

Regional differences in the attributable burden for Germany: Exploring YLL for selected risk factors

Michael Porst

M Porst¹, A Wengler¹, H Gruh², E von der Lippe¹, D Plaß²

¹Epidemiology and Health Monitoring, Robert Koch-Institute, Berlin, Germany

²Exposure Assessment and Environmental Health Indicators, German Environmental Agency, Berlin, Germany

Contact: porstm@rki.de

Background:

Within the BURDEN 2020 project (Burden of disease in Germany at the national and sub-national level) we calculate burden of disease indicators on a small-scale level for Germany. In order to provide a comprehensive view over diseases and their impact on population health, Years of Life Lost due to premature death (YLL) and Years Lived with Disability (YLD) are summed up to the measure Disability Adjusted Live Years (DALY). YLL, YLD and DALY will be attributed to a set of risk factors.

Methods:

Object of the analysis is the indicator YLL across spatial planning regions in Germany. It is calculated by multiplying the number of deaths with the remaining life expectancy at the age of deaths. A share of YLL can be attributed to specific risk factors. Smoking and ambient particulate matter pollution are used as examples. The distribution of risk factors is based on German health surveys and local air pollution measurements. The analysis follows the Comparative Risk Assessment approach, which quantifies the possible change in burden by assuming a different exposure level in the past.

Results:

Based on the absolute YLL estimates, the overall leading causes of deaths are ischemic heart diseases, tracheal, bronchus, and lung cancer and stroke. In addition, for women breast cancer is a leading cause of death. Causes vary by age groups and by region. We expect the attributable fraction to vary across local areas as well.

Conclusions:

When it comes to health care intervention, the method of attributing risk factors to burden of disease outcomes reveals necessary fields of action, especially across regions. In order to allocate financial resources within the health care, the CRA can provide additional arguments for political decision making.

Key messages:

- Causes of death and the related years of life lost are an integral part of health monitoring.
- Our analysis reveals how YLL and risk factor attributable burden vary across German regions.