

Malaria, Tuberculosis, and Other Infectious Diseases

READ TO DISCOVER:

1. What are the effects of Malaria, Tuberculosis, and other Infectious diseases?
2. Where are these diseases most prominent and how can we distribute appropriate medicine to these areas?
3. How can we ensure an end to the spread of such diseases?

DESCRIPTION OF THE COMMITTEE

The General Assembly (GA) is the main decision-making body of the United Nations. It includes all 193 member states; each member state has one vote. It is empowered by Article 11 of the *UN Charter* to “consider the general principles of cooperation in the maintenance of international peace and security.”¹ The GA addresses issues involving all aspects of the UN’s work, including humanitarian, peace and security, and human rights matters. It refers threats to peace to the Security Council for discussion. Resolutions, or peaceful decisions, produced by the GA are not binding—the GA cannot force countries to take action on any issue—but because they are supported by a majority of countries in the world, they are important international documents.



The GA is divided into six committees, with each committee responsible for certain issues. It also meets as a whole. The sessions in which all members of the UN meet are called Plenary sessions.



INTRODUCTION

Huge numbers of people die each year from **infectious diseases**, and in **developing countries** infectious diseases can be the leading causes of death. Diseases affect these poorer countries so seriously because medical care is not available to many people. Infectious diseases that can be easily cured in richer, more developed countries are life-threatening to people in less-developed countries.

An infectious disease may or may not be **contagious**, or able to be spread to others through air or water. Malaria, measles, tuberculosis and HIV/AIDS are all examples of infectious diseases, but of these, only measles and tuberculosis are contagious.

Over the past two decades, infectious diseases have had more of an impact due to the global AIDS **pandemic**. Because HIV/AIDS weakens people's **immune systems**, HIV-positive people become more vulnerable to infectious diseases of all types, but especially to malaria and tuberculosis.

BACKGROUND

Some infectious diseases receive a great deal of attention and can prompt worldwide emergency action. Fears of terrorism have also increased concerns about infectious diseases, especially smallpox and anthrax which could be used as biological weapons.

There are also many diseases that do not receive much media attention. As a result, people may be unaware of how these diseases affect global health. Although these diseases do not always kill people they can cause lifelong disabilities, as well as social and economic problems for survivors. Some of these diseases are leprosy, rabies, Buruli ulcer, sleeping sickness and Dengue fever.

Low levels of **development** often cause infectious-disease outbreaks. People living in underdeveloped areas can lack access to basic health care and are less able to protect themselves from illness. In fact, most infectious-disease deaths occur in countries where many people live on less than one dollar a day.²

Infectious diseases also hinder development. They slow economic and social development and force families, communities and nations to take care of many sick people. Often, poor people are sick because they do not have money to get good medical care. If an infectious disease causes a poor person to miss time at work or even to lose their job, they do not have money to fall back on.

Terms & Concepts

Infectious disease: a disease caused by organisms, such as bacteria or viruses, which enter and reproduce within a person's body.

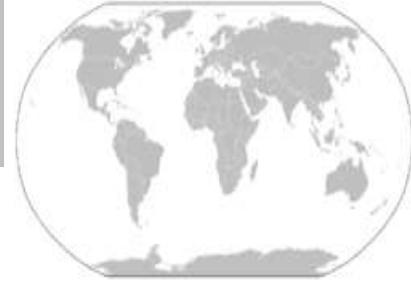
Developing countries: countries that are still undergoing development.

Contagious: capable of transmitting disease, capable of being spread to others.

Pandemic: an epidemic that spreads through several populations, regions, countries, or even continents.

Immune system: the body's defense against diseases and infections.

Development: the complex process of making services, technology, education healthcare available to a population.



Malaria

Malaria is a disease spread by mosquitoes. **Parasites** enter a person's blood after he or she is bitten by a mosquito that carries them. From there the parasites travel via the blood to the liver, where they multiply. Eventually, these parasites invade other organs. Individuals who contract malaria show signs of severe exhaustion, high fever, sweating, and chills.

Malaria is most common where mosquitoes breed year-round, mainly in tropical and sub-tropical regions. 90 percent of malaria cases occur in sub-Saharan Africa, where malaria has become the leading cause of death among children.³ Other high-risk groups include pregnant women and people who have not developed **immunity** to the disease, such as travelers, refugees and workers entering disease-prone areas.

Malaria is curable, especially when it is identified early. However, people need to have access to health care in order to receive treatment. If left untreated, malaria can affect the kidneys and brain, and can also lead to death. Malaria may also cause brain damage and learning disorders in child survivors.

