

# Terveystietojärjestelmän hoitoilmoitusrekisteri (Finland Care Register for Health Care)

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

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

**Data source**

Human

Emergency care discharge records

Hospital discharge records

Hospital inpatient records

Hospital outpatient visit records

Specialist ambulatory care records

## Administrative details

### Administrative details

#### Data source ID

1111187

#### Data source acronym

Terveys-Hilmo

#### Data holder

[Finnish Institute for Health and Welfare \(THL\)](#)

#### Data source type

Emergency care discharge records

Hospital discharge records  
Hospital inpatient records  
Hospital outpatient visit records  
Specialist ambulatory care records

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### **Main financial support**

National, regional, or municipal public funding

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### **Care setting**

Hospital inpatient care  
Hospital outpatient care  
Other  
Secondary care – specialist level (ambulatory)

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### **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

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### **Data source website**

<https://thl.fi/en/statistics-and-data/data-and-services/register-descriptions/care-register-for-health-care>

## **Contact details**

Care Register for Health Care [terveyshilmo@thl.fi](mailto:terveyshilmo@thl.fi)

**Main**

[terveyshilmo@thl.fi](mailto:terveyshilmo@thl.fi)

# Data source regions and languages

## Data source countries

Finland

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## Data source languages

Finnish

# Data source establishment

## Data source established

01/01/1994

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## Data source time span

**First collection:** 01/01/1994

The date when data started to be collected or extracted.

# Publications

## Data source publications

[Quality measures of the population-based Finnish Cancer Registry indicate sound Data quality for solid malignant tumours](#)

[Completeness of pediatric cancer registration in the Finnish Cancer Registry](#)

[How reliable are health registers? Registration of induced abortions and sterilizations in Finland](#)

[Quality of Finnish Hospital Discharge Register: A systematic review](#)

[Coverage and accuracy of myeloproliferative and myelodysplastic neoplasms in the Finnish Cancer Registry](#)

Toimenpiteiden alueellinen vaihtelu korva-, nenä- ja kurkkutautien erikoisalalla

Kohti luotettavaa hoitopääsyn seurantaa: hoitoilmoitusrekisterin ja syöpärekisterin diagnoositietojen vertailu

## Studies

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

Dulaglutide and Potential Risks of Pancreatic Cancer and Thyroid Cancer: A Non-Interventional PASS (H9X-MC-B013)

A Retrospective Cohort Study for Estimating Incidence Rates of Infusion Site Events for ABBV-951 for the Treatment of Advanced Parkinson's Disease

DARWIN EU® - Chondrosarcoma: patient demographics, treatments, and survival in the period 2010-2023

SAFETY-VAC: Network of Data Sources for Vaccine Safety Evaluation

DARWIN EU® - CGRP antagonists - Treatment patterns and users characteristics

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

DARWIN EU® - DUS Characterising STOPP criteria medication use in people with recurrent falls

Effectiveness of Pfizer-BioNTech COVID-19 mRNA vaccine against severe illness in the elderly in Finland (RWE\_COVID19\_2023)

Brand-specific influenza vaccine effectiveness in the Nordic countries

## Data elements collected

The data source contains the following

## **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

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## **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

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## **Pregnancy and/or neonates**

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

No

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## **Hospital admission and/or discharge**

Yes

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## **ICU admission**

Is information on intensive care unit admission available?

Yes

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## **Cause of death**

Not Captured

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## **Prescriptions of medicines**

Not Captured

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## **Dispensing of medicines**

Not Captured

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## **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

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## **Contraception**

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

No

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## **Indication for use**

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

Not Captured

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## **Medical devices**

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

No

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## **Administration of vaccines**

Yes

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## **Procedures**

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

Captured

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## **Procedures vocabulary**

Other

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## **Procedures vocabulary, other**

National classification of procedures (current national classification loosely based on NOMESCO)

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## **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

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## **Clinical measurements**

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

Yes

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## **Genetic data**

Are data related to genotyping, genome sequencing available?

Not Captured

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## **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

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## **Patient-reported outcomes**

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

No

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## **Patient-generated data**

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

No

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### **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

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### **Unique identifier for persons**

Are patients uniquely identified in the data source?

