GBD 2010: understanding disease, injury, and risk

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Publication of the Global Burden of Disease Study 2010 (GBD 2010) is a landmark event for this journal and, we hope, for health. The collaboration of 486 scientists from 302 institutions in 50 countries has produced an important contribution to our understanding of present and future health priorities for countries and the global community.

What is the GBD 2010? Launched in 2007, it is a consortium of seven partners: Harvard University; the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, Seattle; Johns Hopkins University; the University of Queensland; Imperial College London; the University of Tokyo; and WHO. GBD 2010 is the first systematic and comprehensive assessment of data on disease, injuries, and risk since 1990. That initial exercise was commissioned by the World Bank. This latest round was supported by the Bill & Melinda Gates Foundation. The project has dramatically expanded in scope. In 1990, 107 diseases and injuries, together with ten risk factors, were assessed. For 2010, 235 causes of death and 67 risk factors are included.

What are the headline findings? First, although 52·8 million deaths occurred in 2010 (in 1990, the figure was 46·5 million deaths), great progress is being made in population health. Life expectancies for men and women are increasing. A greater proportion of deaths are taking place among people older than 70 years. The burdens of HIV and malaria are falling. Far fewer children younger than 5 years are dying. Infectious diseases are increasingly being controlled. In some parts of the world, there has been substantial progress in preventing premature deaths from heart disease and cancer.

But this hopeful picture is being challenged by old and new threats. Huge gaps remain in progress for some regions of the world. Tuberculosis and malaria are estimated to have killed around 1·2 million people each in 2010. 8 million people died from cancer in 2010, over a third more deaths than 20 years ago. One in four deaths was from heart disease or stroke. 1·3 million deaths were due to diabetes. Deaths from road traffic injuries increased by almost half. Blood pressure is the biggest global risk factor for disease, followed by tobacco, alcohol, and poor diet. And young adults are emerging as a new and neglected priority in global health: GBD 2010 finds that young adults, especially men, are dying in far higher numbers than previously appreciated. But the most afflicted continent remains Africa. Here, maternal, newborn, and child mortality, along with a broad array of vaccine-preventable and other communicable diseases, remain urgent concerns.

GBD 2010 also puts an important spotlight on disability—from, for example, mental health disorders, substance use, musculoskeletal disease, diabetes, chronic respiratory disease, anaemia, and loss of vision and hearing. Disability from disease and injury will become an increasingly important issue for all health systems. More people will be spending more years of their lives with more illnesses. Women are hit especially hard by disability. Women aged 15–65 years lose more healthy life to disability than men. Yet disability has been almost ignored as a central policy priority during the era of the Millennium Development Goals.

What should happen next? These reports should add energy and momentum to efforts to improve the measurement of health, especially commitments to strengthen civil registration and vital statistics systems in countries. There is also every prospect that, instead of the GBD being a single event every few years, it will evolve into a continuous process of reviewing and updating data as new and more reliable information, together with better methods, become available. The 1990 GBD reports led to important shifts in health priorities. Non-communicable diseases, especially mental ill-health, justifiably achieved much greater prominence. The

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success of the GBD, then and now, is that it provides a level playing field to assess independently (and dispassionately) the health priorities that face countries.

In the meantime, everyone concerned with health—health workers and policy makers, those working in technical agencies (across the UN system), development partners, civil society, and the research community—should use these latest findings to sharpen understanding of trends in disease, injury, and risk. We should use them to spark global, regional, and national debates about their meaning for policy and practice. We should use them to hold one another accountable for progress towards internationally agreed development goals and to plan for the post-2015 era of sustainable development, where the scope of health as an indispensable part of human development will be broadened still further. And, finally, we should use them as a platform to advocate ever more vigorously for the growing consensus that universal health coverage could be the third great global health transition.[1] GBD 2010 is an extraordinary collaboration. Our collective responsibility is to turn it into an extraordinary opportunity.

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1 Rodin J, de Ferranti D. Universal health coverage: the third global health transition. *Lancet* 2012; **380:** 861–62.

From new estimates to better data

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The Global Burden of Disease Study 2010 (GBD 2010) in *The Lancet* represents an unprecedented effort to improve global and regional estimates of levels and trends in the burden of disease. Accurate assessment of the global, regional, and country health situation and trends is critical for evidence-based decision making for public health. WHO therefore warmly welcomes GBD 2010, which was undertaken by the Institute for Health Metrics and Evaluation (IHME) with its partners and draws on the contributions of many scientists, including those who work in WHO programmes.

In many areas, GBD 2010 results are similar to WHO's recently published estimates. In other areas, the results of GBD 2010 differ substantially from analyses by WHO and other UN entities. The publication of GBD 2010 constitutes an important milestone that can be used as a basis for further work to address these differences, which are more often based on choice of statistical techniques rather than realities on the ground.

First, as we move forward we need to agree on common standards for documentation and sharing of data, transparent peer review, and sharing of methods in a way that maximises benefits to countries. These common standards will need to be accompanied by the development of user-friendly analytic tools, and a sustained effort to strengthen countries' own capacities to gather data and produce estimates. Second, we have to acknowledge that although competition can be scientifically productive, it can also detract from national capacity strengthening by impeding sharing of data or transparent testing of methods. Third, to reconcile existing differences and provide the world with the best possible health estimates it will be important to ensure the constructive and continued engagement of all groups involved, including IHME and other academic institutions, as well as WHO, UNICEF, and other UN entities.

As a first step in this process, I intend to convene an expert consultation in early 2013 to review all current work on global health estimates and discuss ways in which we can work together to improve data and estimates for better country, regional, and global health decision making. Lastly, we must not forget that the real need is to close the data gaps, especially in low-income and middle-income countries,[1] so that we no longer have to rely heavily on statistical modelling for data on disease burden. We know that this will require stronger country health information systems, such as registration of births and deaths. Accountability for health should be based on sound monitoring of results, tracking of resources, and transparent reviews, with a focus on equity.

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I am Director-General of WHO. I declare that I have no conflicts of interest.

1 Chan M, Kazatchkine M, Lob-Levyt J, et al. Meeting the demands for results and accountability: a call for action on health data from eight health agencies. *PLoS Med* 2010; **7:** e100023.