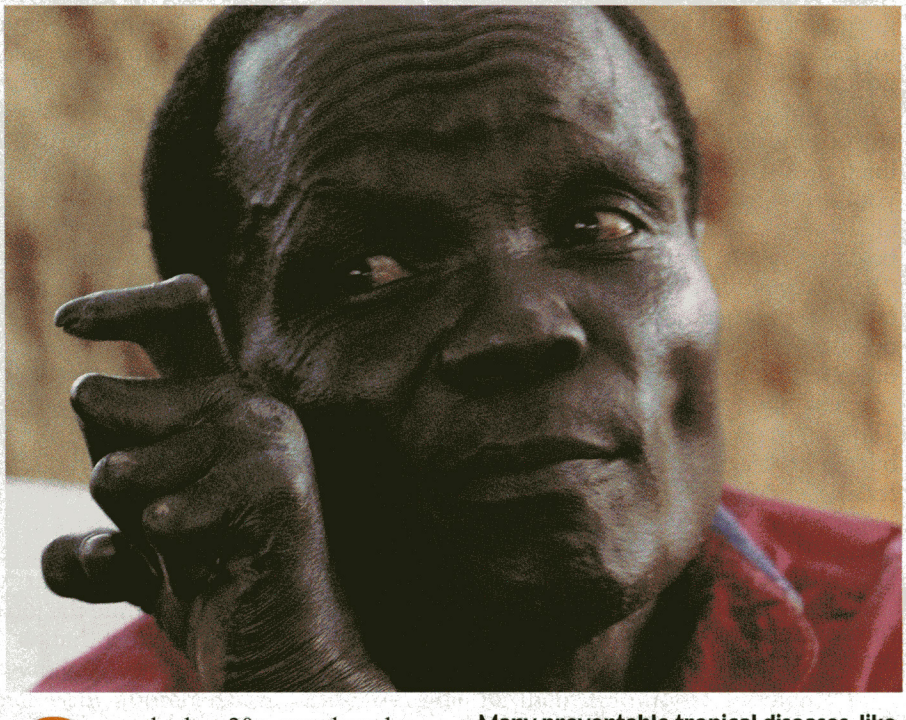
Dying from neglect

Up to 500 million Africans are suffering from diseases that can be easily treated and even eliminated, writes **Baba Chenzira**



Many preventable tropical diseases, like leprosy, largely affects the poor

Over the last 20 years there have been a number of significant achievements in controlling tropical diseases resulting in a modest reduction of many parasite-borne infections. But with the emphasis on the continent's three big killers, HIV/Aids, tuberculosis and malaria, these are often overlooked yet they cause tremendous misery for millions of Africans.

Diseases like bilharzia and river blindness, which occur primarily in rural areas, can be controlled to the point of elimination, according to the Campaign for Fighting Diseases. Bilharzia (schistosomiasis) can be treated with the drug praziquantel at a cost of 20 cents for a child for one year. River blindness is controllable with ivermectin, while the same drug plus albendazole is effective against elephantiasis.

The only significant diseases for which there is no existing safe and effective medicine are dengue fever, sleeping sickness, chagas disease and leishmaniasis, but even for dengue, there are some compounds currently being investigated.

Yet policy makers have largely ignored what are known as neglected tropical diseases (NTDs). What they appear to overlook is that NTDs, even though they can be cheaply and easily prevented, probably account for about as much sickness as any one of the "big three".

Conventional thinking has always believed that developing drugs to combat tropical diseases is unprofitable and consequently pharmaceutical companies are reluctant to pay for the research to come

- **Leprosy** is a chronic infectious disease spread by a bacteria similar to that which causes TB. It attacks the nervous system, particularly the nerves of the hands, feet and face. If untreated, leprosy can leave sufferers deformed and crippled.