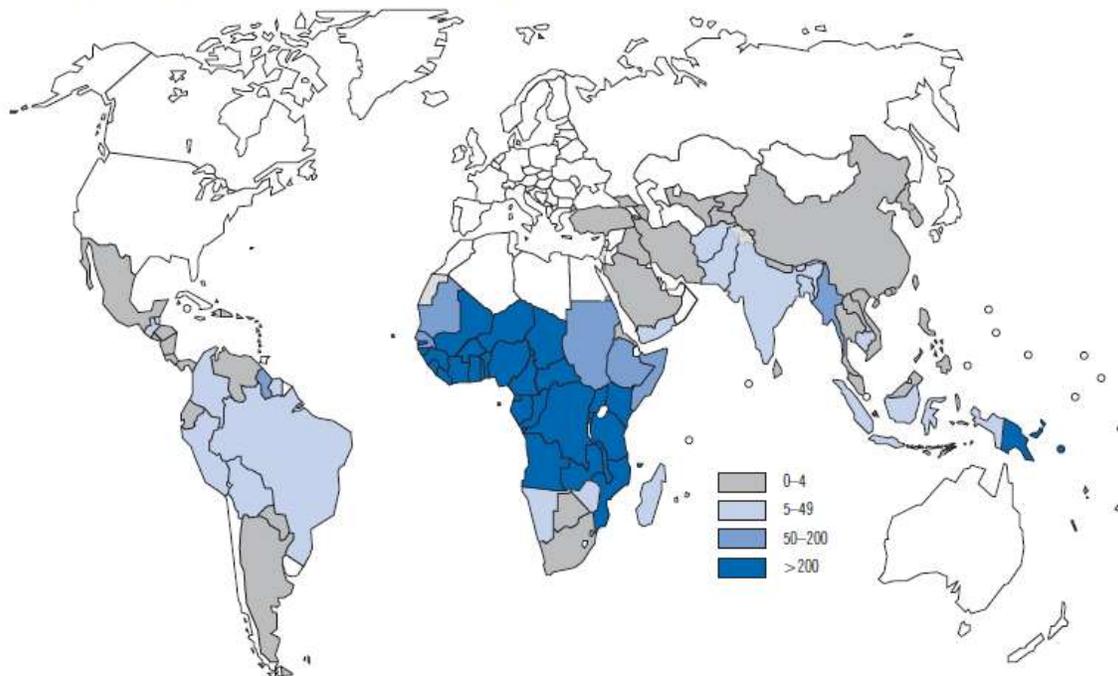
Terms & Concepts

Malaria: an infectious disease characterized by chills, fever, and sweating.

Parasites: an infectious disease characterized by chills, fever, and sweating.

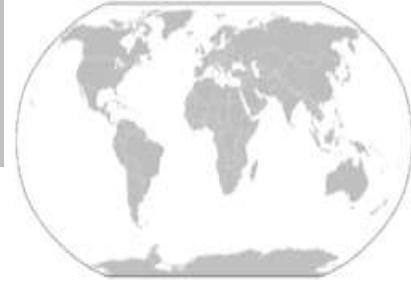
Immune: able to repel diseases and illnesses before they make the body sick.

Fig. 3.3 Estimated incidence of malaria per 1000 population, 2006



Global malaria prevalence 2006

Source: WHO, World Malaria Report 2008



DID YOU KNOW?

- One child dies of Malaria every 45 seconds.
- There are around 200 million cases of malaria worldwide each year.
- About US \$5 billion each year is required to control malaria.

Source: WHO, World Malaria Report 2010

Communities that are at risk of malaria can reduce the likelihood of an outbreak by filling pits or closing open water tanks where mosquitoes breed. Another way to reduce the number of malaria cases is to distribute chemically treated mosquito netting. This netting is placed over a person's bed at night to protect against mosquito bites. Unfortunately, not enough nets are made and distributed to the areas that need them most. Finally health officials can distribute **insecticide** for people to use in their houses.

Tuberculosis

Tuberculosis (TB) is a contagious disease that infects the lungs. One third of the world's population is infected with the organism that causes TB. However, only 5 to 10 percent of these people will become sick during their lifetimes.⁴

When people are sick with TB, their tuberculosis is considered "active." But there are many people who carry TB in their lungs for an entire lifetime without becoming sick. These people have "inactive" TB. Only those people who have "active" TB can spread the disease to others by coughing or sneezing.

Terms & Concepts

Insecticide: chemicals or materials that kill insects.

Tuberculosis (TB): an infectious disease caused by a species of bacteria.

Resistant: not affected by medicines.

DID YOU KNOW?

