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Authors' reply

David Taylor-Robinson and colleagues have raised an important question: why the under-5 mortality rate in the UK is lagging behind other developed nations in western Europe. In their letter, they examined the association between childhood poverty levels and mortality rates in children younger than 5 years in developed countries and showed that increases in childhood poverty is a key potential driver behind quite high mortality in this group in the UK; priority needs to be given to improve the welfare of children. Such efforts, together with strict surveillance of childhood mortality and morbidity, even in developed nations as Philippa Rees and colleagues suggested, will surely help to further reduce under-5 mortality rate in developed nations, such as the UK.

We applaud the efforts by Taylor-Robinson and colleagues and Rees and colleagues in using our comprehensive assessment of mortality in children younger than 5 years at country level to inform debate for national policy. We also suggest that research needs to be taken to the next level—ie, subnational analysis of under-5 mortality rate to assess for which communities are under-performing to allow governments, local or central, to make informed changes to policy. Such is the effort of the Global Burden of Disease Study,[1] together with Public Health England in looking at mortality and disease burden by region and level of deprivation in the UK. Additionally, we are also beginning to assess health disparity by income quintiles at the county level in the USA. These efforts will help to elucidate differentials in health by income and the extent of poverty even in the most developed countries.

We declare no competing interests.

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Learning objectives for sustainable health care

The Comment by Andy Haines and colleagues (Sept 20, p 1073)[1] calls upon health professionals to "promote deep cuts in emissions of climate-active pollutants now for the long-term protection of human welfare". Sustainable Healthcare Education—a network of academics, doctors, and health-care students—has developed three simple learning objectives to communicate the links between medical practice and a more environmentally and socially sustainable world.

In a national consultation we disseminated draft objectives and requested structured feedback from all UK medical schools, Royal Colleges, post-graduate deaneries, and major medical organisations. 64 organisations responded to this questionnaire online or by telephone. Revised objectives were further modified at a seminar attended by 33 educationalists from a diversity of backgrounds. A working group collated feedback into a substantially revised draft that was disseminated to all participants for final review. The three overarching consensus objectives, taken from the full consesus document, are listed in the panel.

Of the objectives, the first examines the value of ecosystems and the anthropogenic threats to human and planetary health. The second objective links sustainability to the quality improvement agenda, describes sustainable approaches to health care delivery and explores the health co-benefits of carbon reduction policies, such as active transport.[2] The third objective addresses the ethical dimensions of sustainability, including the application of the inverse care law to climate change, and whether the hippocratic exhortation of doctors to never do harm, extends beyond individuals in the present generation.

These objectives have been incorporated into existing curricula through public health, primary care, paediatrics, cardiology, nephrology, psychiatry, and emergency medicine. In the UK, several clinical specialties have funded sustainability scholarships to inform and motivate.[3,4] The Centre for Sustainable Healthcare (Oxford, UK) and the Centre for Health and

***Panel:* Three overarching learning objectives for sustainability and health care**

- Describe how the environment and human health interact at different levels
- Show the knowledge and skills needed to improve the environmental sustainability of health systems
- Discuss how the duty of a doctor to protect and promote health is affected by the dependence of human health on the local and global environment

For the **priority learning objectives from the Sustainable Healthcare Education** see http://sustainablehealthcare.org.uk/sustainable-healthcare-education/priority-learning-outcomes

For more about the **Centre for Sustainable Healthcare** see http://sustainablehealthcare.org.uk/

For more about the **Centre for Health and the Global Environment** see http://www.chgeharvard.org/

the Global Environment (Harvard University, Cambridge MA, USA) offer a range of teaching materials.

Learning objectives for sustainable health care aim to align medical education with the changes in emphasis seen in many other academic disciplines, such as engineering and the earth sciences. The next challenge will be to translate these three objectives into robust and relevant parts of the medical curriculum.

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Dietary patterns need emphasising

In a thoughtful Series, Ursula Bauer and colleagues (July 5, p 45)[1] somewhat ambitiously suggest four widespread health-related strategies, specifically for the effective management of chronic conditions to deliver healthier students to schools, healthier workers to employers and businesses, and a healthier population to the health-care system. Exactly how these goals will be accomplished is not clear. At present, there is widespread interest in the role of diet in primary prevention.[2] Thus, of five protective patterns of health behaviour in men in America, diet was the first of five factors mentioned[2] and had too been stressed for in women in America.[3] Furthermore, diet in relation to disease was first mentioned in *The Lancet* in 1947, by Magnus Pyke and colleagues.[4] In 2008, a prospective cohort study[5] about the role of lifestyle factors showed, after 24 years of follow-up, that diet is of major importance to the health of American women. Thus, arguments could be made to suggest that Bauer and colleagues[1] were non-specific in their four aims that did not emphasise diet in the prevention of chronic disease.

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Obesity stigmatisation from obesity researchers

Obesity stigmatisation has become a major topic of research, with empirical evidence showing negative consequences for people who are stigmatised.[1] With research showing that obesity stigmatisation is widespread and that antifat attitudes are strong,[2] there have been not only calls for intervention but also criticism of sources that seem to promote stigmatisation and stereotypical messages about overweight and obese people, such as media portrayals. Stereotypes of overweight and obese people include poor intelligence, sexual unattractiveness, laziness, and gluttony.[3]

We attended the Association for the Study for Obesity conference on Sept 16–17, 2014 in Birmingham, UK, and were surprised at the stigmatising comments of some of the presenters. For example, a well known and established researcher who has published research about obesity stigma and the potential effects on obese people commented that if obese people lost weight "they would have a lot of sex, which is probably good as they won't have had it for a while", in line with the stereotype that obese people are unattractive and likely to be sexually inactive. Another renowned researcher, when speaking about media sources that have reported that exercise is bad in general for health, commented that "exercise is rubbish. That is precisely the message obese people want to hear", reinforcing the stereotype that obese people are lazy. A final example of a derogatory comment made by one of the speakers, who had received the best practice award, was that the work they had achieved in decreasing obese patients' bodyweight had "provided more space for commuters on the London tube". Although research has shown that stereotypes and antifat attitudes are evident in various populations, no research to date has reported that obesity researchers and even those studying obesity stigmatisation are not immune to such perceptions. Thus, it seems that obesity researchers also have stereotypical attitudes towards obese people.

In line with guidelines for publishing in obesity and journals of other disciplines[4] that adhere to the standards of the Committee on Publication Ethics, authors


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