Validation of Primary Care Resource Use and Costs in OMOP-Mapped vs. Source CPRD Aurum Data

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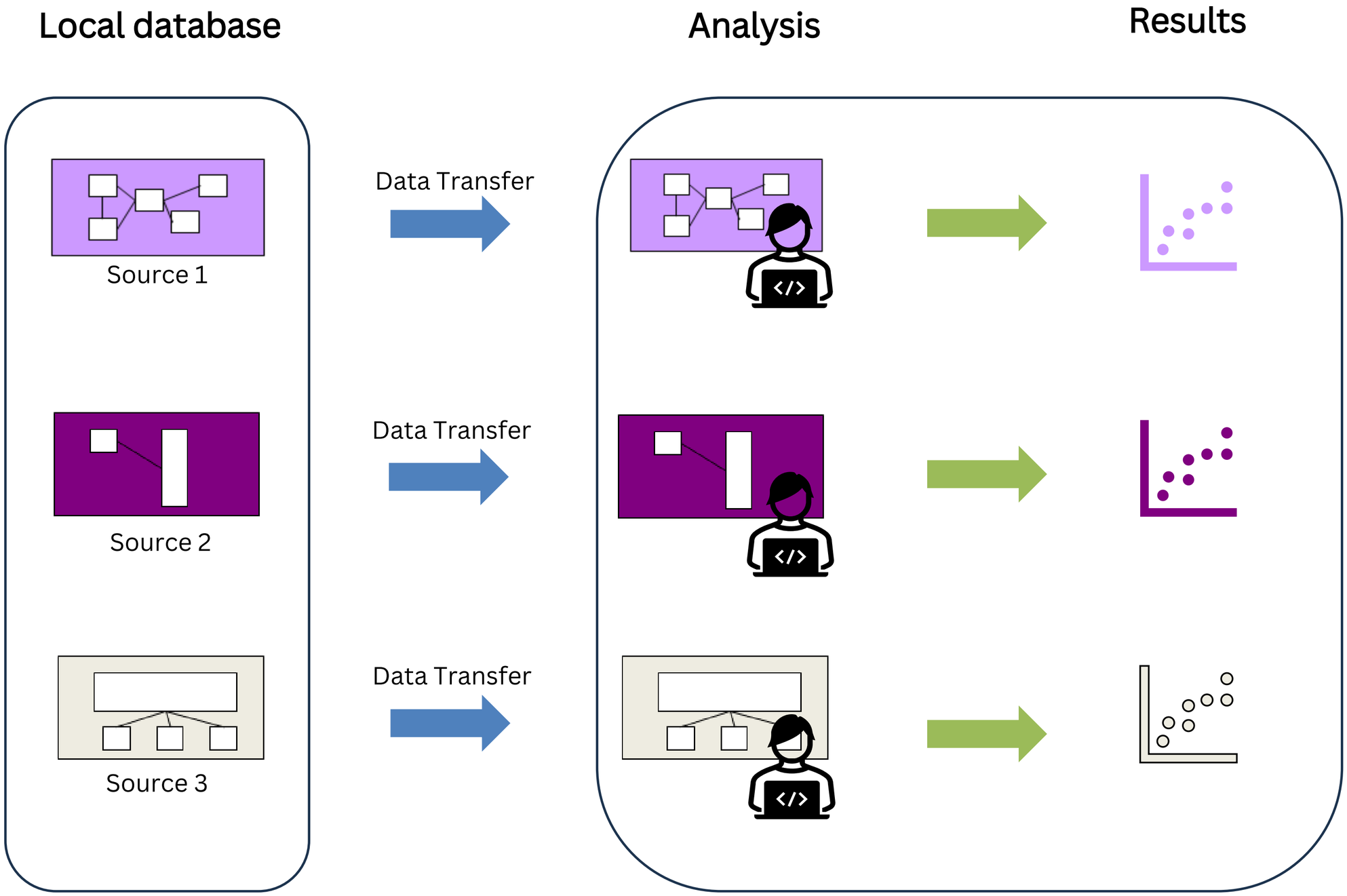
Real-World Data

Evidence on effectiveness, safety, utilisation and economic aspects in real-world populations

Complement trial data

Increasingly accepted by regulatory agencies and HTA bodies


Local database
Analysis
Results
Source 1
Source 2
Source 3
Data Transfer
Data Transfer
Data Transfer

