Morbidity data gaps for EU countries in the Global Burden of Disease 2023 study

Rok Hrzic, MD MSc PhD
Maastricht University

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Thank you to the Burden-EU co-authors!

Grant M A Wyper
Enkeleint A. Mechili
Brigid Unim
Alberto Freitas

Milena Santric Milicevic
Ismael Caballero
João Vasco Santos

Data and estimates

- High quality health data are essential for public health research and policymaking
- Statistical modelling can—to an extent—bridge data gaps by providing estimates for missing data
- Understanding of strengths and weaknesses of estimates is essential for their application

Data and estimates

- GBD study uses several modelling approaches to generate internally consistent estimates
- GBD uses a hierarchical cascade: higher-level estimates constrain and inform those below
- Where data gaps exist, GBD estimates reflect the parent region and nearby countries' health patterns

Examining EU GBD2023 morbidity data inputs

- Systematically map data inputs to the GBD 2023 study's **morbidity** estimates for countries in the EU

- *Aim:* highlight morbidity estimates likely based primarily on parent and neighbour locations' data

Examining EU GBD2023 morbidity data inputs

- Metadata extracted from the GBD 2023 Sources Tool

- Mapped listed data sources by country, year (1990-2023), age (0, 1, …, 99+), and disease entity (Level 2 and Level 3)

Examining EU GBD2023 morbidity data inputs

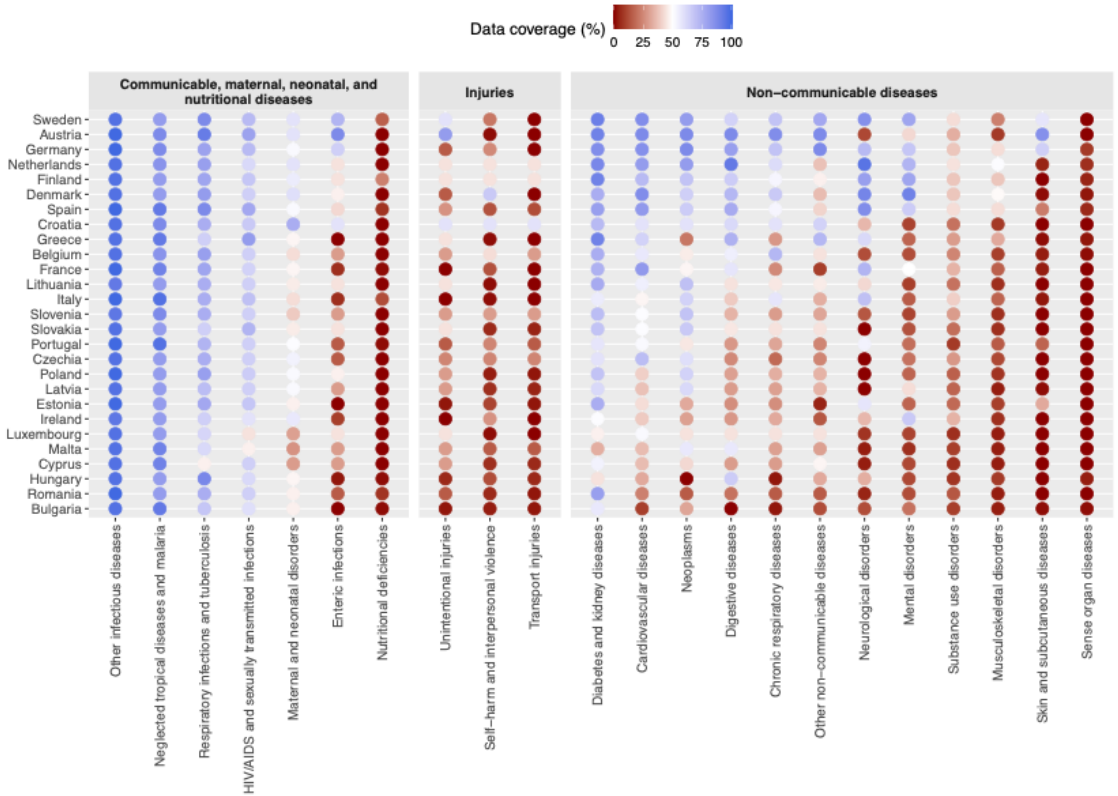
- Data coverage = 100% when **at least one source** provides information for every combination of country, year, disease entity, and age.

What did we learn?

