did tests in rats if a drug was to be given to pregnant women, but thalidomide was not tested in this way. The thalidomide tragedy led to the 1968 Medicines Act in the UK, which required animal testing for safety.

We are not naive enough to ignore the scientific arguments against animal research. Obviously, there are species differences between animals and human beings. But animal work is just one part of the totality of evidence gathering, and use of one rodent and one non-rodent species will predict seven of ten toxic reactions in human beings. About 350 human diseases have an animal counterpart. For each drug tried in humans, about 350 animals will have been tested. Human trials need 3000–4000 participants. They enter studies for no known efficacy benefit to themselves, that being the purpose of the trial to discover. To argue that human beings do not subject themselves to research, research that can lead to harm or even death, is to grievously misunderstand medical science.

In sum, the use of animals in medical research and safety testing is necessary. Our view is a humanistic one that challenges other arguments. This view is, as Singer argues, open to the objection of speciesism. But the creation and development of medicine, together with its vast influence over human life, is inherently speciesist. Rather than apologise for medicine as it is pursued today, society should be seeking to strengthen it. Animal research is an essential part of compassionate humanistic endeavour. ■ *The Lancet*

Clean water alone cannot prevent disease

Progress towards most of the eight Millennium Development Goals (MDGs) has been disappointingly slow. Several high profile organisations—including the World Bank and WHO—have warned that the world will not meet the target of halving world poverty by 2015 unless there is a substantial boost to financial and political commitment from all corners of the globe. Last week, however, a joint WHO/UNICEF report assessing progress towards a key aspect of MDG seven—halving the proportion of people without access to safe drinking water and basic sanitation—provided a faint glimmer of hope.

The report, *Meeting the Millennium Development Goals drinking water and sanitation target—a mid-term assessment of progress*, revealed that during the past 12 years, 1·1 billion people have gained access to clean drinking water, bringing global coverage to 83%. This achievement puts the world on track to meet the 2015 target of reducing to 800 million the number of people without access to safe water sources. The availability of safe water has a direct effect on the likelihood of success for each of the other MDGs, most notably the three health-related targets. unfortunately, however, even with clean water reaching most of the world's population, there cannot be real progress towards a reduction in water-borne disease unless sanitation improvements are equally successful. And indications at the halfway point are that such improvements may not materialise.

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Global sanitation coverage is currently 58%, up from 49% in 1990. In south Asia and sub-Saharan Africa, only around a third of people have access to so-called "improved" sanitation (connection to a public sewer or septic tank); in Ethiopia, Chad, Afghanistan, and Democratic Republic of Congo, the figure is less than 10%. Worryingly, without a substantial increase in the rates of improvement of sanitation, the target of 75% global coverage will be missed by 2·4 billion people, according to WHO estimates. The health implications of such a huge shortfall are clear. *The Lancet* series on child survival estimated that lack of access to sanitation contributes to about 1·5 million child deaths per year and around 88% of deaths from diarrhoea.

The successes seen so far in water distribution prove that rapid improvements are possible, but that many further challenges remain. A large proportion of the people who still do not have access to safe water and sanitation live in rural communities—a situation that makes infrastructural improvements all the more difficult. And population growth may yet outstrip improvements seen so far.

The trends identified in the WHO/UNICEF report are definitely a cause for optimism, but the disparate rates of improvement in water and sanitation are worrisome. Access to water sources and to adequate sanitation facilities are two sides of the same coin: there must be improvements in both to see any real health benefit. After all, without adequate sanitation, how long can safe water sources be expected to remain safe? ■ *The Lancet*