Local database

Source 1

Source 2

Source 3

Data standardisation

Common Data Model

Common Data Model

Common Data Model

Query

Results

Query

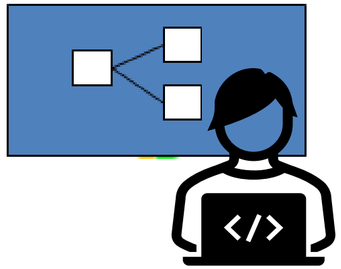
Results

Query

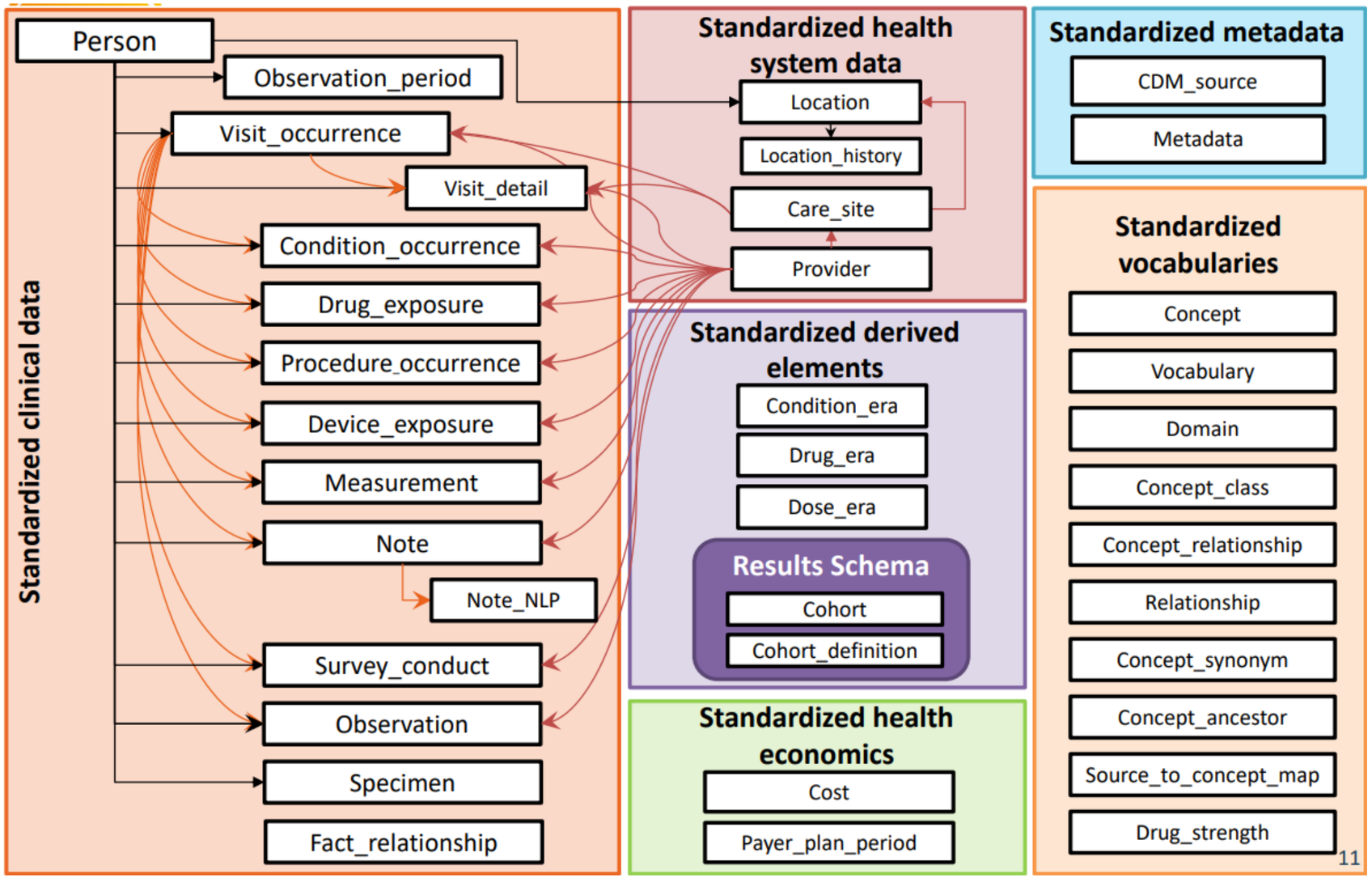
Results

Analysis & Results

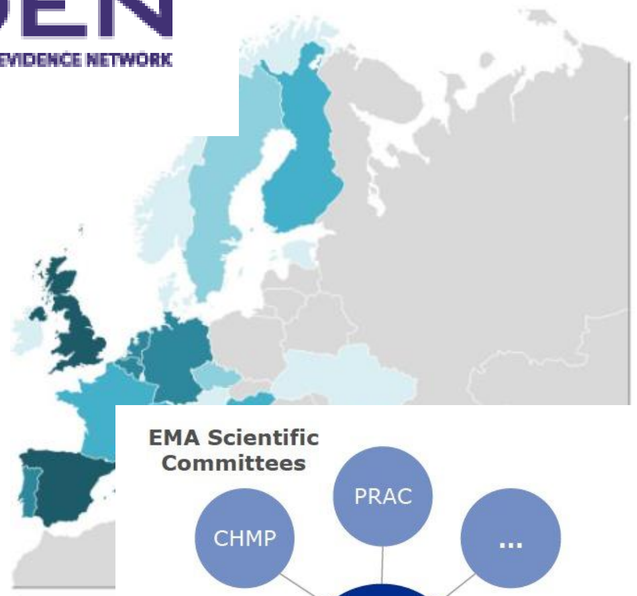
One analytical code

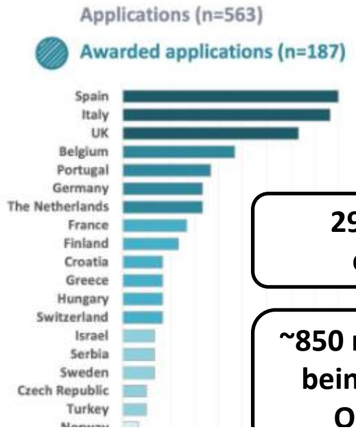


OHDSI Observational Medical Outcomes Partnership (OMOP-CDM)



EHDEN
EUROPEAN HEALTH DATA & EVIDENCE NETWORK

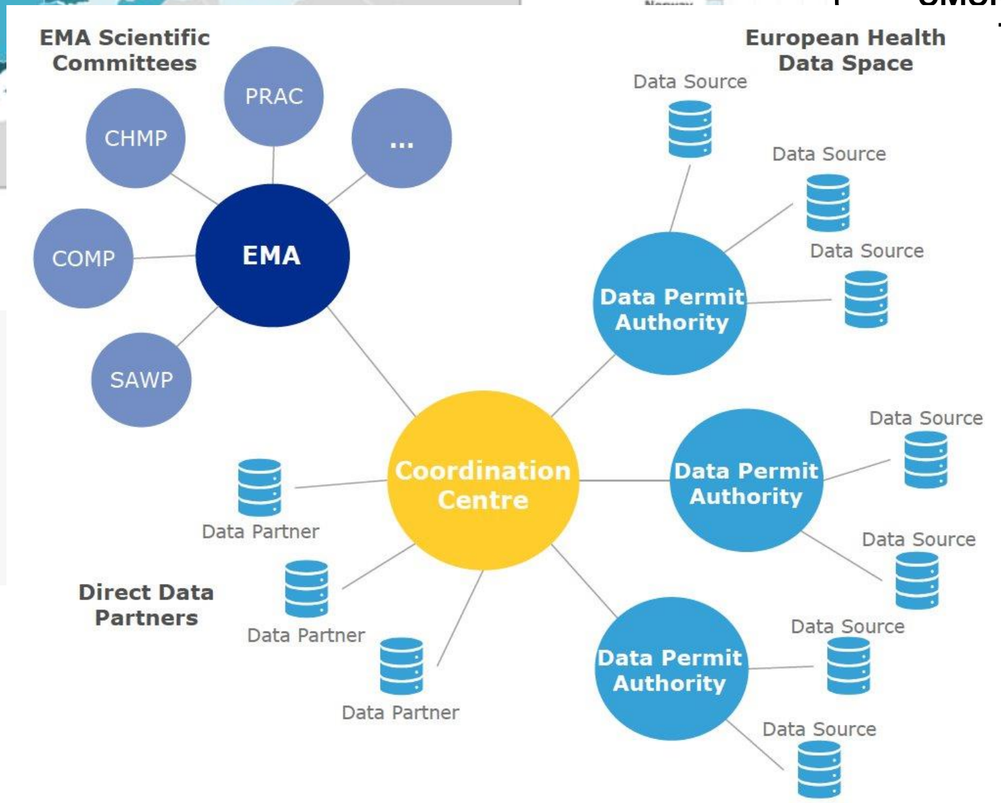




29 European countries

~850 millior being map OMOP

DARWIN EU



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Health Data Research UK

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Opinion

NHS Research SDE Network agrees to adopt common data model

15 August 2023 | Author: Dr Chris Russell, Head of Delivery, Data for R&D at NHS England

Our healthcare system is complex and has evolved over time rather than developing in line with an agreed grand plan. Health data is no different and while the benefits from a more standardised approach to data are enormous, achieving this presents a significant challenge. Dr Chris Russell, Head of Delivery, Data for Research and Development at NHS England, discusses how adoption of a common data model can help.

