. Pharmacoepidemiol Drug Saf. 2017 May;26\(5\):561-569.](#)

Antidepressants during pregnancy: a French drug utilisation study in EFEMERIS cohort. Hurault-Delarue C, Lacroix I, Bénard-Laribière A, Montastruc JL, Pariente A, Damase-Michel C. Eur Arch Psychiatry Clin Neurosci. 2018 May 26.

A contemporary description of French newborns' growth using the Efemeris cohort. Beau AB, Tauber M, Chollet C, Hurault-Delarue C, Bouilhac C, Montastruc JL, Lacroix I, Damase-Michel C. Arch Pediatr. 2017 May;24(5):424-431.

In utero drug exposure and hearing impairment in 2-year-old children A case-control study using the EFEMERIS database. Foch C, Araujo M, Weckel A, Damase-Michel C, Montastruc JL, Benevent J, Durrieu G, Lacroix I. Int J Pediatr Otorhinolaryngol. 2018 Oct;113:192-197.

What changes in prescription patterns of antiemetic medications in pregnant women in France? Hurault-Delarue C, Araujo M, Vabre C, Benevent J, Damase-Michel C, Lacroix I. Fundam Clin Pharmacol. 2021 Apr 18. doi: 10.1111/fcp.12681

Studies

List of studies that have been conducted using the data source

Safety of influenza AH1N1 pandemic vaccination during pregnancy: a comparative study using the EFEMERIS database

Pregnancy outcome in women exposed to dopamine agonists during pregnancy: a study in EFEMERIS database

Veinotonics in pregnancy: a comparative study in the EFEMERIS database

Asthma medication during pregnancy : a cohort study in EFEMERIS

How to classify women exposed to drug prescriptions during pregnancy in pharmaco-epidemiology studies? Method using treatment intensity and

individual trajectories of exposure over time

A contemporary description of French newborns' growth using the Efemeris cohort

Antidepressants during pregnancy: a French drug utilisation study in EFEMERIS cohort

Methods for controlling by indication for prescriptions: application to medications for neuropathic pain

Demonstrating solutions for studying intermittent medication exposures in diseases with episodic manifestations during pregnancy: application to medication for migraine in pregnancy

Exposure to SSRI/SNRI and depression in pregnancy and long-term childhood outcomes: the effect of modifying factors

Novel statistics to handle rare diseases and small sample sizes using Bayesian techniques: Application to Multiple Sclerosis (MS) and Systemic Lupus Erythematosus (SLE) in pregnancy

ADEPT: The utilisation of antiseizure medications in pregnant women, other women of childbearing potential, and men: a multi-database study from 7 European countries

ADEPT: feasibility of estimating the risk of adverse pregnancy, neonatal and child outcomes following either in utero ASM exposure through the mother, or peri-conceptual ASM exposure through the father

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.

No

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?

No

Cause of death

Captured

Cause of death vocabulary

ICD-10

Not coded (Free text)

Prescriptions of medicines

Not Captured

Dispensing of medicines

Captured

Dispensing vocabulary

ATC

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?

No

Indication for use

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

Not Captured

Medical devices

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

No

Administration of vaccines

Yes

Procedures

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

Not Captured

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?

No

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?

No

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.

No

Unique identifier for persons

Are patients uniquely identified in the data source?

Yes

Diagnostic codes

Captured

Diagnosis / medical event vocabulary

ICD-10

Medicinal product information

Captured

Medicinal product information collected

Active ingredient(s)

Brand name

Package size

Route of administration

Strength

Medicinal product vocabulary

ATC

Quality of life measurements

Captured

Quality of life measurements vocabulary

other

Quality of life measurements, other

FDEP

Lifestyle factors

Captured

Lifestyle factors

Alcohol use

Tobacco use

Sociodemographic information

Captured

Sociodemographic information collected

Age

Education level

Gender

Socioeconomic 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)

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

Approximately 80%. The database contains around 170,000 mother-child/foetus pairs.

Median observation time: 1 year for the mothers (3 months before pregnancy and pregnancy) , 2 years for babies

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)

Regional sub-set - Data capture is restricted to the region of Haute-Garonne (south-west France department).

Family linkage

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

Ad hoc

Population

Population size

170000

Active population size

16779

Population by age group

Age group	Population size	Active population size
Paediatric Population (< 18 years)	160051	10072
Preterm newborn infants (0 - 27 days)	2951	473
Term newborn infants (0 - 27 days)	42275	8843
Infants and toddlers (28 days - 23 months)	43799	652
Children (2 to < 12 years)	70652	85
Adolescents (12 to < 18 years)	374	19
Adults (18 to < 46 years)	119413	6696
Adults (46 to < 65 years)	368	11

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

Description of data collection

Annual collection of data from 4 sources (PMSI, CPDPN, PMI, CPAM), anonymization of data in 2 levels, cross-referencing of data between the 4 sources and data management, integration of new data into the existing database.

Event triggering registration

Event triggering registration of a person in the data source

Birth

Other

Event triggering registration of a person in the data source, other

Pregnancy outcome

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

Other

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

If the person objects to be included in the study

Event triggering creation of a record in the data source

Data of the person registered with the health insurance, effective crossing with the CPAM source

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, pre-linked

Cross-referencing of data from the 4 sources based on anonymized identifiers in 2 levels

Linkage description, possible linkage

after anonymization on name, surname and date of birth

Linked data sources

Pre linked

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

Yes

Data source, other

CPAM (Caisse primaire d'assurance maladie)

Linkage strategy

Deterministic

Linkage variable

patronymic identifier (maiden name + first name + date of birth), marital identifier (married name + first name + date of birth), delivery date

Linkage completeness

Completeness of the linkage can be provided upon request

Pre linked

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

Yes

Data source, other

CPDPN (Centre pluridisciplinaire de diagnostic prénatal)

Linkage strategy

Deterministic

Linkage variable

patronymic identifier (maiden name + first name + date of birth), marital identifier (married name + first name + date of birth), delivery date

Linkage completeness

Completeness of the linkage can be provided upon request

Pre linked

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

No

Data source, other

Disability registry

Linkage strategy

Deterministic

Linkage variable

patronymic identifier (maiden name + first name + date of birth), marital
identifier (married name + first name + date of birth), delivery date

Linkage completeness

Completeness of the linkage can be provided upon request

Pre linked

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

Yes

Data source, other

PMI (Protection maternelle infantile)

Linkage strategy

Deterministic

Linkage variable

patronymic identifier (maiden name + first name + date of birth), marital identifier (married name + first name + date of birth), delivery date

Linkage completeness

Completeness of the linkage can be provided upon request

Pre linked

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

Yes

Data source, other

PMSI (Programme de médicalisation des systèmes d'information)

Linkage strategy

Deterministic

Linkage variable

patronymic identifier (maiden name + first name + date of birth), marital identifier (married name + first name + date of birth), delivery date

Linkage completeness

Completeness of the linkage can be provided upon request

Data management specifications that apply for the data source

Data source refresh

Yearly

Informed consent for use of data for research

Other

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

Informed consent, other

There is a committee to evaluate requests for data access

Data source last refresh

01/04/2022

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

EUROMEDICAT

CDM website

<https://www.euromedicat.eu>

Data source ETL CDM version

1.0

Data source ETL frequency

12,00 months

Data source ETL status

Completed

Data source ETL specifications (link)

<https://www.euromedicat.eu>

CDM name

ConcepTION CDM

CDM website

<https://www.imi-conception.eu/>

CDM release frequency

6 months

Data source ETL CDM version

2.0

Data source ETL frequency

12,00 months

Data source ETL status

Completed