

Joining together to combat poverty

Everybody welcome and needed

The International Poverty and Health Network was created in December 1997 following a series of conferences organised by the World Health Organisation with the aim of integrating health into plans to eradicate poverty. Its formation was a response to the evidence of the persistent and growing burden of human suffering due to poverty. The more people who join the greater the likely impact of the network.

Around 1.3 billion people live in absolute, grinding poverty on less than \$1 per day.¹ This is despite the overall growth of the world economy, which doubled in the 25 years before 1998 to \$24 trillion. Of the 4.4 billion people in developing countries nearly three fifths lack access to sanitation, a third don't have clean water, about a fifth have no health care, and a fifth do not have enough dietary energy and protein.

Economic disparities both within and between countries have grown, and in about 100 countries incomes are lower in real terms than they were a decade ago.² By 1995 the richest fifth of the world's population had 82 times the income of the poorest fifth. The world's 225 richest people have combined wealth equivalent to the annual income of the poorest 2.5 billion (nearly half of the world's population).¹ At the same time the world faces a growing scarcity of renewable resources from deforestation, soil erosion, water depletion, declining fish stocks, and lost biodiversity. The poor will be hit hardest by these problems.

Despite overall dramatic increases in life expectancy in the past century, health professionals should be concerned about growing inequalities in health and wealth.³ The precipitous decline in life expectancy in Russia is a graphic example of how health may deteriorate as societies face sudden social and economic change accompanied by growing poverty. The gap in life expectancy for men between selected western European countries and Russia has widened from about three years in 1970 to around 15 in 1995.⁴

Many African countries have total external debts that are more than 100% of their gross national product. Although there has been progress in cancelling debt, only 22 of the 52 countries needing substantial or total debt reduction will actually see their annual payments reduced after the agreements made at the Cologne summit.⁵ Therefore much remains to be done, including monitoring how the World Bank and International Monetary Fund implement debt reduction ensuring that the economic reforms they recommend are focused on reducing poverty. The

announcement by the British Chancellor of the Exchequer just before Christmas that Britain would cancel the debts owed by the world's 25 poorest countries so long as the money saved was spent on poverty reduction and improving the health of the poorest is welcome. We hope other countries will follow.

Even among rich nations there are many examples of growing socioeconomic inequalities in health over the past 20 years.⁴ Health inequalities in Britain have just been declared the worst ever.⁶ The life expectancy gap between professional and unskilled workers is now 9.5 years for men and 6.4 years for women. Of particular concern is the fact that so many children are robbed of their physical and mental potential through poverty.⁷ Even in the US more than one in four children aged under 12 have difficulty obtaining all the food they need.

Ill health and poverty are mutually reinforcing and can generate a vicious cycle of deterioration and suffering. Ill health contributes directly to reduced productivity and sometimes to loss of employment. When it affects the main earner in poor families it has severe implications for economically dependent family members, particularly children. By definition, poor people have few reserves and may be forced to sell what assets they have, including land and livestock, or borrow at high interest rates, to deal with the immediate crisis precipitated by illness. Each option leaves them more vulnerable, less able to recover, and in greater danger of moving down the poverty spiral. In contrast, effective and accessible health services can protect the poor from spiralling into worsening economic problems.

In the 20th century development has usually been equated with economic growth, but the link between economic prosperity and health, a key component of human development, is not automatic. A recent World Bank study showed that income improvement caused about a fifth of the decline in mortality between 1960 and 1990.⁸ Education of women and the generation and use of new knowledge were more important.

Poverty has many dimensions—lack of education, inadequate housing, social exclusion, unemployment, environmental degradation, and low income. Each of these diminishes opportunity, limits choices, undermines hope, and threatens health. Economic indicators focus primarily on income poverty, whereas health indicators provide a measure of the multidimensional nature of poverty. For this reason health should be the pre-eminent measure of the success or failure of development policies in the next century.

website *extra*

A list of signatories to this open invitation appears on the BMJ's website

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Health professionals strive to understand their patients' experience of illness and distress. As we share the frustration and anger of those whose health is undermined by poverty this understanding becomes part of a process of developing solidarity with disadvantaged individuals and communities. Once suffering is expressed, it becomes tangible and demands redress. This is fundamental to medicine and healing; it applies no less to social injustice. If we hear of suffering but do not work alongside the sufferer for redress, we abandon our task.