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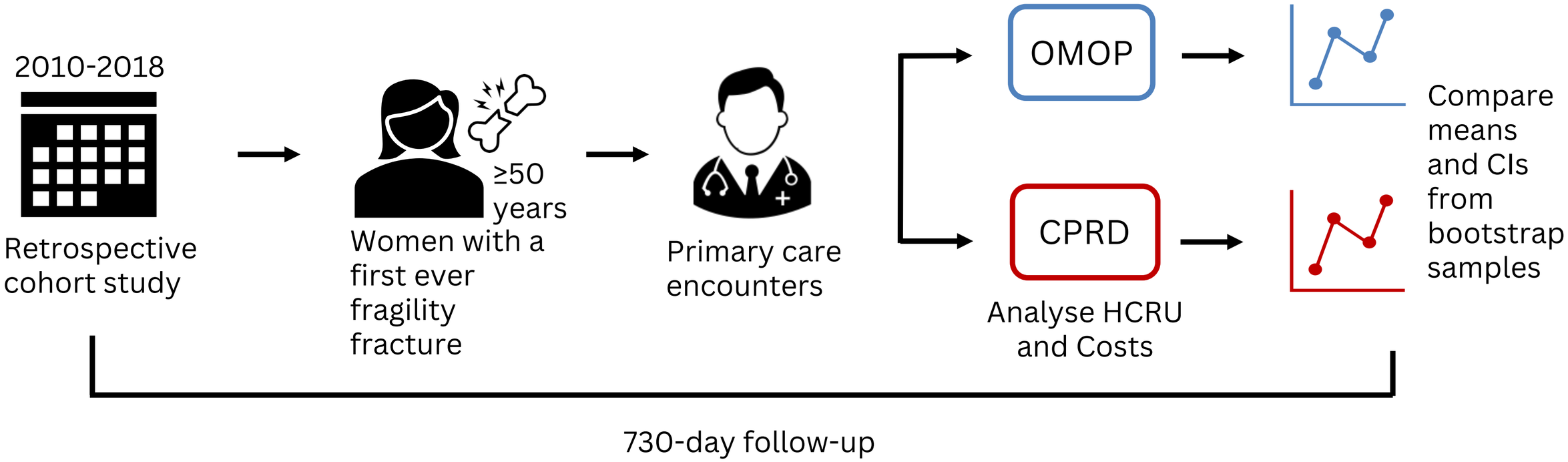
OBJECTIVE

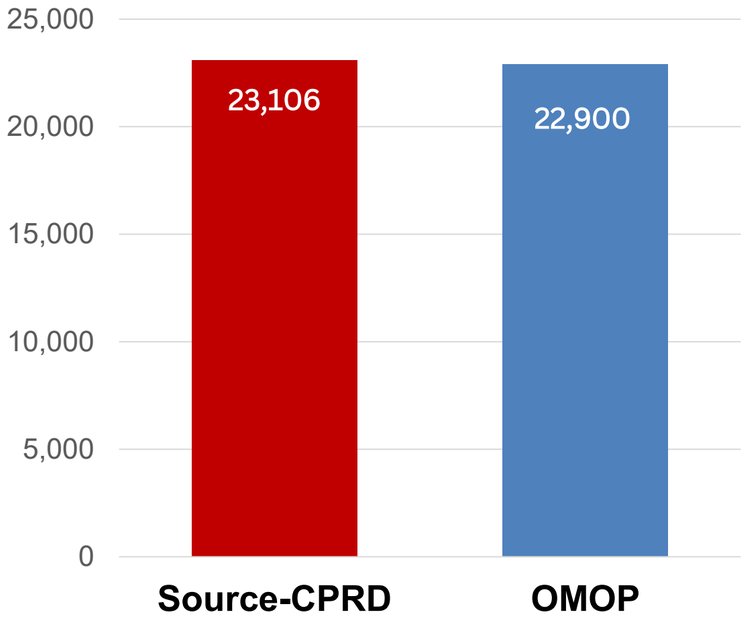
To compare HCRU and costs calculated in OMOP-mapped against estimates from the corresponding CPRD-source dataset

