



## Global Burden of Disease Study 2015 provides GPS for global health 2030

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The latest estimates and analyses from the Global Burden of Disease Study 2015 (GBD 2015)<sup>1-7</sup> provide a vital link between the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) for 2016–30. The GBD 2015 investigators report global and national trends in various health metrics, from 1990 to 2015, and their association with levels of national development measured through a Socio-demographic Index (SDI), and profile epidemiological and health transitions across the world. GBD 2015 also measures progress on specific MDG-related indicators and non-MDG-related indicators that are included in the SDGs.<sup>1-7</sup>

We can celebrate the 10-year rise in global life expectancy from birth, which occurred between 1980 and 2015, especially the upswing since 2005 in sub-Saharan Africa which was devastated by HIV/AIDS in earlier decades.<sup>8</sup> There is, however, a grim pointer that regions affected by conflict are showing a decline in life expectancy—for example, in Syria male life expectancy dropped by 11.3 years in the past decade.<sup>1</sup> It will be tragic if the life expectancy gains accruing from socioeconomic development and scientific advance are undermined by conflicts which feed sectarian violence and fuel social disruption. The rise in disability-adjusted life-years (DALYs) lost due to war and interpersonal violence in some regions<sup>3</sup> demands that political processes place a

premium on peace, social stability, prevention of crime, and arms control.

Epidemiological transition, noted in earlier GBD studies, had gathered momentum by 2015. Deaths due to infectious and nutritional causes as well as maternal and child deaths have declined, whereas deaths from non-communicable diseases (NCDs) have risen.<sup>1</sup> However, age-standardised mortality rates of NCDs have fallen,<sup>1</sup> indicating that the SDG goal of reducing premature mortality from NCDs is achievable. Globally, trends suggest that NCDs will pose the challenge of longer survival accompanied by an expansion of morbidity that health systems have to deal with. Even as primary prevention has to be vigorously promoted, the demands of secondary prevention for people who live with NCDs will increase. Countries at a higher level of SDI have shown that a relative compression of morbidity is possible, even with increasing life expectancy, signalling that socioeconomic development and investment in health-system strengthening can yield the dividend of increased healthy life expectancy (HALE).<sup>3</sup> Infectious diseases still demand action for improving environmental hygiene and delivery of health services, with dengue rising in prominence<sup>1</sup> and vaccine-preventable rotavirus and pneumococcus still contributing to a substantial number of child deaths.<sup>1</sup>

In responding to these challenges the role of health systems is especially important, since both the unfinished MDG agenda and the SDGs call for efficient and equitable health services. Although maternal and child deaths have declined globally, there are still several countries where mortality rates are appallingly high, which highlights the need for improved antenatal and obstetric care.<sup>5,6</sup> Risk factors of NCDs dominate the top ten list of global risk factors.<sup>4</sup> Control of high systolic blood pressure, hyperglycaemia, and high cholesterol will require a strong health-system commitment to early risk detection, stratification, and reduction, especially through reconfigured primary health care. Tobacco control, reducing ambient and household air pollution, curtailing alcohol-related harm, and



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countering the growing problem of drug use call for coherent multisectoral responses propelled by unwavering political commitment.

The many faces of malnutrition continue to feature prominently in GBD 2015, albeit with considerable geographical diversity. With anaemia affecting 2.36 billion people<sup>2</sup> in 2015 and child undernutrition still a major contributor to DALY loss in sub-Saharan Africa,<sup>3</sup> nutrition transition is still patchy. Rising risks attributable to high salt diets, high body-mass index, and diet-related metabolic risk factors suggest diet-related NCDs will become the dominant nutrition challenge on the road to 2030.

The relation of various health metrics to SDI (a composite index of income per person, educational attainment, and fertility) reveal a broad global pattern of countries with low SDI still having high burdens of maternal and child mortality and infections, whereas countries higher on the SDI scale have higher absolute burdens of NCDs.<sup>1,2</sup> There is, however, substantial variability within geographical regions and SDI categories. The NCD epidemics are still evolving in low-income and middle-income countries and the social gradients are likely to change as the epidemics mature.<sup>9</sup> The causes of health inequities within countries have not been mapped out, although that profiling is far more relevant to national health policy and system response than the positioning of countries across a global gradient. The recommendation that countries should aim to increase income and educational levels, while reducing fertility through improved access to reproductive health services, is a useful steer to national policy makers. Although necessary, that action is not sufficient. At each level of SDI, stronger performance of the health system must avert or attenuate the anticipated health burdens.

GBD 2015 also tracks progress on the 33 health-related indicators of the SDGs.<sup>7</sup> Understandably, attention to the MDGs since 2000 has resulted in greater progress on MDG-related indicators than on the additional indicators in the SDGs. While accelerating progress on the MDG indicators, health systems must also now address major NCDs, mental health, substance use disorders, and road traffic injuries, as well as the growing burdens of sense organ disorders and musculoskeletal disorders. This composite agenda must

be positioned in the framework of universal health coverage.

GBD is not a repetitive exercise of cataloguing current and future disease catastrophes with greater and greater precision. Improved mapping of trends and future projections from GBD, as well as climate change predictions,<sup>10</sup> provide a picture of where our world is headed if we do not resolutely act to design a healthier and more secure future for all of humanity. Never before have we been so forewarned of the dangers that await us if we do not act now. We have the knowledge and tools to avert those dangers. It is a challenge to human intellect and enterprise, as well as the shared values of social solidarity and equity, as to how best we use this knowledge to create our common future.

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I declare no competing interests.

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