

# Healthcare Emergency Information System

**First published:** 01/02/2024

**Last updated:** 17/10/2024

**Data source**

**Human**

**Administrative healthcare records (e.g., claims)**

## Administrative details

### Administrative details

#### **Data source ID**

24587

---

#### **Data source acronym**

HEIS

---

#### **Data holder**

[Department of Epidemiology of the Regional Health Service - Lazio](#)

---

#### **Data source type**

Administrative healthcare records (e.g., claims)

---

#### **Main financial support**

National, regional, or municipal public funding

---

#### **Care setting**

Other

---

### **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**

<https://www.deplazio.net>

## Contact details

Marina Davoli [dipepi@deplazio.it](mailto:dipepi@deplazio.it)

 Main

[dipepi@deplazio.it](mailto:dipepi@deplazio.it)

## Data source regions and languages

### **Data source countries**

Italy

---

### **Data source languages**

Italian

---

### **Data source regions**

Lazio

---

## Data source establishment

## **Data source established**

15/06/2000

---

## **Data source time span**

**First collection:** 15/06/2000

The date when data started to be collected or extracted.

## Publications

### Data source publications

Ferroni E, Belleudi V, Cascini S, Di Martino M, Kirchmayer U, Pistelli R2, Patorno E, Formoso G, Fusco D, Perucci CA, Davoli M, Agabiti N OUTPUL Study Group1. Role of Tiotropium in Reducing Exacerbations of Chronic Obstructive Pulmonary Disease When Combined With Long-Acting  $\beta$ 2 -Agonists and Inhaled Corticosteroids: The OUTPUL Study. *J Clin Pharmacol.* 2016 Nov;56(11):1423-1432. doi: 10.1002/jcph.750.

Mataloni F, Pinnarelli L, Perucci CA, Davoli M, Fusco D. Characteristics of ED crowding in the Lazio Region (Italy) and short-term health outcomes. *Intern Emerg Med.* 2018 May 25. doi: 10.1007/s11739-018-1881-3

Cascini S, Agabiti N, Incalzi RA, Pinnarelli L, Mayer F, Arcà M, Fusco D, Davoli M. Pneumonia burden in elderly patients: a classification algorithm using administrative data. *BMC Infect Dis.* 2013 Nov; 25:13:559. doi: 10.1186/1471-2334-13-559.

de' Donato FK1, Leone M, Noce D, Davoli M, Michelozzi P. The impact of the February 2012 cold spell on health in Italy using surveillance data. *PLoS One.* 2013 Apr; 188(4):e61720. doi: 10.1371/journal.pone.0061720. Print 2013.

Di Domenicantonio R, Cappai G, Sciatella P, Belleudi V, Di Martino M, Agabiti N, et al. (2016) The Tradeoff between Travel Time from Home to Hospital and Door

to Balloon Time in Determining Mortality among STEMI Patients Undergoing PCI.  
PLoS ONE 11(6): e0158336. doi:10.1371/journal. pone.0158336

## Studies

### List of studies that have been conducted using the data source

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)

Comparative Effectiveness and Safety of Drugs used in Rare Neuromuscular and Neurodegenerative Diseases (CAESAR)

Comparative Effectiveness and Safety of Immunosuppressive Drugs in Transplant patients (CESIT)

The BRodalumab Assessment of Hazards: A Multinational Safety (BRAHMS) study in electronic healthcare databases

An epidemiological investigation of high-risk children for Respiratory Syncytial Virus infections - RWE palivizumab utilization as a RSV preventive treatment in Lazio (Italy)

## 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)?

No

---

## **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-9-CM

---

## **Prescriptions of medicines**

Not Captured

---

## **Dispensing of medicines**

Not 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?

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)?

Captured

---

## **Procedures vocabulary**

ICD-9-CM

Other

---

## **Procedures vocabulary, other**

local Italian coding system

---

## **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.

No

---

## **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?

No

---

## **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-9-CM

---

## **Medicinal product information**

Not Captured

---

## **Quality of life measurements**

Not Captured

---

## **Lifestyle factors**

Not Captured

---

## **Sociodemographic information**

Captured

---

## **Sociodemographic information collected**

Age

Gender

Health area

## 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 ( $\geq$  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**

95%

---

**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 - Lazio region

## Population

### Population size

6983762

---

### Active population size

5599534

## Population by age group

| Age group                                  | Population size | Active population size |
|--|-----------------|------------------------|
| Paediatric Population (< 18 years)         | 953684          | 846375                 |
| Preterm newborn infants (0 - 27 days)      | 73              | 73                     |
| Term newborn infants (0 - 27 days)         | 1388            | 1388                   |
| Infants and toddlers (28 days - 23 months) | 72000           | 69342                  |
| Children (2 to < 12 years)                 | 516696          | 463290                 |
| Adolescents (12 to < 18 years)             | 363527          | 312282                 |
| Adults (18 to < 46 years)                  | 2114341         | 1722877                |

| Age group                  | Population size | Active population size |
|----------------------------|-----------------|------------------------|
| Adults (46 to < 65 years)  | 1953805         | 1710593                |
| Elderly ( $\geq$ 65 years) | 1961932         | 1319689                |
| Adults (65 to < 75 years)  | 754897          | 645999                 |
| Adults (75 to < 85 years)  | 622617          | 466321                 |
| Adults (85 years and over) | 584418          | 207369                 |

## Median observation time

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

1.00

---

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

1.00

## 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**

Administrative data

# Event triggering registration

## **Event triggering registration of a person in the data source**

Other

---

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

Emergency care

---

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

End of treatment

Death

---

## **Event triggering creation of a record in the data source**

Access to emergency room

# 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**

Record linkage can be performed with all other available information systems (MIS, PHARM, HIS)

## Linked data sources

### **Pre linked**

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

No

---

### **Data source, other**

HIS

---

### **Linkage strategy**

Deterministic

---

### **Linkage variable**

Anonymous Patient Identifier

---

### **Linkage completeness**

All mostly completed

### **Pre linked**

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

No

---

### **Data source, other**

MIS

---

**Linkage strategy**

Deterministic

---

**Linkage variable**

Anonymous Patient Identifier

---

**Linkage completeness**

All mostly completed

**Pre linked**

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

No

---

**Data source, other**

PHARM

---

**Linkage strategy**

Deterministic

---

**Linkage variable**

Anonymous Patient Identifier

---

**Linkage completeness**

All mostly completed

Data management specifications that apply for the data source

## **Data source refresh**

Monthly

---

## **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)?

No

---

## **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**

Upon DPO consent

---

## **Data source last refresh**

30/04/2023

# Common Data Model (CDM) mapping

## **CDM mapping**

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

No