METHODS


2010-2018
Retrospective cohort study
≥50 years
Women with a first ever fragility fracture
Primary care encounters
OMOP
CPRD
Analyse HCRU and Costs
Compare means and CIs from bootstrap samples
730-day follow-up

RESULTS

COHORT



AGE in years (mean, SD)

Source-CPRD: 71.3 (12.2)

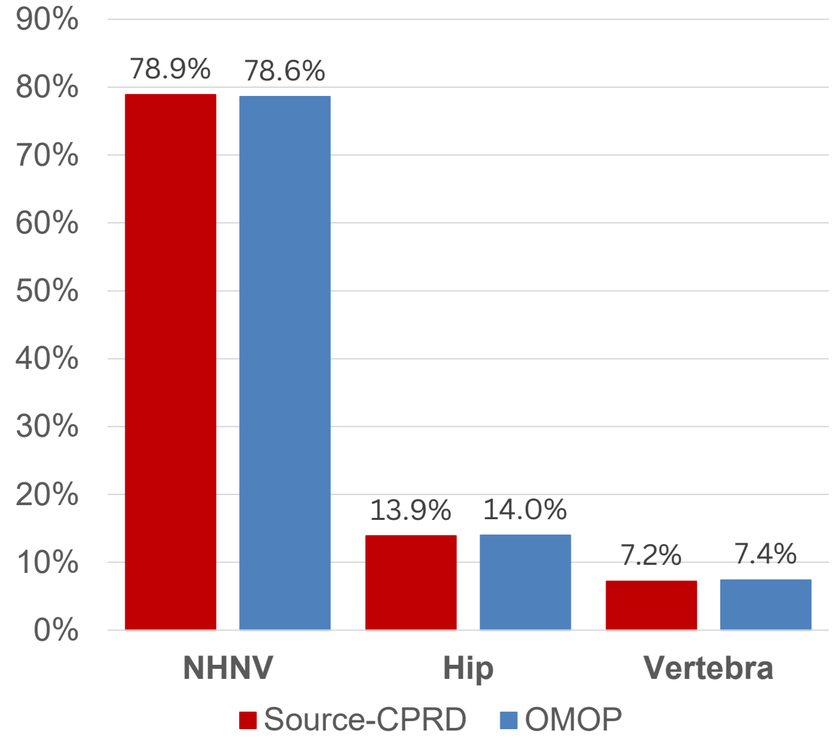
OMOP: 71.3 (12.2)

