

# It is Possible to Control Infectious Diseases in Poor Countries



## Seven Effective Tools

The following affordable medicines and tools are highly effective, when used correctly.

- **TB medicines** are 95% effective in curing TB. Cost: as little as US\$ 10 for a 6-month course of treatment.
- **ORT** is highly effective in treating dehydration caused by diarrhoeal diseases. Cost: US\$ 0.33
- **Antibiotics for pneumonia** are 90% effective. Cost: US\$ 0.27
- **Antimalarials** are 95% effective. Cost: as low as US\$ 0.12
- **Bednets** can reduce child deaths by 25%. Cost: as low as US\$ 4 for an insecticide-treated bednet.
- **Vaccines** are 85% effective in preventing measles. Cost: US\$ 0.26 per dose (including the cost of injection equipment).
- **Latex condoms** are highly effective in preventing HIV. Cost: US\$ 14 for a year's supply.

The evidence is clear. Infectious diseases can be controlled in the world's poorest countries. Throughout the world, communities have mobilized to use their knowledge, skills, and resources to reverse the devastating impact of killer diseases such as AIDS, TB, malaria, and diseases that kill children, infants, and mothers.

Uganda, Thailand, and Senegal are all national success stories in the fight against HIV/AIDS. Over a million lives have been spared from TB in the past decade due to the success of TB control efforts in countries such as China, India, Nepal, and Peru. Malaria has been turned back in Azerbaijan and Viet Nam and reduced in some parts of Kenya and Ethiopia. Childhood deaths and disability have been reduced in Bangladesh, Benin, Brazil, Malawi, Mexico, Pakistan, Tanzania, and Thailand. And maternal deaths have been reduced in a number of countries, including Sri Lanka.

Yet many of these achievements remain invisible and unrecognized by the world at large. As a result, many people remain sceptical about the possibility of controlling disease in poor countries. As this report shows, such fatalism is no longer scientifically defensible. Over the coming decade, it is possible to make huge gains against the major infectious diseases which have a disproportionate impact on the health and well-being of the poor.

## Effective Tools are Available

It is estimated that as many as one in two malaria deaths can be prevented if people have ready access to rapid diagnosis and prompt treatment with antimalarial drugs – often costing no more than US\$ 0.12 for a course of treatment. Meanwhile, 25% of child deaths can be prevented if children sleep under insecticide-treated bednets at night to avoid mosquito bites. Yet in Africa, where an insecticide-treated bednet could be provided for as little as US\$ 4, only an estimated 1% of children sleep under bednets.

Millions of lives can be saved, and the threat of antimicrobial resistance reduced, if people with TB have access to DOTS, a 5-pronged strategy for TB

control. And millions of new cases of HIV can be prevented through well-targeted, low-cost HIV prevention and care strategies.

More widespread use of low-cost vaccines, vitamin A supplements, oral rehydration salts, and inexpensive antibiotics to treat pneumonia could prevent millions of child deaths. And a package for the Integrated Management of Pregnancy and Childbirth, ensuring good health care throughout pregnancy and childbirth, together with family planning, could prevent maternal and perinatal deaths as well as the lifelong disabilities due to complications of pregnancy – for as little as US\$ 3 a year per capita.

## Keys to Success

Many low-income countries have shown that by using the available tools both widely and wisely the disease burden of infectious diseases can be reduced dramatically. But it is not easy, as the success stories that follow will show, especially in the over 20 countries worldwide that have less than US\$ 20 a year per capita to spend on health. Many countries have succeeded in spite of poverty. Malawi is set to eliminate measles in a country where only 3% of the population have access to adequate sanitation and Bangladesh has reduced neonatal tetanus death rates by over 90% at a time when most mothers in this country do not have access to a clean delivery.

In many cases, efforts to reduce the burden of disease have been driven by firm **political commitment** at the highest level. Examples include Uganda and Thailand where political leadership has been critical in the fight against HIV/AIDS and where every government sector has been involved. Another example is Peru, where the government has established TB control as a social, political, and economic priority.

Success has often involved new ways of working : entering into **partnerships** with the private sector, nongovernmental organizations (NGOs), and UN agencies – for the social marketing of condoms in Uganda and for malaria control in Azerbaijan. In some countries, governments are providing health services and commodities outside the formal health sector in an effort to broaden access to health care.