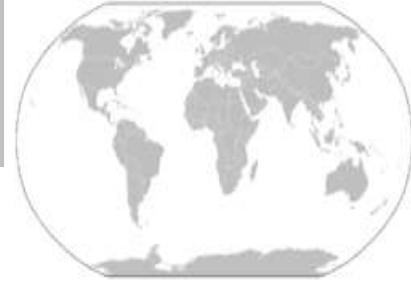
Tuberculosis (TB) kills between one and two million people every year.

It is the most serious public health concern in the world.

In 2009, there were more than 9 million new cases of TB.

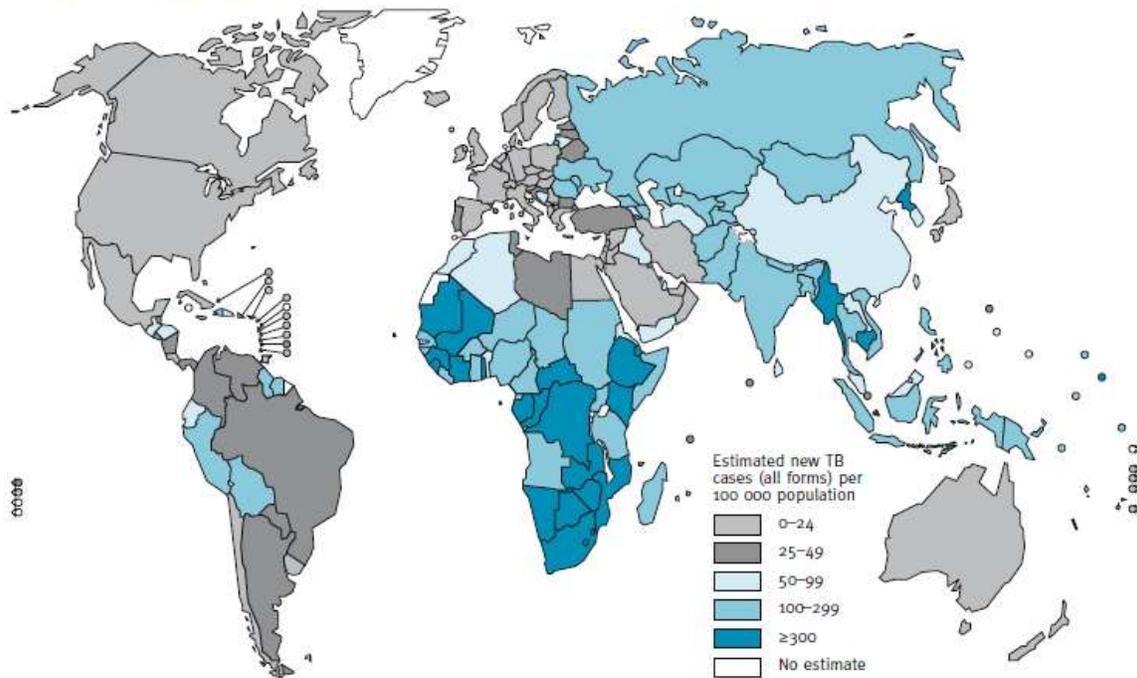
Source: WHO, Global Tuberculosis Control 2010

Although treatment for TB is available, some strains of the disease have become drug-**resistant** and no longer respond to regular medicines. If people develop tuberculosis, they can take a drug in order to combat the disease. However, if they stop taking the drug before they are fully cured because they begin to feel better and do not go back to a doctor, or because they cannot afford nor get access to the drug anymore, the disease can become worse. Sometimes, it can even become immune to the drug. If people then return to the doctor to begin the same treatment again, the tuberculosis strain may have "learned" how to counteract it.



Drugs to treat TB may not be available in certain areas, particularly in developing regions. Once an individual gets a strain of the disease that is resistant to a common drug, he or she can spread that strain to others. Surprisingly, improperly treating tuberculosis is actually worse for the population than not treating the disease at all.

FIGURE 1
Estimated TB incidence rates, by country, 2009



Global Tuberculosis presence, 2009.
Source: WHO, Global Tuberculosis Control 2010

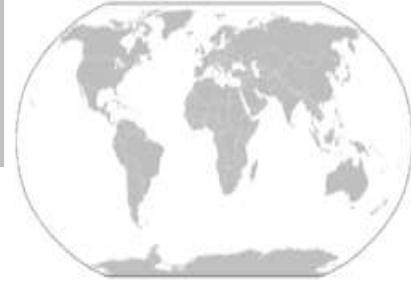
The World Health Organization developed a strategy called DOTS, or “directly observed treatment, short course.” Through DOTS, health officials or volunteers actually observe patients taking their TB treatment for as long as is required (usually six to eight months). This ensures that people infected with the disease do not stop taking their medicines too soon. It is a simple strategy and relatively cheap.