HEALTHCARE USERS

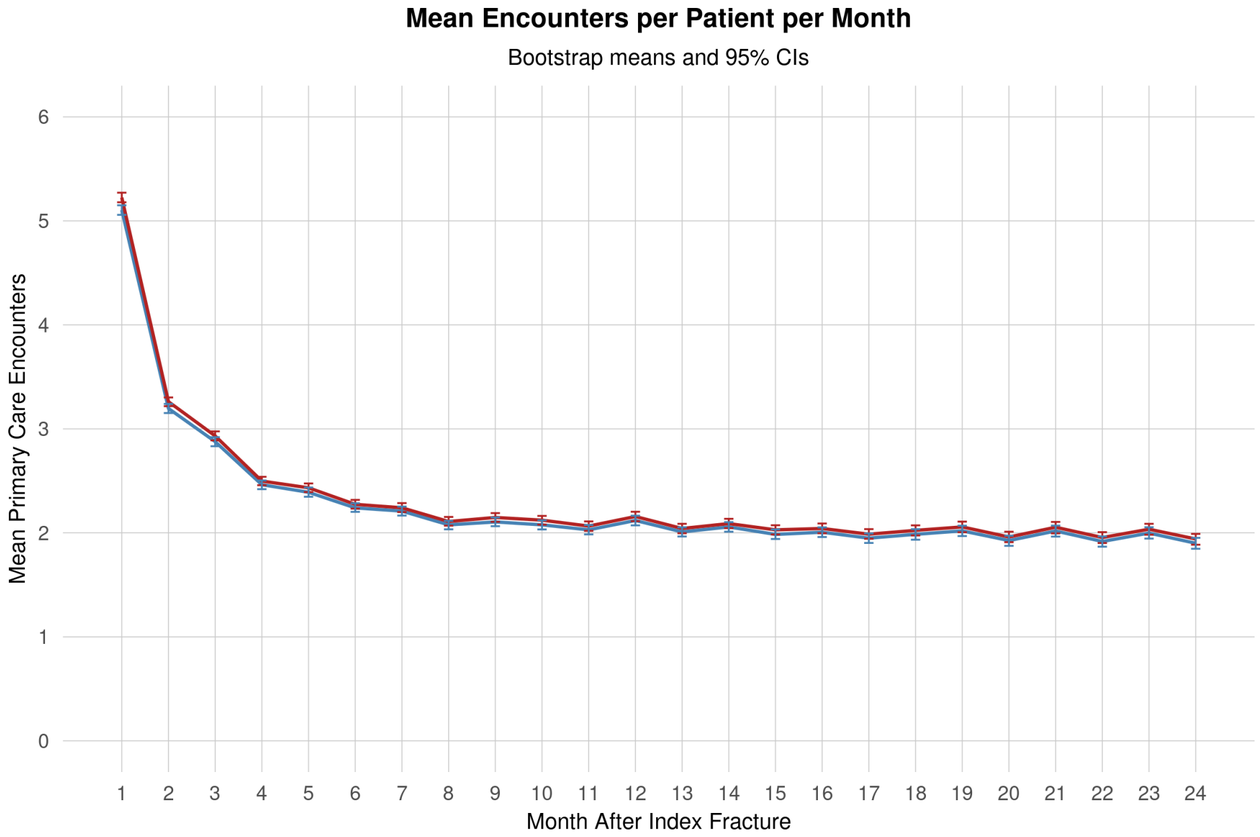
Source-CPRD: 97.3%

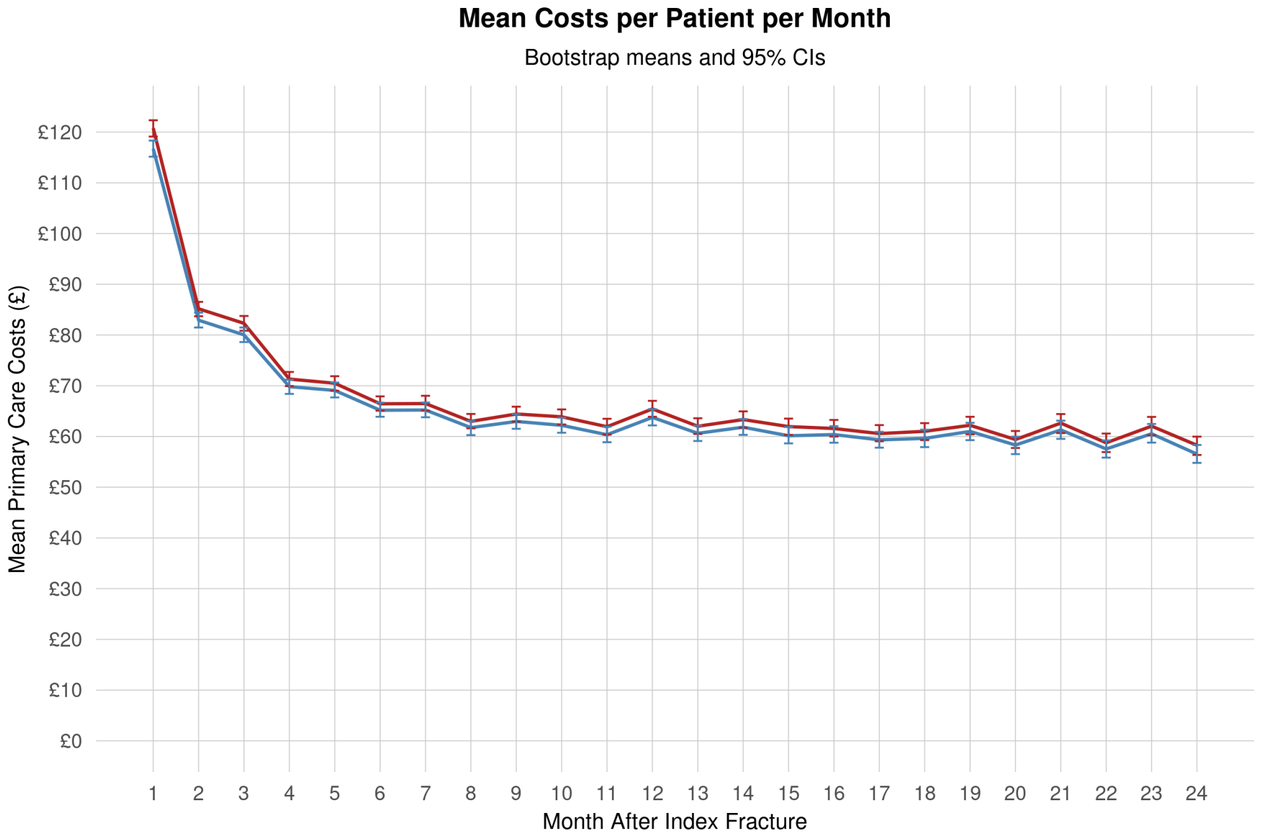
OMOP: 97.4%

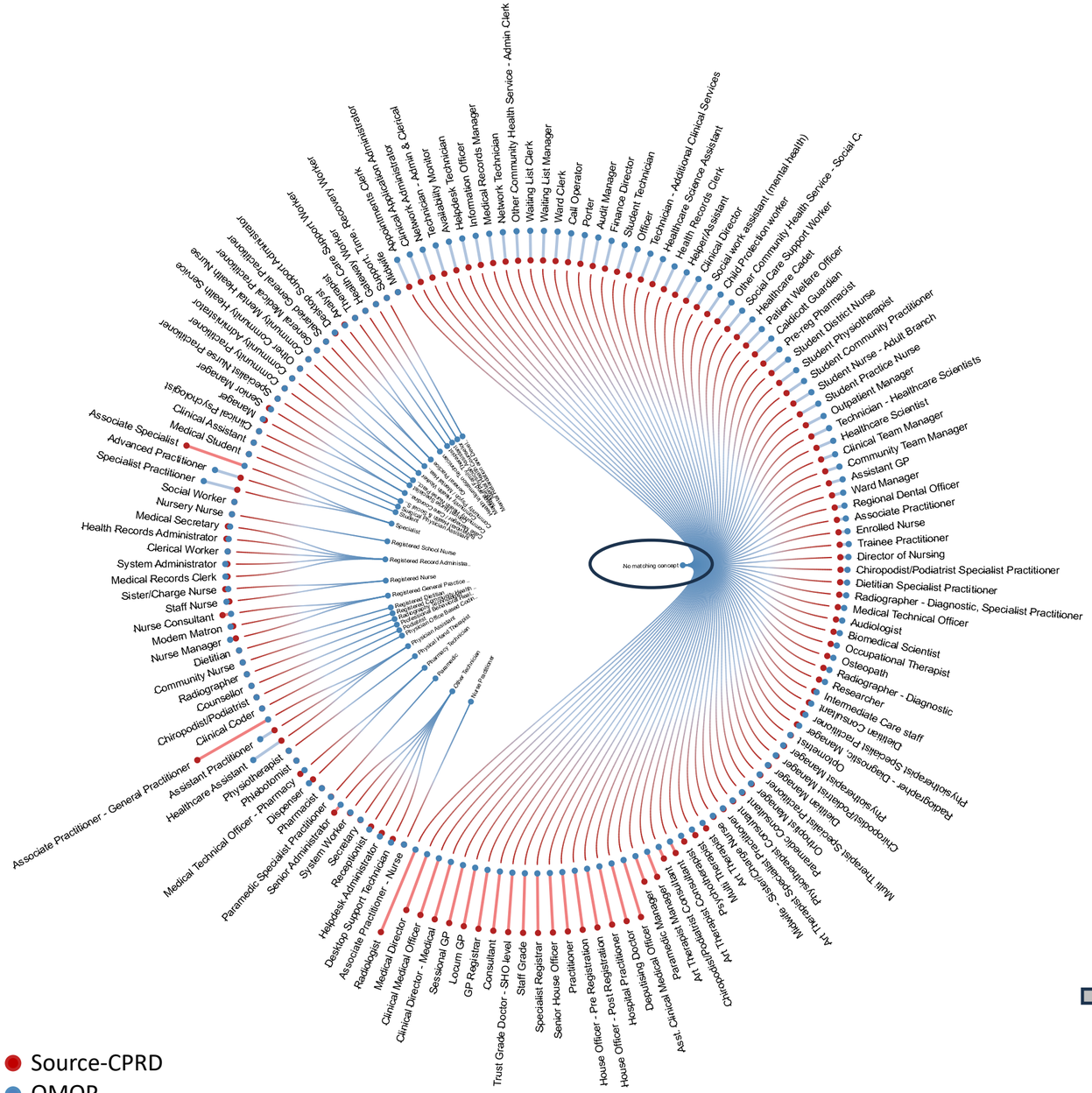
FRACTURE SITE



RESULTS: HCRU and Costs

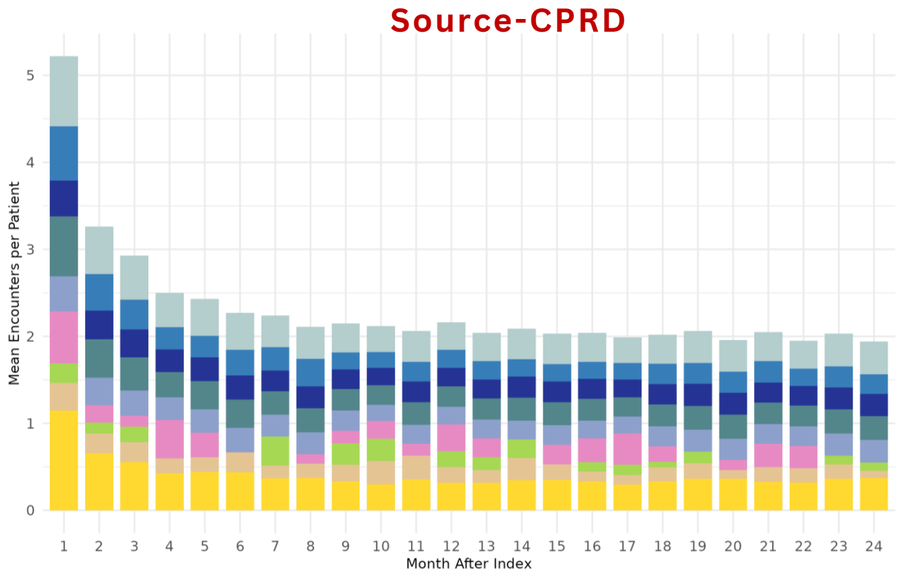


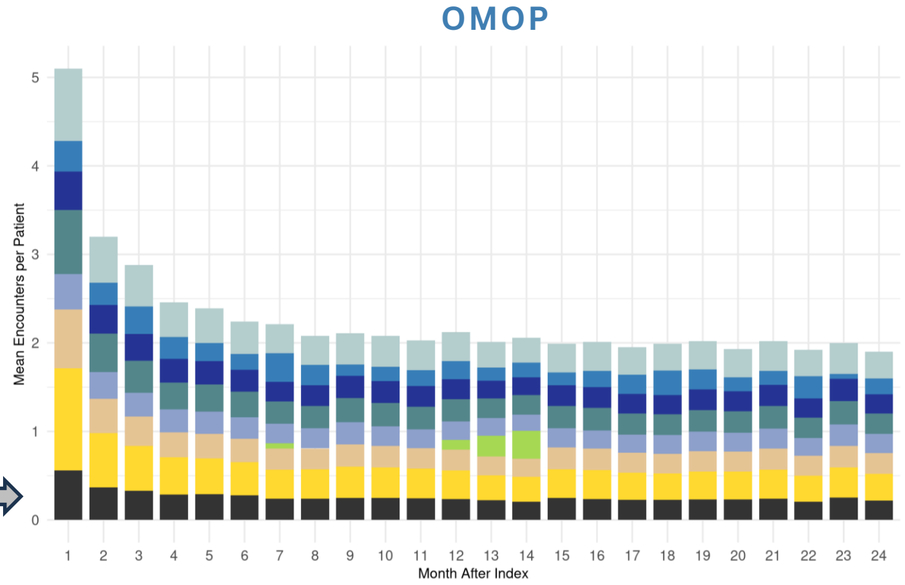




Source-CPRD

OMOP





Specialty: GP, Nurse, AHP, Social, Admin, Medic non-GP, Non-registered other, Dental, Service, Uncategorised

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CONCLUSIONS

- **OMOP-mapped** estimates of primary care resource use and costs were **equivalent** to those obtained from source-CPRD dataset

- (Minor) differences were observed in:
  - Cohort composition due to mapping quality standards
  - Specialty classifications

- Differences can be minimised with refinements to mapping and vocabularies

- Federated analyses using OMOP mapped data appears to be a **reliable** method to **accurately** capture HCRU and costs in CPRD-UK.