

Reporting guidelines for burden of disease studies: why and how?

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BACKGROUND

Burden of disease studies using disability-adjusted life years (DALY)

- Many studies estimating DALY and its components, Years of Life Lost due to premature mortality (YLL) and Years Lived with Disability (YLD), have been performed across Europe between 1990 and 2022.^{1,2}
- Variations and inconsistencies in the application and reporting of DALY specific methods have been identified.^{1,2,3,4}
- Guidelines for reporting DALY calculation methods in (national-level) burden of disease studies are currently lacking.

AIM

- To develop guidelines for reporting DALY calculation studies which will enhance transparency and comparability of burden of disease estimates across Europe and beyond.

METHODS

- In 2021, a working group of burden of disease experts was formed by the European Burden of Disease Network (burden-eu) aiming to promote good practices in reporting DALY calculation methods.
- A list of potential YLL, YLD, and DALY items was generated based on existing literature, guidance for developing guidelines, and consultations with other experts.
- Piloting the draft process and consultation meetings were performed.

RESULTS

- The guide for DALY calculation studies comprises about 6 main headings and about 25 items.
- Information about the study setting and design, data input sources for mortality and morbidity including their quality, and design choices to derive burden of disease estimates were included.

Defining the study setting

- Study location
- Study time frame
- Reference population
- Define data stratification

Data inputs and burden of disease measures



- Cause of death
- Number of deaths
- Choice of life table

- Cause of ill-health
- Number of cases
- Severity of disease
- Disability weight

- Dealing with uncertainties in estimates

- Information on data comparability with previously available burden of disease estimates were included
- Information on how to deal with uncertainties in (national-level) burden of disease studies were also included.

CONCLUSIONS

- We proposed a reporting instrument for DALY calculations to document input data and methodological design choices in burden of disease studies.
- These guidelines serve as an educational and practical tool to better understand the different choices and parameter assumptions that need to be made when estimating DALYs.
- These guidelines can be used by authors, reviewers, and/or journal editors in order to promote consistencies in reporting DALY estimates in future burden of disease studies.
- Application of these guidelines will enhance usability of burden of disease estimates for decision-makers and global, regional, and national health experts.

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