

CONCLUSION

GBD 2010 identified major trends in global health that can be summarized by the three Ds: demographics, disease, and disability. As most countries have made great strides in reducing child mortality, people are living longer and the population is growing older. These demographic changes are driving up premature deaths and disability, or DALYs, from non-communicable diseases. Health problems are increasingly defined not by what kills us, but what ails us. In 1990, childhood underweight was the leading risk factor for ill health, but high body mass surpassed it in 2010 as a more important cause of premature death and disability. This finding illustrates global shifts away from risk factors for communicable disease in children toward risk factors for non-communicable diseases.

GBD 2010 found that non-communicable diseases and disability caused a greater share of health loss in 2010 compared to 1990 in most regions of the world. At the same time, the study revealed that the leading causes of DALYs in sub-Saharan Africa have changed little over the past 20 years. Still, GBD 2010 provides evidence of encouraging progress in that region, such as reductions in mortality from malaria, HIV/AIDS, and maternal conditions.

In Latin America and the Caribbean, GBD 2010 documented important regional trends that reveal increasing disease burden due to injuries and non-communicable diseases. Injuries from violence in Brazil, Ecuador, and a number of Central Latin American countries are driving these regional trends. Road injuries were another dominant cause of premature death and disability in the region. DALYs due to non-communicable diseases such as depression, musculoskeletal disorders, chronic kidney disease, cirrhosis, and alcohol and drug use disorders also increased in this region between 1990 and 2010.

While disease burden estimates are useful for informing health system planning, an alternative metric known as age-standardized rates must be used to measure health progress in the region. Removing the effects of demographic changes by using age-standardized rates shows that most countries in Latin America and the Caribbean have reduced rates of non-communicable diseases such as ischemic heart disease and stroke between 1990 and 2010, but diabetes, musculoskeletal disorders, drug use disorders, and depression remain problem areas in many countries.

Risk factors such as high sodium intake and lack of fruit, nuts and seeds, and whole grains in the diet, overweight and obesity, high blood pressure, and alcohol use have become important threats to public health in many countries in Latin America and the Caribbean. While many countries have reduced health loss from risk factors related to illness in children, these risk factors persist in countries such as Bolivia and Haiti.

While GBD 2010 provides key information about health trends at global and regional levels, its tools also allow users to view data specific to 187 countries. Similar to the ways in which governments use financial data to monitor economic trends and make necessary adjustments to ensure continued growth, decision-makers can use GBD data to inform health policy. Continual updates of GBD will incorporate the most recent data on disease patterns as well as the latest science about the effects of different risk factors on health.

Future updates of GBD will be enriched by widening the network of collaborators. Expanded collaboration between researchers, staff of ministries of health, and IHME on national and subnational burden of disease studies will ensure that GBD tools are used to understand causes of premature death and disability at the community level. Despite the similarities in epidemiological trends in most regions, GBD illustrates the unique patterns of diseases, injuries, and risk factors that exist in different countries. Local epidemiological assessment is crucial for informing local priorities. The GBD approach to health measurement can help guide the design of public health interventions to ensure they are tailored to countries' specific needs.

IHME is seeking partners interested in conducting in-depth studies of the burden of disease in countries. Through such partnerships, IHME is helping governments and donors gain insights into localized health trends to inform planning and policymaking. IHME is committed to building capacity for GBD analysis in countries around the world and will be conducting a variety of training workshops. Information on these trainings can be found at <http://www.healthmetricsandevaluation.org/gbd/training>.

GBD data visualization tools can display regional and national data from burden of disease studies. These user-friendly tools are helpful for planning, presentations, and educational purposes. Also, IHME has designed a variety of data visualization tools to compare trends between various raw data sources at the national level. By visualizing all available data, ministry of health officials and researchers can quickly identify unexpected trends in the data that they may wish to flag for further investigation.

Currently, IHME is working to expand GBD to track expenditure for particular diseases and injuries. Also, IHME is estimating utilization of outpatient and inpatient facilities and other health services for specific diseases and injuries. Side-to-side comparisons of these estimates to the number of DALYs from myriad causes will allow decision-makers to evaluate health system priorities. Data on disease-specific expenditure and disease burden are essential for policymakers facing difficult decisions about how to allocate limited resources.