### Six Keys to Success

- **Political will**
- **Partnerships**
- **Innovation**
- **Home as the first hospital**
- **Well-stocked supplies**
- **Measurable results**

In Senegal, mosques throughout the country are a focal point for HIV prevention efforts, counselling and support. In the United Republic of Tanzania (Tanzania) a school-based programme has improved the health of children infected with intestinal worms, and in Kenya, employers are supplying bednets to their workforce through payroll purchasing schemes.

**Innovation**, born out of a pragmatic approach to achieving results, has made all the difference in some countries. In Nepal, hostel accommodation is provided for TB patients from remote mountain areas to encourage compliance with treatment. In China, cash incentives are provided to local health workers for every case of TB they detect and cure. And in Thailand, the government worked with brothel owners to ensure 100% condom use – despite the fact that prostitution remains illegal. Meanwhile, in Senegal, religious leaders opposed to condom use have had the courage to refer people to other service providers.

Elsewhere, efforts to promote the **home as the first hospital** – in a bid to ensure rapid diagnosis and prompt treatment for malaria and diarrhoeal diseases, for example – have helped reduce child deaths in Ethiopia and Mexico. Training of health care workers and education of mothers have been key elements for success, as witnessed in Sri Lanka where high female literacy rates and midwifery training for health care workers have both been instrumental in preventing maternal deaths. In India, a massive training programme involving 100 000 health workers has helped ensure that treatment of TB can be provided within the community. Meanwhile, sex education for children and adolescents has been an integral part of successful HIV prevention programmes in Thailand, Senegal, and Uganda.

**Well-stocked supplies**, medicines, and other low-cost tools at the community level are essential. Without the availability of these lifesaving commodities, health workers are unable to do the job for which they are trained. In some cases, local production of drugs, vaccines, and other commodities has helped keep prices down. Examples include community production of bednets in Kenya, manufacture of tetanus toxoid vaccine in Bangladesh, and local production of antimalarial drugs in Viet Nam. In Mexico, supplies of oral rehydration salts were increased almost tenfold in the fight against childhood diarrhoeal deaths. Elsewhere, social marketing of condoms in Senegal and Uganda has been a key factor in preventing HIV.

### Six Effective Interventions

- **DOTS** strategy for curing tuberculosis.
- **IMCI** (Integrated Management of Childhood Illness) for controlling pneumonia, diarrhoeal diseases, malaria, and measles.
- **Social Marketing of Condoms** for preventing HIV.
- **Roll Back Malaria** strategy for controlling malaria.
- **EPI** (Expanded Programme on Immunization) for the elimination of measles and neonatal tetanus.
- **IMPAC (Integrated Management of Pregnancy and Childbirth)** for reducing maternal and perinatal deaths.

Finally, an approach focused on achieving **measurable results** is central to most of the success stories that follow. In Senegal, Thailand, and Uganda, disease surveillance and monitoring systems have been essential in tracking the course of the HIV/AIDS epidemic and monitoring the effectiveness of interventions. Meanwhile, Malawi's success in controlling measles has involved efforts to improve surveillance and monitoring systems. And Viet Nam's dramatic success in reducing malaria deaths has been backed up by strengthened disease reporting and epidemic forecasting systems.

## The Challenge is in Scaling Up

Much is at stake. Almost half of all deaths in developing countries are due to infectious diseases. And most of these deaths are among newborn babies, children under five, and young adults – among them parents and breadwinners.

Meanwhile, repeated bouts of illness and chronic disability keep children away from school and prevent adults from working or caring for their families – trapping families in a downward spiral of poverty, lost opportunity, and ill-health. While life expectancy edges ever higher in the industrialized world, children in some developing countries are not expected to live beyond 50. And for 3 million of the children born each year, life begins and ends before they are even a week old.

But this vicious cycle of poverty and ill-health can be broken. The success stories that follow are evidence that widespread and wise use of low-cost tools, coupled with new flexible ways of working, often through partnerships and across sectors other than health, can have a major impact, even in the poorest countries. What is needed now is a massive effort to replicate these successes on a global scale. Many other countries could achieve similar results if they could afford to massively increase their supplies of urgently needed medicines, vaccines, and other lifesaving commodities. However, in countries where health systems are both under-resourced and under-performing, critical efforts will also be needed to strengthen the capacity of the health system to identify and respond to the most urgent health needs, to ensure universal access to health care, to work with operational partners, and to develop effective systems for disease reporting and for the delivery of health supplies and services.

