

OVERVIEW OF BURDEN OF DISEASE STUDIES IN EUROPE

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Background

- Over years, many national or sub-national **burden of disease (BoD)** studies have been conducted in Europe

Aim and objectives

- How many burden of disease assessments have been performed across Europe, and in which European countries?
- What are the most relevant causes of disease across European countries?
- Which data sources have been used as input data for disease burden studies?
- Which methodological approaches have been made to measure mortality or morbidity due to different causes of illness?

Methods

Data screening

- We searched multiple international databases, search engines, and platforms
- Grey literature was obtained from different sources
- Additional sources (e.g, websites of public health agencies, personal contacts with the working group members part of the burden-eu COST Action)
- Hand-search of eligible burden of disease studies was performed

Methods

Data extraction

Study characteristics

- Title
- Author(s)
- Year of publication
- Study aims
- Reference country (single-country *versus* multi-country)
- Cause of ill-health outcome(s)
- Other: Funding body

Data sources

- Mortality and morbidity data input sources
- Data adjustments
- Internal consistency

DALY methods

- Choice of life table
- Usage of disability weights
- Severity distributions
- Social weighting

Uncertainty analysis

Methods

Data synthesis

- Scope of analysis: causes of ill-health outcomes that have been addressed (eg, overall BoD studies *versus* cause-specific BoD studies)
- Geographic coverage: multi-country *versus* single-country BoD studies
- Type of analysis: secondary analyses using existing GBD/WHO estimates *versus* calculating own YLL, YLD, or DALY estimates

