

Chapter 2.3 Disease burden: generating evidence, guiding policy

Author: Nomura S, Ishizuka A

Further reading

1. Haagsma JA, Polinder S, Cassini A, Colzani E, Havelaar AH. Review of disability weight studies: comparison of methodological choices and values. *Population health metrics*. 2014 Dec;12(1):1-4.

Summary of this document: Disasters and other health emergencies cause substantial disability and mortality, and it is important to have reliable evidence on these impacts. Disability weight is necessary for estimating disability-adjusted life years (DALYs), which can be used to measure the burden of disease.

This review article provides an overview of studies that developed disability weights and compares methodological design choices. Four key choices were addressed: (1) health state description, (2) time presentation, (3) panel composition and (4) valuation method. The authors compared disability weights calculated in the disability weight studies for 15 specific disease and injury groups and assessed the influence of the description of the health condition and other design choices on differences in the disability weights. Their main finding is that the values of the disability weights across studies differ markedly, which means that disability weights from studies with different designs cannot be used interchangeably.

2. Murray CJ. Quantifying the burden of disease: the technical basis for disability-adjusted life years. *Bulletin of the World Health Organization*. 1994; 72(3): 429-45.

Summary of this document: Disasters and other health emergencies can cause substantial disability and mortality, and it is important to have reliable evidence on these impacts. Understanding the concept of disease burden can help decision-makers understand the impact on population health using the disability-adjusted life year (DALY) as a summary measure of both mortality and disability.

This article provides the technical basis for the disability-adjusted life year (DALY). The author presents the rationale for measuring the burden of disease, the need for a single indicator of burden, general concepts used in the design of an indicator of the burden of disease, a series of specific value choices and some computational aspects. He notes that using DALYs as an indicator is consistent with a long line of work on composite indicators of non-fatal health outcomes and premature mortality.

3. Murray CJ, Lopez AD. *The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020*. Cambridge: Harvard University Press. 1996.

Summary of this document: Disasters and other health emergencies cause substantial disability and mortality, and it is important to have reliable evidence on these impacts. Understanding the global burden of disease can help decision-makers understand the world's current and future healthcare needs.

This booklet provides a summary of “The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and projected to 2020”, which was published in 1996. It contains examples of the detailed information on the epidemiology of 240 conditions around the world, which was published in “Global Health Statistics: a compendium of Incidence, Prevalence and Mortality Estimates for Over 200 Conditions”. The authors highlighted the expectation that, by 2020, noncommunicable diseases would account for seven out of every ten deaths in low- and middle-income regions of the world. They also discussed the extent to which mental health problems had been underestimated worldwide and showed the significance of injuries as a problem for the health sector in all regions.