

NEGLECTED TROPICAL DISEASES

**INNOVATIVE AND INTENSIFIED  
DISEASE MANAGEMENT**



## Pro-poor and pro-active interventions against neglected tropical diseases contribute to achievement of the health-related Millennium Development Goals

- Goal 1    **Eradicate extreme poverty and hunger**
- Goal 2    **Achieve universal primary education**
- Goal 3    **Promote gender equality and empower women**
- Goal 4    **Reduce child mortality**
- Goal 5    **Improve maternal health**
- Goal 6    **Combat HIV/AIDS, malaria and other diseases**
- Goal 7    **Ensure environmental sustainability**
- Goal 8    **Develop a global partnership for development**

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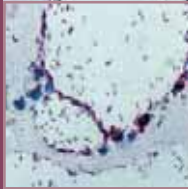
Cover photograph: © Gregoire Mahler.

*Chad, 2006. A young herdsman chases after a mobile screening team for sleeping sickness. The disease ravages impoverished populations in some of the least developed countries in the world. Control of neglected tropical diseases offers hope that the most disadvantaged populations can lead healthy and productive lives.*

Further information about neglected tropical diseases is available from  
[http://www.who.int/neglected\\_diseases/](http://www.who.int/neglected_diseases/)

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## SOME OF THE MOST COMPLEX NEGLECTED TROPICAL DISEASES REQUIRE INTENSIFIED CONTROL AND INNOVATIVE STRATEGIES



Buruli ulcer is a severe skin disorder caused by a bacterium that remains shrouded in mystery.

Left untreated, the disease causes massive destruction of the skin and, in some cases, of bone, eyes and other tissues. Limb amputations may be needed to save a patient's life. Buruli ulcer is endemic in more than 30 countries, particularly in parts of west Africa.



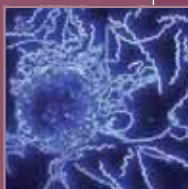
Chagas disease is transmitted by the bite of a "kissing bug" that resides in rural areas and periurban slums or by transfusion of infected blood. Chronic infection, which usually begins in childhood, irreversibly damages the heart, oesophagus, colon and peripheral nervous system in later life. The disease is endemic in Latin America, with 16–18 million people infected and 100 million at risk.



Human African trypanosomiasis, or sleeping sickness, is spread by the bite of the tsetse fly in impoverished rural parts of sub-Saharan Africa. A person can be infected for months or even years without major signs or symptoms of the disease. When symptoms do emerge, the patient is often already at an advanced stage of the disease, with central nervous system involvement. Death follows prolonged agony. In 2006, WHO estimates that some 70 000 people were infected with the disease in 2006.



Leishmaniasis is transmitted by the bite of the sandfly and has a wide range of clinical symptoms. Visceral leishmaniasis, which attacks the internal organs, is the most severe form. Left untreated, it is usually fatal within two years. Cutaneous leishmaniasis commonly causes ulcers on the face, arms and legs that leave severe and permanently disfiguring scars and disability. WHO estimates that 350 million men, women and children in 88 countries are at risk and that around 1.5–2 million new infections occur every year.



Yaws is a contagious, nonvenereal, treponemal infection in humans that presents mainly in children aged under 15 years. After 5–10 years, 10% of untreated patients develop destructive lesions involving bone, cartilage, skin and soft tissue, similar to those seen in tertiary syphilis.

Approximately 5000 cases are reported annually: 4000 in Indonesia, 1000 in Timor-Leste and a few cases in India.



Cholera is usually transmitted through faecally-contaminated water or food. Outbreaks can occur sporadically in any part of the world where water supply, sanitation, food safety and hygiene are inadequate. In untreated cases, the case fatality rate may reach 30–50%. Prompt and appropriate medical management of cases can significantly decrease mortality; when applied properly, the case-fatality rate should be below 1%.