Results

Review focusing on NCD BoD

163 studies were included

89 performed an **NCD-specific BoD assessment**

67 national BoD studies
in 22 European countries

Review focusing on injuries BoD

125 BoD studies were included

48 performed an **injury-specific BoD assessment**

23 national BoD studies
in 11 European countries

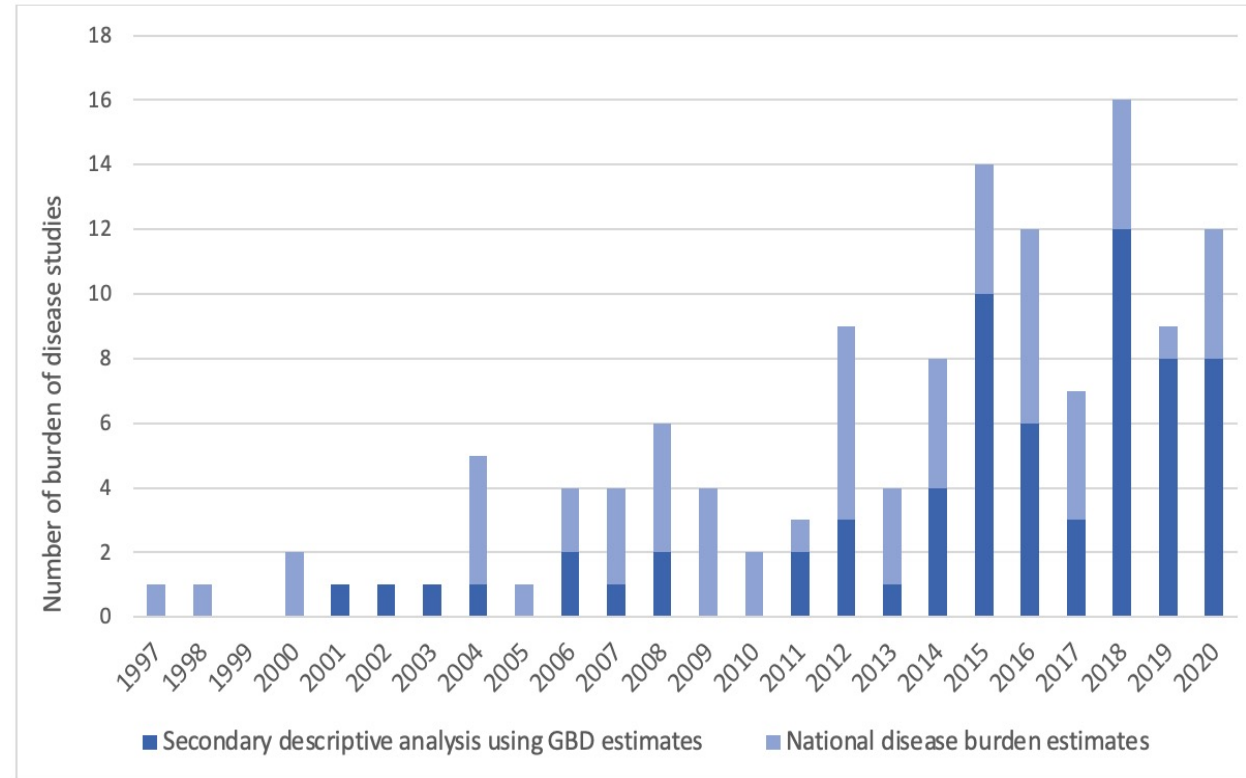
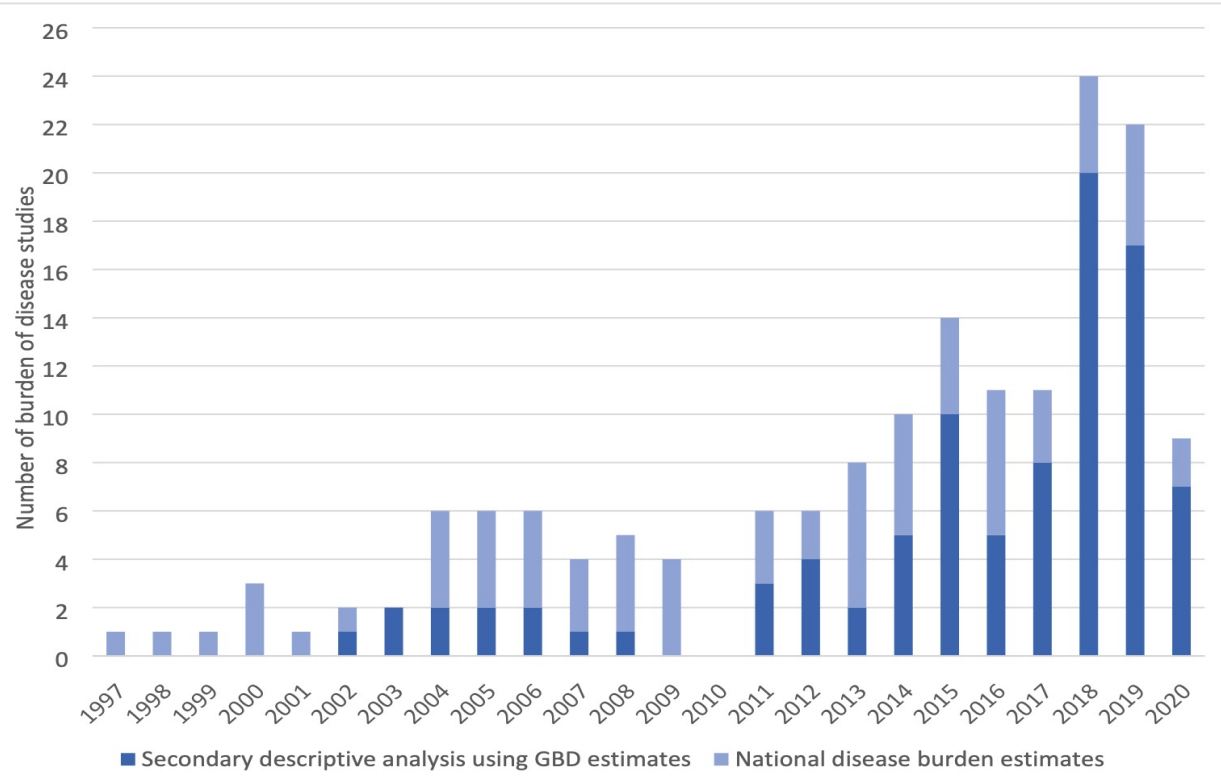
Review focusing on CD BoD

