Stockholm CREAtinine Measurements project

First published: 01/02/2024

Last updated: 17/10/2024

Data source | Human | Other | Pharmacy dispensing records | Primary care medical records | Registration with healthcare system

Administrative details

Administrative details

Data source ID

1111208

Data source acronym

SCREAM

Data holder

Department of Medical Epidemiology and Biostatistics (MEB), Karolinska Institutet

Data source type

Other

Pharmacy dispensing records

Primary care medical records

Registration with healthcare system

Data source type, other

Healthcare utilisation cohort with routine laboratory measurements

Main financial support

Funding from industry or contract research

National, regional, or municipal public funding

Care setting

Hospital inpatient care

Hospital outpatient 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

https://ki.se/en/meb/scream

Contact details

Juan-Jesus Carrero juan.jesus.carrero@ki.se

Main

juan.jesus.carrero@ki.se

Linn Austin linn.austin@ki.se

Alternate

linn.austin@ki.se

Data source regions and languages

Data source countries

Sweden

Data source languages

English

Swedish

Data source regions

Stockholms län [SE-01]

Data source establishment

Data source established

01/01/2006

Data source time span

First collection: 01/01/2006

The date when data started to be collected or extracted.

Last collection: 31/12/2021

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

Publications

Data source publications

Stopping mineralocorticoid receptor antagonists after hyperkalaemia: trial emulation in data from routine care

GLP-1 receptor agonist versus DPP-4 inhibitor and kidney and cardiovascular outcomes in clinical practice in type-2 diabetes

Cardiorenal Outcomes Among Patients With Atrial Fibrillation Treated With Oral Anticoagulants

Use of nephrotoxic medications in adults with chronic kidney disease in Swedish and US routine care

The Stockholm CREAtinine Measurements (SCREAM) project: Fostering improvements in chronic kidney disease care

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

Disease details (other)

Linkage with Cardiology registers (clinical examination of myocardial infarction and heart failure), echocardiograms, Renal Register (clinical examinations at nephrologists), Dementia Register (clinical examinations at mental units), intensive care register (clinical examinations during iCU stay)

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-10

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?

Yes

Indication for use

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

Captured

Indication vocabulary

ICD-10

Medical devices

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

Yes

Administration of vaccines

No

Procedures

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

Captured

Procedures vocabulary

Other

Procedures vocabulary, other

NOMESCO/KvÅ

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.

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.

Yes

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

Dose

Package size

Strength

Medicinal product vocabulary

ATC

Quality of life measurements

Not Captured

Lifestyle factors

Not Captured

Sociodemographic information

Captured

Sociodemographic information collected

Age

Country of origin

Education level

Gender

Marital status

Pharmaceutical copayment

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)

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

Complete healthcare utilisation records of the region of Stockholm, with a population of generally 2.3 Million individuals. At present SCREAM contains the life trajectories of 3.1 Million persons during 2006-2021

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)

Healthcare use and medications in the complete population. Laboratory tests only in those with creatinine or albuminuria (70% of the complete population)

Family linkage

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

Ad hoc

Population

Population size

3100000

Median observation time

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

13.00

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://onlinelibrary.wiley.com/doi/10.1111/joim.13418

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

Automatic extraction of healthcare databases from the region of Stockholm, and linkage with several national and regional government registers and quality registers.

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

being a citizen of Stockholm for more than 30 days

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

Death

Emigration

Event triggering creation of a record in the data source

Accessing any form of healthcare

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

Linkage is done by the Swedish Government via the unique personal identification number of each citizen. Thereafter the dataset is pseudoanomymized and send to the researchers for analysis

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Linkage description, possible linkage

Depending on data source

Linked data sources

Pre linked

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

Yes

Data source, other

Birth Registry

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

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Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

Cancer Registry

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

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Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

COVID-19 seropositivity records

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

Intensive care Units register

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

LISA Registry

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

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Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

Renal Registry

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

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Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

SWEDEHEART and SWEDEHEF

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

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Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

Swedish Dementia Registry (SVEDEM)

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

The Dispensed Drug Registry

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

The Population Registry (Cause of death)

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

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Linkage completeness

100.00%

Pre linked

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

Yes

Data source, other

Vård Analys Databasen (VAL; the Region Stockholm healthcare data warehouse administrative health data registry of Stockholm region)

Linkage strategy

Probabilistic

Linkage variable

An encrypted key created by the Government that tranforms the individual personal identiciation number in a random identifier

Linkage completeness

100.00%

Pre linked

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

No

Data source, other

We update our dataset recurrently every 3 years. There is the possibility to perform additional linkages with Swedish registers or others pending approval by the ethics board and within the conditions imposed by the data owners.

Linkage variable

Depending on data source

Linkage completeness

Depending on data source

Data management specifications that apply for the data source

Informed consent for use of data for research

Not Required

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

31/12/2022

Common Data Model (CDM) mapping

CDM mapping

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

No