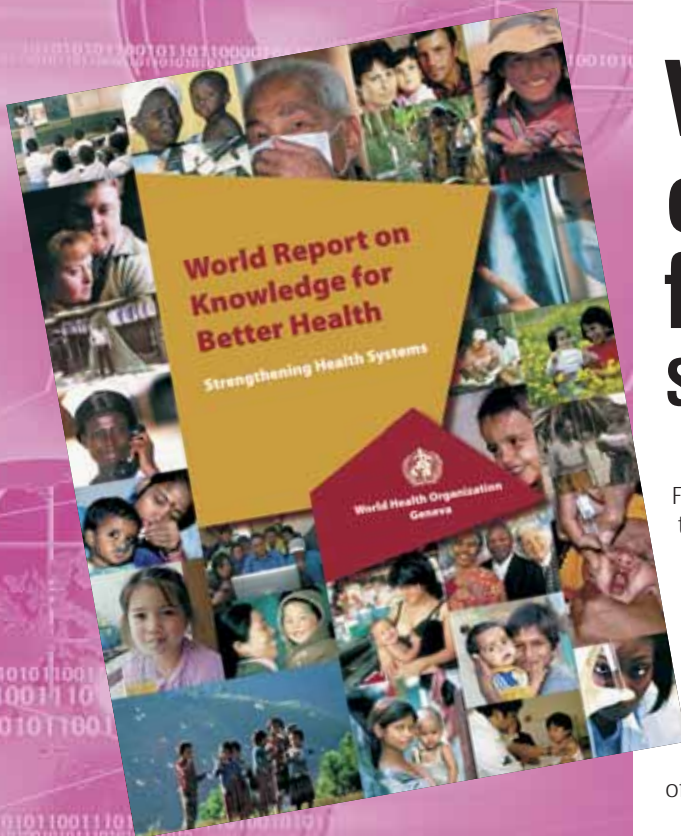




World Health Organization

# World Report on Knowledge for Better Health Strengthening Health Systems



From penicillin to insulin, antiseptics to anaesthetics and X-rays to magnetic resonance imaging, science has led to dramatic improvements in health worldwide. With the sequencing of the human genome, science is on the verge of discovering remarkable new ways to diagnose, treat, prevent and maybe even predict human diseases. Yet all is not well. HIV/AIDS, malaria and dengue continue to wreak havoc. New foes such as the SARS and avian flu viruses have appeared while age-old scourges like tuberculosis remain recalcitrant. Childhood infections and maternal mortality ravage the developing world, which now faces a growing burden of diabetes, obesity and cardiovascular disease.

Disparities and inequities in health remain major development challenges in the new millennium and malfunctioning health systems are at the heart of the problem. Countries with few resources struggle with creaking infrastructure, inadequate financing, a dire shortage of doctors and nurses, and a lack of basic information on health indicators. Half the world's deaths are potentially preventable with simple and cost-effective interventions. But not enough is known about how to make these more widely available to the people who need them. Against a backdrop of history and today's global health challenges, *Knowledge for Better Health* takes stock of the current state of health research around the world and reaches the following conclusions:

- increased investments are needed for a new, innovative approach to research on health systems
- health research must be managed more effectively if it is to contribute to strengthening health systems and building public confidence in science
- stronger emphasis should be placed on translating knowledge into action to improve health by bridging the gap between what is known and what is actually being done

The report provides a compass to reorient health research so that it may respond more effectively to public health challenges on a national and global level. This reorientation requires a strengthening of the health research sector, an environment that is more conducive to research-informed policy and practice, and more focus on key priorities for research to improve health systems. While building on past achievements, the report's recommendations highlight aspects of the health research sector that, if managed more closely, could reap even more benefits for public health in future.

***"Health systems should nurture a stronger culture of learning and problem-solving to tackle the major health challenges of our times. This could be achieved by understanding how elements within a health system interact with each other and by finding innovative ways to solve complex problems."***

— Tim Evans, Assistant Director General, WHO

***"Knowing is not enough, we must apply; willing is not enough, we must act."***

— Johann Wolfgang von Goethe

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## Excerpts from the report



In the late 1960s a group of doctors was sent on a mission to treat people with dysentery living in a remote area of Bangladesh. After many trips to villages with heavy backpacks containing intravenous rehydration solution they sought new ways to address this common problem. Basic research had shown the importance of salt to avoid dehydration and the role of sugar in absorbing water and salt through the intestinal wall. Researchers at the International Center for Diarrhoeal Disease Research in Bangladesh developed variations and refinements of oral rehydration therapy (ORT) and conducted trials on the efficacy of this relatively simple treatment.

BRAC, one of the world's largest nongovernmental organizations, discovered how to make the solution with common household items. In the 1980s, with government backing, BRAC launched a nationwide health campaign to teach mothers in rural areas how to prepare and administer it. Social marketing and army-like logistics helped to ensure the success of the campaign. Having reached over 90% of all households, ORT has contributed to a significant decline in infant morbidity and mortality in Bangladesh. The Lancet once described ORT as "potentially the most important medical advance of this century".

The Tanzania Essential Health Interventions Project (TEHIP) was set up to find new ways to plan, set priorities and allocate resources as part of a major reform of the country's health-care system. Tanzanian researchers started research in 1997 in two of the country's 123 districts as part of the project run by the Ministry of Health and Canada's International Development Research Centre. The aim was to evaluate the overall impact of health interventions in terms of burden of disease and per capita cost. Researchers found, for example, that in both Rufiji and Morogoro districts malaria alone accounted for 30% of all healthy years of life lost due to deaths in 1996–1997. In response, government planners increased the budget for malaria prevention and treatment programmes from just 10% to 26% by 2000–2001. Overall, the research has resulted in a better match between disease burden and health budget allocation. Latest data after a 5-year follow-up of the project indicated a 54% reduction in infant mortality, 47% in under-five mortality and 18% in adult mortality.

TEHIP researchers also developed several tools to help district health management teams collect and analyse information, improve health service delivery, set priorities and allocate resources accordingly. Using these tools, Rufiji and Morogoro districts have addressed their burden of disease by investing in several essential health interventions, such as the Integrated Management of Childhood Illnesses strategy, insecticide-treated bednets and the Safe Motherhood Initiative. Both districts have cut their child mortality rate by more than 40% since the late 1990s. The government's goal is to have all districts allocating resources according to health priorities by 2005.



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