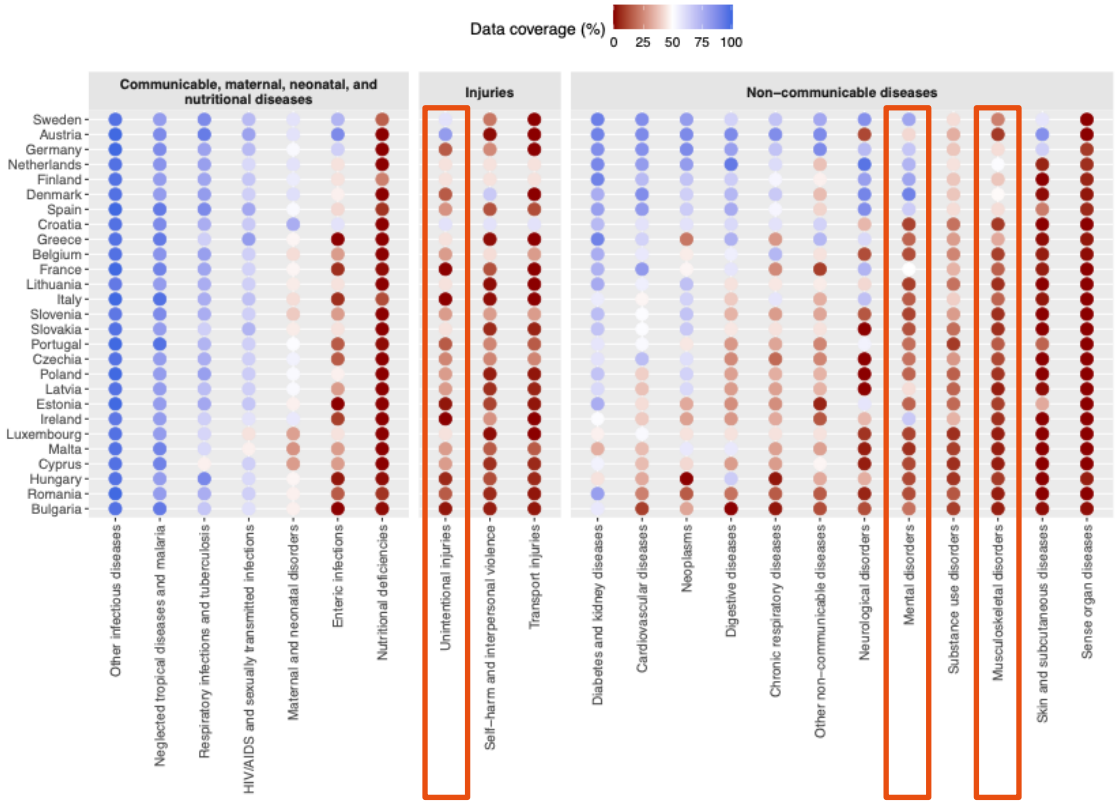
- Differences in data coverage between EU countries, disease categories, and over time

- Post-2004 EU member states have more gaps in important NCD categories (CVD, neurological diseases, mental disorders) compared to Western EU countries