Yes

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### **Diagnostic codes**

Captured

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### **Diagnosis / medical event vocabulary**

ICD-10

ICPC-2

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### **Medicinal product information**

Captured

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### **Medicinal product information collected**

Brand name

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### **Medicinal product vocabulary**

ATC

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### **Quality of life measurements**

Not Captured

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## **Lifestyle factors**

Captured

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## **Lifestyle factors**

Alcohol use

Tobacco use

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## **Sociodemographic information**

Captured

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## **Sociodemographic information collected**

Age

Gender

Health area

Living in rural area

Sex

## 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)

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

100%

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**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)**

Data is not collected on private outpatient health services, including privately provided occupational health care (an extension of data collection is in progress to cover this patient population).

## Population

**Population size**

6883497

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**Active population size**

5500000

## Population by age group

Age group	Population size
Neonate	64495
Infants and toddlers (28 days - 23 months)	164057
Children (2 to < 12 years)	626372
Adolescents (12 to < 18 years)	351207
Adults (18 to < 46 years)	2010394
Adults (46 to < 65 years)	1430472
Adults (65 to < 75 years)	861108
Adults (75 to < 85 years)	799519
Adults (85 years and over)	575873

## 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://thl.fi/fi/tilastot-ja-data/aineistot-ja-palvelut/tilastojen-laatu-ja-periaatteet/laatuselosteet/esh>

#### Biospecimen access

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

No

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### **Access to subject details**

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

No

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### **Description of data collection**

Data collection is encounter-based. Data on patient's outpatient visits and inpatient stays are recorded within health care provider's information systems and electronically transferred to Hilmo.

## Event triggering registration

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

Other

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

First outpatient visit to a public healthcare provider or inpatient stay

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

Outpatient visit, admission and discharge from inpatient care (specialized care)

## 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

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## Linkage description, possible linkage

It is possible to link Terveys-Hilmo to Other Finnish registers through the personal identification number. Examples of Other Finnish national health care registers are:

- Register of Primary Health Care Visits (Contains information on primary care health care visits and diagnoses)
- Prescription Registers (Contains information on prescription medication dispensed from community pharmacies)
- The Medical Birth Register (The register has relevant information on pregnancies that has lasted at least 22 weeks or the infant's birth weight was at least 500 g in Finland at home or in a hospital. This register includes linkage between infant and mother)
- The Cause of Death Register (Contains information on date and cause of death)

## Linked data sources

### Pre linked

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

No

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### Data source, other

Prescription Registers (Contains information on prescription medication dispensed from community pharmacies)

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### Linkage strategy

Deterministic

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**Linkage variable**

Personal identification number

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**Linkage completeness**

100%

**Pre linked**

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

No

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**Data source, other**

Register of Primary Health Care Visits (Contains information on primary care health care visits and diagnoses)

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**Linkage strategy**

Deterministic

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**Linkage variable**

Personal identification number

---

**Linkage completeness**

100%

**Pre linked**

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

No

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**Data source, other**

The Cause of Death Register (Contains information on date and cause of death)

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**Linkage strategy**

Deterministic

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**Linkage variable**

Personal identification number

---

**Linkage completeness**

100%

**Pre linked**

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

No

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**Data source, other**

The Medical Birth Register (The register has relevant information on pregnancies that has lasted at least 22 weeks or the infant's birth weight was at least 500 g in Finland at home or in a hospital. This register includes linkage between infant and mOther)

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**Linkage strategy**

Deterministic

---

**Linkage variable**

Personal identification number

---

**Linkage completeness**

100%

## Data management specifications that apply for the data source

**Data source refresh**

February

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**Informed consent for use of data for research**

Not Required

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**Possibility of data validation**

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

Yes

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**Data source preservation**

Are records preserved in the data source indefinitely?

Yes

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**Approval for publication**

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

Yes

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**Data source last refresh**

28/02/2022

## 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

OMOP

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### CDM website

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

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### Data source ETL CDM version

5.4

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### Data source ETL frequency

12,00 months

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### Data source ETL status

Completed