

European burden of disease network: strengthening the collaboration

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What are the most relevant diseases and risk factors in a country? How is the impact of different diseases evolving over time, and how does the health status compare between and within countries? With an increasing need for prioritizing available resources, a timely, sound and comprehensive answer to these essential questions is more than ever needed to inform public health decision making. Driven by the impact of the Global Burden of Disease (BoD) study,¹ several researchers and health institutes across Europe have adopted the BoD approach to address these questions.^{2,3} Fundamental to this approach is the use of the Disability-Adjusted Life Year as a comprehensive and comparable summary measure of population health.⁴

Despite the increasing prominence of the BoD approach, several challenges remain. The BoD methodology is complex and highly data intensive, which has led to major disparities across researchers and nations in their capacity to perform BoD studies, to interpret the soundness of available BoD estimates, or to advocate for the use of BoD methods. Often, these disparities follow geographical boundaries—for instance, over half of all published BoD studies in Europe were set in the Netherlands, Spain and UK, while only 15% were set in eastern European countries.² BoD as a generally standardized approach nonetheless requires different methodological choices, and lack of harmonization in these may hamper comparisons across studies. This is further aggravated by the fact that different BoD initiatives have remained scattered—there is for instance little interaction between infectious disease, nutritional and environmental epidemiologists, even though several methodological issues transcend the boundaries of diseases and risk factors. Finally, many BoD researchers are struggling to find optimal ways to translate their findings and communicate them adequately and comprehensively to decision makers and other stakeholders.

In response to these needs, several countries and BoD researchers have set up *ad hoc* partnerships. In 2016, the WHO Regional Office for Europe (WHO-EURO) launched a European BoD network, aiming to intensify links between WHO, IHME and the WHO-EURO member states.⁵ Recently, our group has launched a COST Action that will serve as a technical platform to integrate and strengthen capacity in BoD assessment across Europe and beyond. The burden-eu Action has listed the following four priorities for intensified collaboration:

i. **Increased interaction between existing efforts.** The Action will bring together expertise across different domains and professional backgrounds, ranging from experts in infectious diseases, non-communicable diseases, injuries and risk factors, to experts in more comprehensive national, regional and global BoD studies. By comparing existing BoD initiatives, methodological

differences will become evident and the road will be paved towards improvements and harmonization of methods and approaches. It will continuously monitor BoD activities to keep track of new developments and initiatives.

ii. **Technical capacity building at country level.** The Action will serve as a capacity building platform for those interested in developing or strengthening their BoD skills. To support this aim, we will organize training schools and workshops, and facilitate short-term scientific missions. The Action will also develop standardized training material, a checklist for BoD studies and a technical roadmap for national BoD studies.

iii. **A platform to support methodological advances.** Many of the methodological challenges of BoD transcend the boundaries of diseases and risk factors, and connect to domains such as economics, mathematics and statistics. The Action will be in a unique position to discuss and advance BoD methodology, and to work towards a joint BoD research agenda, including an identification of common challenges as well as knowledge and data gaps.

iv. **An actionable understanding of the process underlying knowledge translation.** In collaboration with experts in knowledge translation and risk communication, the Action will make much needed steps towards effective translation of evidence into practical and tangible advice. It will compile good practices in knowledge translation and develop a roadmap to integrate knowledge translation in national BoD studies.

The COST Action currently comprises researchers from 36 different European countries and from the European Observatory on Health Systems and Policies. We expect the network to continue growing over time, and welcome researchers from across Europe and beyond to join the Action and contribute and strengthen their expertise. Further information about our Action remains available via our website www.burden-eu.net.

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