

neonatal causes such as preterm birth and intrapartum-related complications will require focused attention to improve management of labour and delivery and equitable access and quality of care, especially in health facilities. Neonatal infections could be further reduced with use of new WHO guidelines for simplified antibiotic therapy that will enable increased treatment at community level.¹⁰ If countries were to achieve the proposed SDG target of reducing under-5 mortality rates to 25 deaths or lower per 1000 livebirths in 2030, then major cause-specific mortality rates would need to be more than halved at the global level.⁴

While we evaluate countries' progress towards the MDGs, it is also useful to consider the global process of setting targets. It is unfortunate that the MDGs set in 2000 began the target period retroactively in 1990. With the focus on the targets after 2000, 17 countries reached annual rates of reduction in child mortality consistent with accomplishing the two-thirds reduction, but did not achieve the target because of the slower rates of decline in the previous decade. Targets can be motivating for programmes, but can result in frustration if they are set retroactively or for too great a change.

It is debatable whether the target for child mortality should be a proportionate reduction from a baseline, as the MDG 4 target was, or whether it should instead be a single target for all, as is proposed for the SDG target on child survival. A proportionate reduction target for MDG 4 recognised the very different starting points of the low-income and middle-income countries, yet resulted in countries still having high child mortality even after reductions of up to two-thirds. A single target for all countries to achieve low child mortality has many attractions, including the motivation that the world would have much greater equity if it were accomplished. You and colleagues¹ project the current trends in reduction

of under-5 mortality rate from 2015 to 2030 and compare that with the projection of the SDG target. Achievement of the SDG target would result in about 13 million more children surviving until their fifth birthday in the next 15 years than would current mortality trends. That we have the necessary means to save these lives provides a moral imperative to implement the efficacious child survival interventions that are now available.

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How can we reduce the global burden of disease?

In *The Lancet*, the Global Burden of Disease (GBD) collaboration¹ reports an update on trends of risk factors and health behaviours in 188 countries from 1990 to 2013, as part of the GBD 2013 study. The report is an extraordinary contribution to evidence-based policy making and will be extensively cited. In his editorial commenting on the first GBD 2010 report, Richard

Horton welcomed the prospect that the GBD project will evolve into a continuous process of reviewing data as they become available.² This prediction has materialised, substantively.

The authors have expanded the number of risk factors investigated from 67 to 79, and added 3 extra years to the period of observation. In total, the 79 risk factors



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and health behaviours accounted for more than half of global deaths, and around 41% of global disease burden as measured in terms of disability-adjusted life-years. Besides high blood pressure and air pollution, the report emphasises the importance of behaviour-related factors, such as dietary risks and high body-mass index (BMI). Child and maternal malnutrition and clean water supply have been a diminishing problem. The big picture of the GBD 2013 findings is clear: an increasing majority of the world's population lives in post-epidemiological transition circumstances. The report reminds us that many prevention and primary care policy options are already available to act on these important risks.¹

Well designed health policies have enormous potential to improve population health, but when misguided they can also cause harm.³ It is therefore important to consider carefully how the new findings should be interpreted. First, the authors have done an excellent job in using sophisticated statistical instruments to assess causality, representativeness, and accuracy.¹ Nevertheless, the strength of evidence varies substantially between the risk factors. Just to mention two examples: strong evidence has accumulated in recent years about the effects of air pollution (with a surprising 100% representativeness index in GBD 2013); on the other hand, GBD 2013 finds that a diet low in nuts and seeds accounts for more than half of the proportions of global deaths and burden of disease attributed to physical inactivity, and almost half of those for high total cholesterol. This estimate for consumption of nuts and seeds is uncertain to say the least. Implementation of interventions simply to increase

this single dietary item is unlikely to make such a major difference in life expectancy or disease-free years, because the health effects arise from wider dietary patterns.^{4,5}

Second, the degree to which the risk factors are modifiable varies. At this stage, the GBD 2013 authors have paid relatively little attention to this issue as their approach was to select risk factors based on so-called convincing or probable evidence of an association with disease outcomes.¹ This is justified as the aim was to quantify harm. In the future, the obvious next step is to understand modifiability and the interventions available to address harm. This insight is crucial to improve public health modelling and to develop better preventive guidelines.⁶⁻⁹ We recognise the evolving methods GBD researchers are developing to address complexity in the aims of the GBD programme, and propose that modifiability should be incorporated as an additional element in future estimations.

As a way forward, GBD 2013 suggests strengthening of research on behavioural interventions, a vitally important but challenging area of study. In drug trials, adherence to a drug regimen can be tightly controlled whereas, in real life, even treatments as simple as taking a pill once a day are not adhered to.¹⁰ In behavioural interventions, which require populations to modify long-held habits, the adherence problem is orders of magnitude greater. Large drug trials are expensive but often also profitable investments for the pharmaceutical industry, ensuring motivation to fund research. For behaviour change studies, there are usually few financial incentives for industrial partners to investigate intervention benefits and harms. In the public health context, evidence for causation, and for the effectiveness of interventions, cannot depend exclusively on gold-standard randomised trials. More feasible methods, such as natural experiments, monitoring the effect of policies with electronic medical records, and mendelian randomisation are essential.

The top risk factors in GBD 2013 include dietary risks, high systolic blood pressure, child and maternal malnutrition, tobacco smoke, air pollution, and high BMI. It is useful to compare this list with the risk factors included in the 25×25 strategy by the UN and WHO.¹¹ Air pollution is notable for its absence in the UN-WHO prevention strategy, while physical activity does not emerge as a top 10 priority from the GBD 2013 estimates. Even more interesting is the fact that the sum

of other risk factors in GBD 2013, which are not included in the 25 × 25 strategy, explains a large proportion of disease burden, a finding that the UN–WHO strategy should seriously consider.¹¹

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China—a call for papers

In October, 2016, *The Lancet* will dedicate a weekly issue to health care and research in China—our seventh such themed issue since 2008. While we welcome submissions from China throughout the year and across all *Lancet* titles, the editors invite submissions of high quality research from China, or from research teams working on health in China, for this issue in particular. Submissions are welcome on all aspects of health science including, but not limited to: non-communicable disease control, health policies, and health-care reform in China.

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