# NEGLECTED TROPICAL DISEASES: THE COMMUNICABLE DISEASES OF THE POOREST POPULATIONS

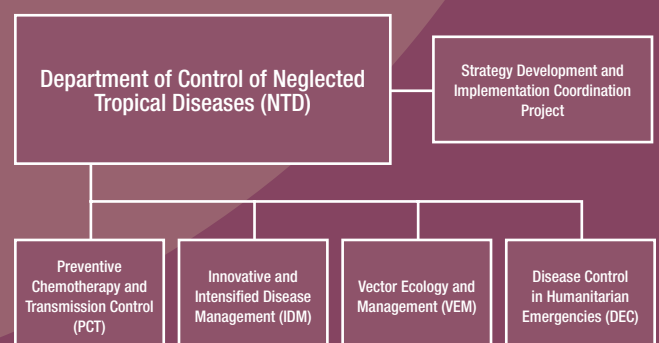
- 1 billion people are infected, with 2 billion at risk in tropical and sub tropical countries/areas.
- 100% of low-income countries are affected simultaneously by more than five diseases.
- Those most affected are the poorest, often living in remote rural areas or urban slums.
- The diseases flourish under conditions linked to poverty – unsafe water, poor sanitation, substandard housing and reservoirs for insects and other disease vectors.
- Children are most likely to be affected and may suffer lifelong consequences, including severe physical pain, irreversible disability and gross disfigurement. If the diseases are left untreated, the children may die.
- Social stigmatization and discrimination compound these consequences.

# GLOBAL PLAN TO COMBAT NEGLECTED TROPICAL DISEASES 2008–2015: STRATEGIC AREAS FOR ACTION

1. Assessing the burden of neglected tropical and zoonotic diseases
2. Developing multi-intervention packages for disease control
3. Strengthening national health-care systems and capacity building
4. Disseminating evidence for advocacy
5. Ensuring free and timely access to high-quality medicines and diagnostic and preventive tools
6. Improving access to innovation
7. Strengthening integrated vector management
8. Building partnerships and mobilizing resources
9. Promoting intersectoral and interprogrammatic approaches

## WHO DEPARTMENT OF CONTROL OF NEGLECTED TROPICAL DISEASES

The World Health Organization has developed a conceptual framework for control that moves from a disease-centred to an integrated approach, with neglected tropical diseases grouped together based on similar intervention strategies. The structure of the new Department of Control of Neglected Tropical Diseases follows this framework.



The Unit of Innovative and Intensified Disease Management focuses on Buruli ulcer, Chagas disease, leishmaniasis, sleeping sickness, yaws and epidemic diarrhoeal diseases such as cholera. These diseases are complex to manage because safe and cost-effective control tools are not available. Diagnostic tests and medicines are often expensive and difficult to administer and their large-scale use is limited.

- Buruli ulcer
- Chagas disease
- Human African trypanosomiasis
- Leishmaniasis
- Yaws
- Cholera

## EPIDEMICS

Untreated, these diseases kill, disfigure, impair or disable millions of people every year.



## INTENSIFIED DISEASE CONTROL WITH CURRENT

Treatment can dramatically reduce the suffering of affected populations and save millions of lives every year.

Since neglected tropical diseases are hidden – and basic health services are often unavailable in endemic countries – people in remote areas die before the diseases are diagnosed, even when donated medicines are available.

WHO intensifies disease control by

- increasing awareness of diseases
- ensuring the availability and affordability of current tools
- detecting cases at an early stage of illness to prevent irreversible disabilities and death
- treating affected populations
- optimizing the use of existing tools (diagnostic tests, medicines, insecticides, etc.)

## INTRODUCTION OF INNOVATIVE KEY CONTROL

Since the threat of disease resurgence persists, and control activities tend to lapse as soon as the level of transmission is reduced, diseases are doomed to re-emerge.

For their use and delivery, current diagnostic tests and drugs require specially trained technicians and specialized facilities. Hence, in case of re-appearance of diseases, endemic countries can

hardly intervene early enough to curb transmission.

This reality points to an urgent need to remove obstacles to integration of disease control programmes into local health systems.

WHO plays a leadership role in the introduction of innovative disease control tools by

- analysing obstacles to sustainable



Despite the high cost and limitations of current tools, treating patients is an ethical obligation.

**ELIMINATION**



**SUSTAINABLE ELIMINATION**



**SUSTAINABILITY**

Key control tools such as simple diagnostic tests and cost-effective medicines will empower endemic countries to achieve sustainable elimination of diseases.

## WIDELY AVAILABLE TOOLS LEADS TO ELIMINATION

To reach the affected populations, current control activities must be intensified.

Intensified disease control means that many ill people, previously hidden from help, will now be found and treated, leading to interruption of disease transmission.

Intensive use of current tools can interrupt transmission or even eliminate diseases as a public health problem. This hard-won success, however, is not sustainable.

## IMPROVED TOOLS CAN ENSURE SUSTAINABILITY

disease control

- identifying needs for key control tools that are suitable in resource-poor settings and optimal in the field
- encouraging rapid development and implementation of key control tools
- assisting countries in the use of new tools in line with national policies
- providing technical assistance to countries for training and capacity building

- ensuring newly developed tools are accessible to affected populations through national programmes.

Key innovative tools will drastically alter current control strategies and guarantee ethical, cost-effective and sustainable control, aimed at eliminating the most difficult of the neglected tropical diseases.