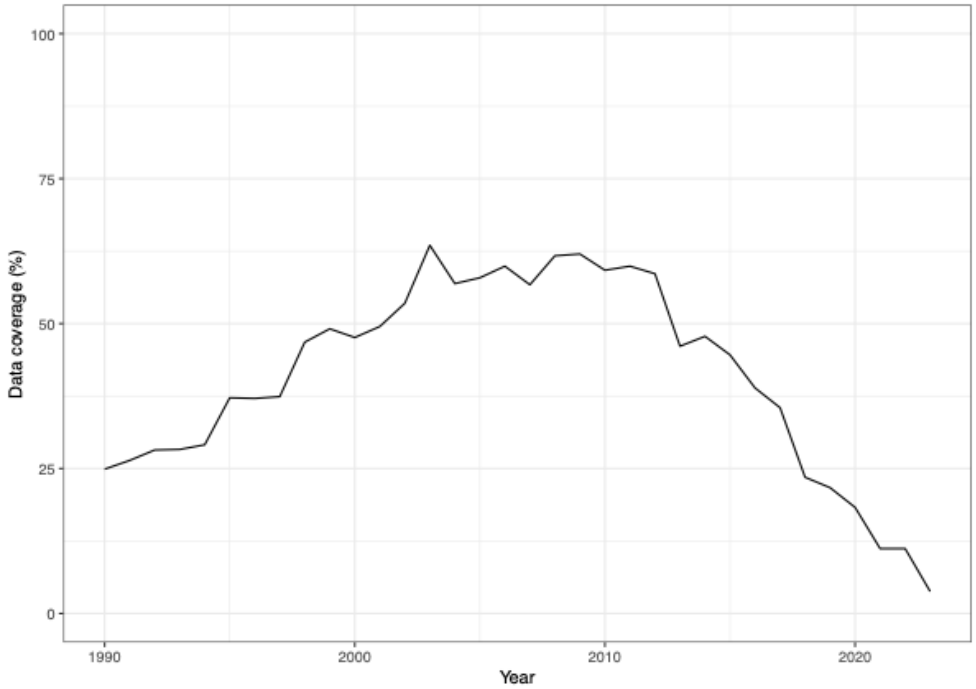
Country-disease coverage



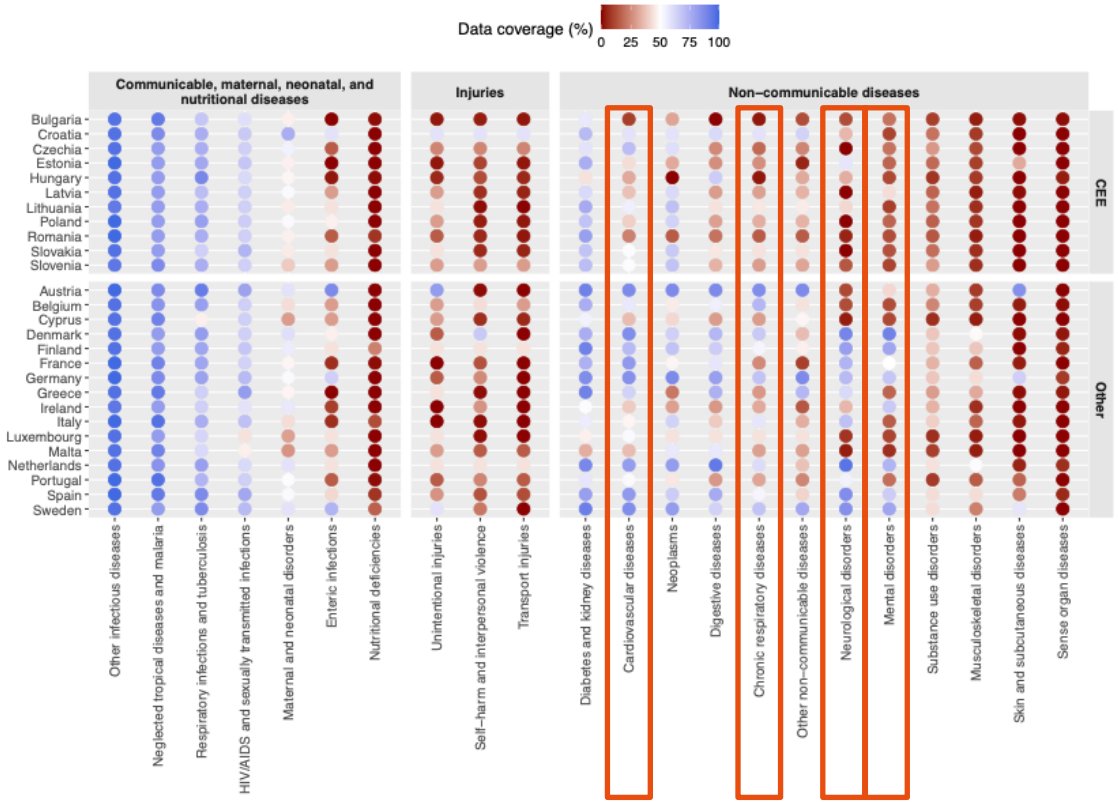
Country-disease coverage



Coverage over time



Coverage CEE versus other EU countries



Interpretation and implications

- Data coverage should inform how we interpret estimates from large-scale statistical models

- Imperfect estimates are preferable to no estimates at all—*but what is the right role for them in guiding decision-making*?

Improving data coverage

- Investing in data collection, standardisation, and sharing is essential
- *Levers*: data infrastructure maturity, workforce availability and skill level, national regulatory environment
- *European Health Data Space presents a window of opportunity*

Thank you for your attention!