

Are cost effective interventions enough to achieve the millennium development goals?

Money, infrastructure, and information are also vital

At a high level forum in Paris this month policy makers are meeting to discuss the financial sustainability and coordination of activities essential for achieving the millennium development goals. Building on other targets set in the 1990s, such as those at the 1990 UN children's summit, these ambitious goals agreed by 189 countries aim to markedly reduce poverty and hunger and improve education and health throughout the world by 2015. But many less developed countries, especially in sub-Saharan Africa and south Asia, are falling short of the target to reduce child mortality by 4.4% a year, the rate required to cut deaths among children less than 5 years old by two thirds (from the 1990 level) by 2015.¹

To invest effectively in achieving the goals policy makers need robust evidence. Here, in a series of articles in the *BMJ*, David Evans and colleagues provide that evidence.^{2 w1-w7} Along with other work,³ these papers clearly show that important cost effective interventions, such as the integrated management of childhood illness (IMCI), are not being implemented adequately.^{4 5}

To ensure that the millennium development goals will not end up as just another unfinished programme, the World Health Organization, UNAIDS (the joint UN programme on HIV/AIDS), the United Nations Development Programme, the World Bank, and other development partners—as well as the governments of less developed countries—must work to strengthen inadequate health systems and must ensure that global initiatives work synergistically in health development in each needy country. This will mean tackling three main challenges in addition to choosing cost effective interventions.

The first challenge is overall financial support. The requirement for resources to achieve the goals is huge.² Even a doubling of current government spending could not meet the goals because spending on health is so low in poor countries.⁶ Donors already provide substantial resources, but too much of this funding goes to technical support and too little to activities related to the goals. Recent initiatives such as the Global Alliance on Vaccine and Immunization; the Global Fund to fight AIDS, Tuberculosis, and Malaria; and the President's Emergency Plan for AIDS Relief play a huge role, especially in financing programmes for combating HIV/AIDS. In all, 56% of the \$1.6bn

(£0.9bn, €1.4bn) disbursed to date through the global fund, and \$2.8bn of the 2005 budget for the president's fund were for HIV/AIDS.⁷ Neither the Abuja target for African countries to allocate 15% of their public spending to health care nor the target for donor countries to allocate 0.7% of gross national product to official development assistance has been met, except among Scandinavian countries (see figure on bmj.com).⁸ Moreover, few less developed countries have the capacity to coordinate donors' contributions effectively to achieve the millennium development goals.

Heavy reliance on resources from donors raises serious concerns about the financial sustainability of the goals in the long term. This dependence on limited grants also raises ethical concerns about the possibility of interrupting lifesaving, long term antiretroviral treatment and the supply of pentavalent vaccines against diphtheria, tetanus, pertussis, hepatitis B, and *Haemophilus influenzae*. Sustainable achievement will require adequate local resources, which will, in turn, depend on sustained peace and economic growth. Thailand, for example, has shifted 30% of its national budget since 1985 towards social development, including health, and away from investment in national security and paying public debt. Thailand's health budget rose from less than 5% to more than 8% of national public spending during this period.⁹

Fairer international trade practices will also contribute to supporting economic growth in developing countries. High subsidies for agriculture in developed countries have greatly reduced economic growth in less developed countries, particularly among poor farmers. Furthermore, the World Trade Organization's agreement on trade related aspects of intellectual property rights (TRIPS) and the movements to go beyond TRIPS (the so called TRIPS Plus) are reducing the accessibility of essential drugs and creating important obstacles to reaching the millennium development goals for health.¹⁰

The second challenge is the flood of financial aid only into specific vertical health programmes in poor countries, posing a serious strain on fragile health infrastructures and distorting national priorities for health care. Limited and poorly motivated health

workforces in inadequately funded programmes—such as those for safe motherhood, child survival, tackling malnutrition, and reducing road traffic injuries—are drained to support better paid global initiatives. International migration of healthcare workers further aggravates the situation.^{11 12} Notably, nine of the 20 countries with the highest emigration of healthcare workers are in sub-Saharan Africa, where the millennium health goals are least likely to be achieved. Evidence clearly shows that density of human resources for health at least partly explains variations in maternal, infant, and child mortalities.¹³ In line with resolutions at the World Health Assemblies in 2004 and 2005, member states are committed to solving this problem, but no real concrete global movement has been initiated so far.

Thirdly, accurate information is needed to monitor progress towards the goals. But most poor countries' health information systems are undeveloped and cannot provide reliable data.

The Global Alliance on Vaccine and Immunization, the Global Fund, and the Health Metrics Network

strongly emphasise the need to strengthen systems for health and health information, but proposals made recently at the Global Fund have not yet yielded much success. Of the 30 proposals for strengthening health service infrastructure, only three were approved, because of the poor quality of the proposals. In addition to strengthening health systems, reducing geographical, sociocultural, and financial barriers to care (such as user fees for services) remains just as important.

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Trauma care research and the war on uncertainty

Improving trauma care demands large trials—and large trials need funding and collaboration

For people aged 5-45 years trauma is second only to HIV/AIDS as a cause of death.^{1 2} Every day world wide over 300 000 people are severely injured, about 10 000 of whom die. Road traffic crashes and violence are the leading causes. The global number of road deaths is forecast to rise by 65% between 2000 and 2020 and the number of violent deaths has increased steadily, with the 20th century being the most violent on record. Despite the best preventive efforts, providing effective trauma care will remain a major challenge for healthcare professionals. There is considerable potential to improve trauma outcomes by using clinical audit to increase the implementation of evidence based interventions in trauma services.³ However, for many trauma care interventions, the balance of risks and benefits is uncertain and they must be assessed in randomised trials before being implemented.

Compared with the disease burden there is a dearth of clinical trials in trauma care and the existing trials are small, contributing to uncertainty about effectiveness (see table).⁴ For example, few if any of the pharmacological treatments for brain and spinal cord injury have ever been proved to be effective.⁵ To avoid random errors, trials must recruit sufficient numbers of patients, implying the need for large international collaborative trials. The CRASH trial, run by the UK's Medical Research Council, was designed to confirm or refute the modest but promising effects of corticosteroids on outcome after traumatic brain injury by recruiting 20 000 patients. The trial was stopped after 10 000 patients had been recruited from 239 hospitals in 49 countries. The effect of corticosteroids was a highly significant relative increase of 18% in all cause mortality.⁶ It has been estimated that 10 000 patients with head injuries may have died because of the inap-

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