Hospital Universitario Virgen Macarena EHR

First published: 01/02/2024

Last updated: 17/10/2024

Data source　Human　Emergency care discharge records

Hospital outpatient visit records　Other

Administrative details

Administrative details

Data source ID

1111138

Data source acronym

HUVM

Data holder

Hospital Universitario Virgen Macarena

Data source type

Emergency care discharge records

Hospital outpatient visit records

Other

Data source type, other

Electronic health records,Pharmacy dispensation, discharge, prescriptions, ...

Main financial support

Funding by own institution

Care setting

Hospital inpatient care

Hospital outpatient care

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.

Yes

Description of the qualification

Certified according to the Spanish national security scheme

Contact details

Alberto Moreno Conde

alberto.moreno.sspa@juntadeandalucia.es

(Main)

alberto.moreno.sspa@juntadeandalucia.es

Data source regions and languages

Data source countries

Spain

Data source languages

Spanish

Data source establishment

Data source established

15/06/2011

Data source time span

First collection: 15/06/2011

The date when data started to be collected or extracted.

Publications

Data source publications

Moving toward a single comprehensive electronic health record for every citizen in Andalucía, Spain

The electronic health record (Diraya): a resource in epidemiological surveillance

Comparing the application of Health Information Technology in primary care in Denmark and Andalucía, Spain

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

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

ICD-9-CM

Prescriptions of medicines

Captured

Prescriptions vocabulary

ATC

RxNorm

Dispensing of medicines

Captured

Dispensing vocabulary

ATC

RxNorm

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?

No

Indication for use

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

Captured

Indication vocabulary

ICD-9

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

ICD-9

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?

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

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

Medicinal product information

Captured

Medicinal product information collected

Brand name

Dose

Package size

Strength

Medicinal product vocabulary

ATC

RxNorm

Quality of life measurements

Captured

Quality of life measurements vocabulary

SF-36

Lifestyle factors

Captured

Lifestyle factors

Alcohol use

Tobacco use

Sociodemographic information

Captured

Sociodemographic information collected

Age

Country of origin

Gender

Health area

Pharmaceutical copayment

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

Although the hospital provides care for the whole population in our region and around 90% of population uses public care in our region

---

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)

Virgen Macarena University Hospital provides hospital and community care services to 480,000 people. The hospital belongs to the Andalusian Public Health System as 3erd level hospital in Seville and Huelva areas (Spain). Medical specialties such as Ophthalmology, Cardiology and Neurology are recognized as national reference unit (CSUR) in Retinoblastoma, Multiple Sclerosis, intraocular tumors and Congenital cardiac disorders. The hospital currently participates in more than 200 in phase I, II and III clinical trials and produced scientific publications with 1187 impact factor points during last year.

Our EHR system has been in use for more than a decade and it contains more than 10 million episodes, 1 million discharge summaries and 1.1 million consultations.

Family linkage

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

Permanently

Family linkage available between the following persons

Mother-child

Population

Population size

1082755

Active population size

483354

Population by age group

Age group	Population size	Active population size
Paediatric Population (< 18 years)	119122	58002
Term newborn infants (0 – 27 days)	217	

Age group	Population size	Active population size
Infants and toddlers (28 days – 23 months)	4753	2900
Children (2 to < 12 years)	53354	25618
Adolescents (12 to < 18 years)	41547	23201
Adults (18 to < 46 years)	351533	159023
Adults (46 to < 65 years)	768770	134372
Elderly (≥ 65 years)	301490	155157
Adults (65 to < 75 years)	279253	49785
Adults (75 to < 85 years)	79935	39635
Adults (85 years and over)	113714	65253

Data flows and management

Access and validation

Biospecimen access

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

Yes

Biospecimen access conditions

Evaluation by Ethical committee, and informed consent must be requested from the patient. Spanish Legislation (article 24 Real Decreto 1716/2011)

contemplates several exceptions to obtaining informed consent

Access to subject details

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

Yes

Event triggering registration

Event triggering registration of a person in the data source

Birth

Immigration

Insurance coverage start

Other

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

Any visit to emergency department without any additional requirement

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

Death

Emigration

Other

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

Although person is not active data is preserved since it might be useful in the future for patient care

Event triggering creation of a record in the data source

Each patient that receives care in our hospital

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

Our system is integrated with the Andalusian Health Service IT infrastructure. Diraya Regional EHR has been deployed to provide care for 8 million people through the full network of 50 hospitals and 1,500 Primary care centers distributed throughout the region with 8 million population. We expect that our initiative could be the pioneer for widespread of EMA conducted studies in our whole region since we share the organizational and technical mechanisms for accessing patient data

Linked data sources

Pre linked

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

Yes

Data source, other

Diraya Regional EHR

Data management specifications that apply for the data source

Data source refresh

Quarterly

Informed consent for use of data for research

Waiver

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

01/08/2023

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

i2b2

CDM website

https://community.i2b2.org/wiki/display/BUN/i2b2+Common+Data+Model+Documentatio

---

Data source ETL frequency

4,00 months

Data source ETL status

Planned

CDM name

OMOP

CDM website

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

Data source ETL CDM version

5.4

Data source ETL frequency

4,00 months

Data source ETL status

Completed