The International Poverty and Health Network is a worldwide network of people and organisations from health, business, non-governmental organisations, and government who seek to influence policy to protect and improve the health of the world's poor, particularly the poorest in all countries. The network urges that a balance must be struck between social development and growth in income; between the human and financial dimensions of poverty; and between redistribution and market reforms. Our aspiration is to achieve a balance between biomedical and social approaches; between community based health development and a response to individuals; between prevention of disease, promotion of health, and treatment; and between physical and mental health.

Over the next few years supporters of the network will strive to reduce the burden of ill health due to poverty in the following ways:

- Engaging in strategic discussions with the International Monetary Fund, the World Bank, the World Health Organisation, and national governments to ensure that health is put at the centre of development. We urge health impact assessments of all policies.

- Promoting action for health locally, regionally, and nationally by working with sectors such as education, business, agriculture, and transport.
- Building the evidence base on effective interventions to reduce inequalities in health and how improved health can reduce poverty.
- Facilitating exchange among health professionals in north and south about effective ways of working (such as WorldSpace's public health channel, see p 8).
- Ensuring that education programmes for health professionals include information on the impact of socioeconomic inequalities on health and what they can do to reduce such inequalities.
- Encouraging health professionals to work with local communities to improve the health of the poorest.
- Monitoring trends in health inequalities and using the data to influence policy.

We invite others to join us in this endeavour. Why not you?

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We hope that a version of this editorial will appear in many other medical journals. International signatories appear on the *BMJ's* website.

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- 1 United Nations Development Programme. *Human development report 1998*. New York: Oxford University Press, 1998.
- 2 United Nations Development Programme. *Human development report 1996-7*. New York: Oxford University Press, 1997.
- 3 McCally M, Haines A, Fein O, Addington W, Lawrence R, Cassel C. Poverty and ill health: physicians can and should make a difference. *Ann Intern Med* 1998;129:726-33.
- 4 Whitehead M, Diderichsen F. International evidence on social inequalities in health. In: Drever F, Whitehead M, eds. *Health inequalities*. London: Office for National Statistics, 1996.

- 5 Jubilee 2000 Coalition. *Unfinished business. The world's leaders and the millennium debt challenge*. London: Jubilee 2000 Coalition, 1999.
- 6 Yamey G. Study shows growing inequalities in health in Britain. *BMJ* 1999;319:1453.
- 7 Unicef. *The state of the world's children 1998*. New York: Oxford University Press, 1998.
- 8 Wang J, Jamison D, Bos E, Preker A, Peabody J. Measuring country performance on health: selected indicators for 115 countries. Washington, DC: World Bank, 1999.

Conviction by mathematical error?

Doctors and lawyers should get probability theory right

In a recent case of DNA evidence the probability of a chance match was quoted as 20 million to one. The accurate statement—that the defendant or two other unknown people in the United Kingdom could have committed the offence—is much less impressive. Other evidence was overwhelming, but this may not always be true, especially with matches from DNA databases. Even more problematic than the issue of presenting statistical evidence fairly is the problem of getting it wrong.

On 9 November at Chester Crown Court Sally Clark, a Cheshire solicitor, was convicted, by 10-2 majority, of smothering her two infant children. With conflicting forensic evidence, the Crown's case was bol-

stered by an eminent paediatrician testifying that the chances of two cot deaths happening in this family was vanishingly small—1 in 73 million. This seriously misunderstands probability theory. It is speculation whether Sally Clark would have been acquitted without this evidence. But with this mathematical error prominent the conviction is unsafe.

Imagine an archery target with two arrows sticking in the very centre of it. This provides greater evidence of the skill of the archer if the target was in place before the arrows were fired than if it was drawn around them afterwards. Probability theory requires calculation of the probability not only of the event in question but also of all events that are as extreme or more extreme.

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