- **Sleeping sickness**, or *African trypanosomiasis*, is a parasitic disease transmitted by the tsetse fly. It leads to an infection in the brain and the meninges but symptoms develop gradually. If left untreated, the sufferer eventually falls into a coma and dies. It is related to **chagas disease** which is prevalent in South America

- **Bilharzia**, also known as *schistosomiasis*, is caused by infestation by a type of flatworm, or fluke, whose larvae are released by freshwater snails. Symptoms range from 'swimmer's itch' to pain when passing urine. If untreated, the person may suffer life threatening liver or bladder damage.

- **Guinea worm disease,** or *dracunculiasis*, is spread when people ingest guinea worm larvae after drinking dirty water. Once inside the human body, the larvae mature and emerge through a painful blister in the skin, causing swelling and pain.

- **Elephantiasis**, or *lymphatic filariasis*, is characterised by the thickening of the skin and underlying tissues, especially in the legs and genitals. It is caused by a parasite which obstructs the the lymphatic vessels creating the debilitating deformity

- **Leishmaniasis** is spread by the bite of certain species of sand fly that can cause multiple skin ulcers, disfiguring lesions in the nose and mouth. In its most severe and potentially fatal form, it attacks the liver and spleen. There has been a recent upsurge of cases of the latter in the Horn of Africa region

- **River blindness**, or *onchocerciasis*, causes severe itching, disfiguring lesions and lesions of the eye that can cause blindness. It is spread by the blackfly which lives in contaminated water

- **Trachoma** is the world's leading cause of preventable blindness. It is caused by repeated infections of the eye that lead to scarring, which eventually results in blindness. It frequently occurs in childhood and is spread easily from person to person, so often affects whole families.

- **Dengue fever** is a mosquito-borne infection that has symptoms very similar to flu, like headaches and fever. An infected person can feel debilitated for up to three months.

Contaminated water is a breeding ground for ill-health

up with effective treatment. But this is a myth; the reality is that not only are there highly effective drugs to treat them but they are extremely cheap and in many cases have been freely donated by the drug companies.

The newly formed consortium, the Global Network for Neglected Tropical Disease Control (GNNTDC) is now seeking to spearhead the elimination of up to seven of the major NTDs. Speaking at a briefing at the International Policy Network in London, Professor Alan Fenwick observed many of those infected with NTDs are not even aware of their own condition – they have never really enjoyed good health, possibly having caught an infection many years ago without there being effective treatment.

Fenwick, professor of tropical parasitology at the faculty of medicine at Imperial College, London, UK, heads the Schistosomiasis Control Initiative (SCI). He believes that waterborne infectious diseases such as bilharzia could largely be consigned to history in less than a decade. He estimates that in Africa some 500 million people need treatment to control the full array of NTDs.

The way that SCI operates could well provide the model for how the GNNTDC might conduct its work. Operating in Burkina Faso, Mali, Niger, Tanzania, Uganda and Zambia, in each country there is an initial need to identify the districts with heavy infections, providing appropriate health education as well as advice and assistance in the procurement of the required drugs.

SCI has identified local and international partners to provide training, and then support the delivery of the drugs. As the programme progresses, SCI monitors its effectiveness to demonstrate the impact that treatment can achieve – in particular by recording the reduction in numbers of people with heavy infections, the alleviation of symptoms, and improvement in nutritional status.

Apart from the six countries receiving direct support, SCI will assist any interested African countries to develop national control plans, and will take other steps to deliver the drug to severely infected people. For example, the World Food Programme (WFP) feeds several million poor children in African schools every day. SCI will assist the WFP to add an annual preventative drug treatment to their food deliveries, which will quickly save those children from the devastating effects of heavy infections.

The donation of drugs by pharmaceutical companies, together with financial donations from foundations, is already having an impact. The numbers being given preventative treatment for NTDs has increased from virtually zero in 1986 to as many as 80 million individuals in 2006. 'The programmes to prevent death, blindness and disfigurement have proved that they can work, and by 2006 they are reaching ever more people with donated or inexpensive drugs. The health of children in areas that have been reached is improving, and they are gaining a better start in life,' Fenwick stated.

The cost of combatting NTDs can be as low as half a US dollar a person a year, a small price to pay for restoring someone's health.