184 BoD studies were included

96 performed an **infectious-specific BoD assessment**

Results

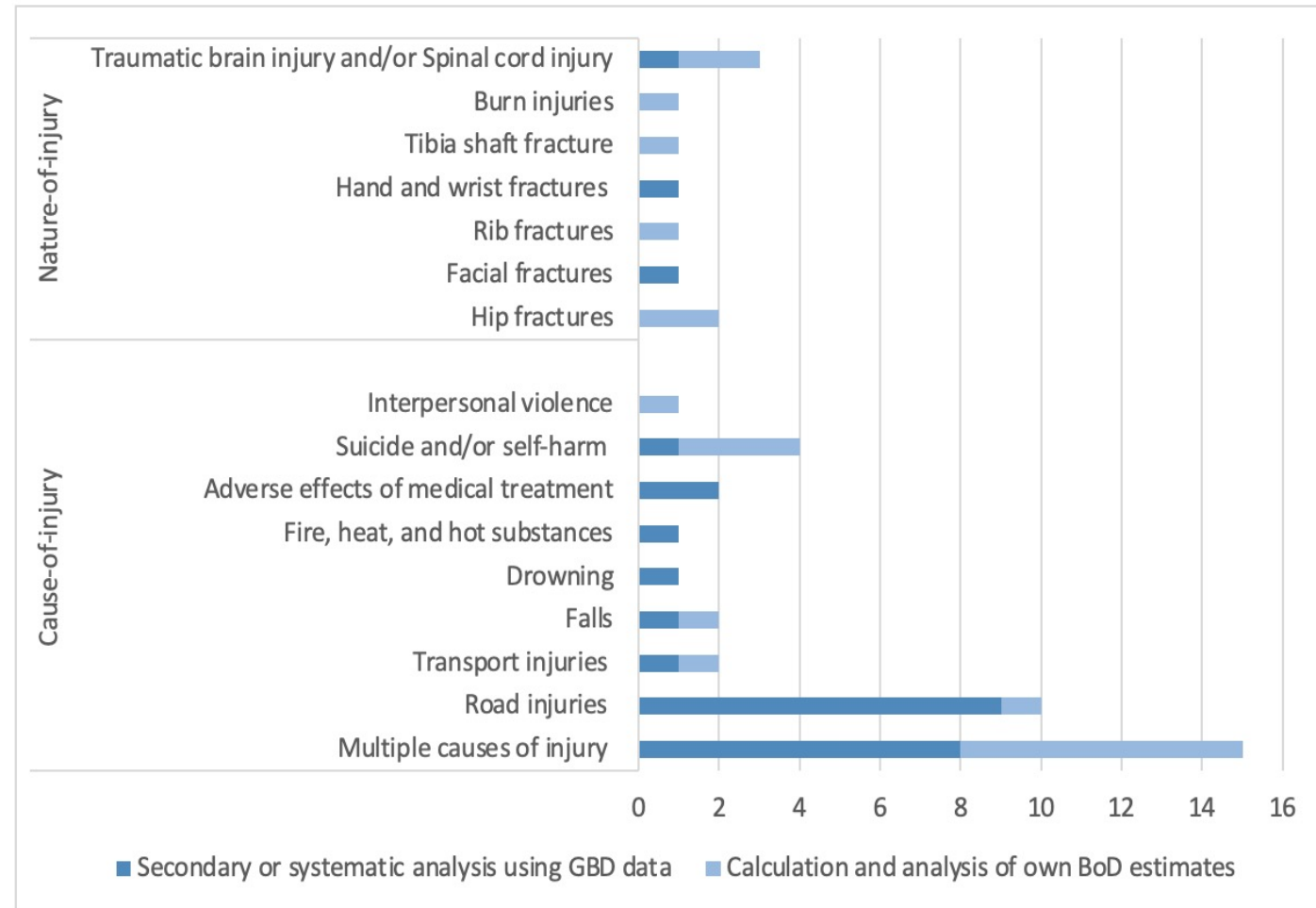
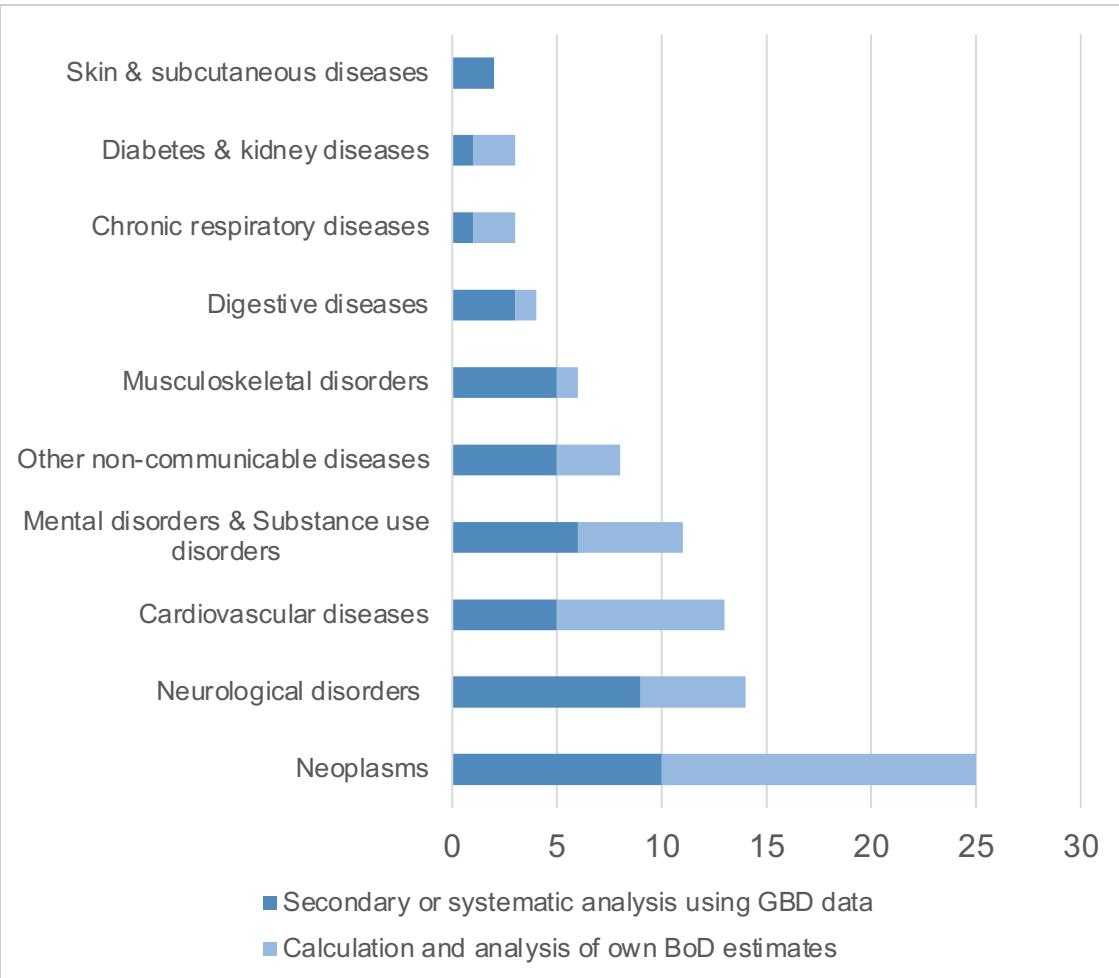
Number of burden of disease studies by year of publication*
NCD (left) and injury (right) BoD systematic literature review



* Please note that the number of the identified studies refers to BoD assessments performed between January 1990 and April 2020

Results

Number of burden of disease studies by cause of ill-health outcomes*
NCD (left) and injury (right) BoD systematic literature review



* Please note that the number of the identified studies refers to BoD assessments performed between January 1990 and April 2020

Conclusions

- Burden of disease **methodological design choices** varied between national or sub-national European studies
- For the **YLD calculations** an incidence or prevalence approach can be used, which is highly dependent on the **data availability**
- In some European countries, the burden of disease approach has not yet been established
 - lack of appropriate data or harmonization of data collection processes?

Thank you for listening!

Special thanks

To more than 100 COST Action CA18218 collaborators
Please get in touch: info@burden-eu.net