According to WHO, 180 countries were implementing DOTS by the end of 2002. Through the strategy, some 37 percent of all TB patients were being treated.⁵ But even though DOTS is a very successful strategy, many countries are not able to use it because they do not have enough TB medicine.

DOTS in China

The World Bank has ranked the DOTS strategy as one of the “most cost-effective health interventions.” In China, TB cases dropped by more than 30 percent in provinces where DOTS was implemented.

Source: WHO, www.who.int



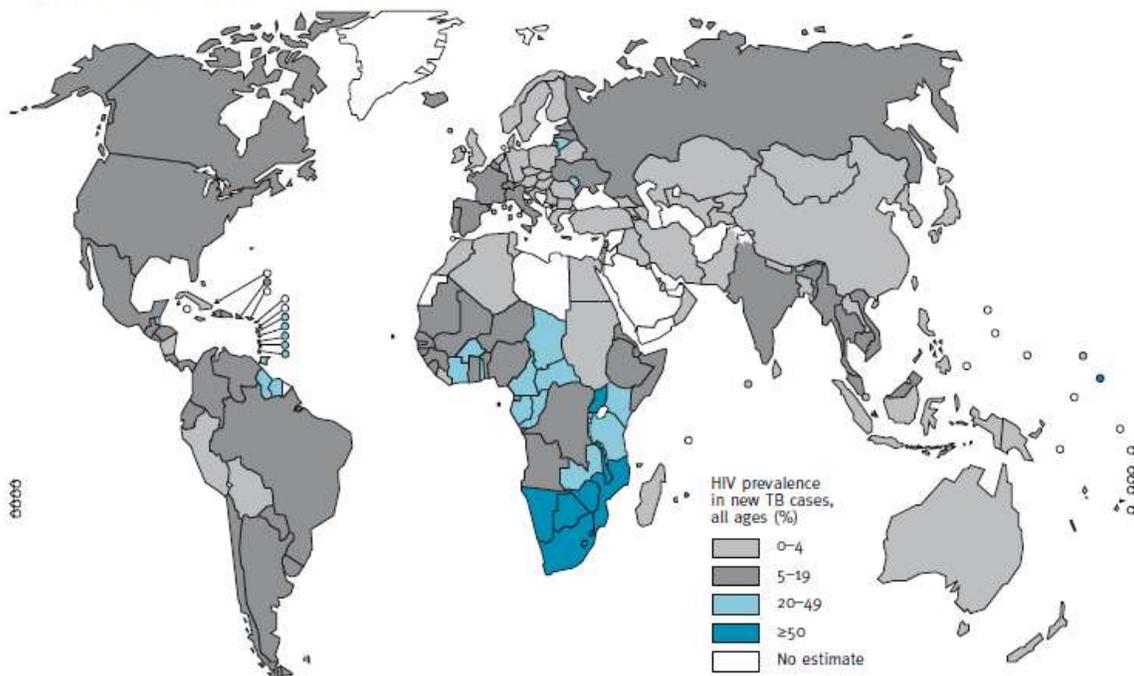
Countries need to make a commitment to fighting TB and provide enough money to expand DOTS. Because TB can only be spread by patients who have symptoms, it is very important to identify people who are sick with the disease and treat them quickly. Quick treatment is the best way to prevent widespread outbreaks of TB.

HIV/AIDS and Other Infectious Diseases

Because HIV/AIDS weakens a person’s immune system, infectious diseases like malaria and TB are a greater threat to HIV-positive people than to others. Of the 25 million Africans now living with HIV, it is estimated that eight million also carry TB. Half of those people, or four million people in all, will develop active TB at some point in their lives. Without treatment, an HIV-positive person sick with TB usually does not live longer than a couple of months.⁶

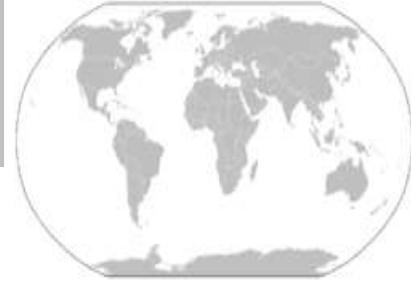
Experts concluded that half a million African lives could be saved each year if HIV/AIDS and TB were dealt with jointly. Combating the infectious diseases that kill HIV-positive people is a vital part of the fight against HIV/AIDS.

FIGURE 2
Estimated HIV prevalence in new TB cases, 2009



This map shows people who have both HIV and TB, called “co-infection.” What similarities do you see to this map and the previous maps of malaria and TB cases?

Source: WHO, Global Tuberculosis Control 2010



CURRENT SITUATION

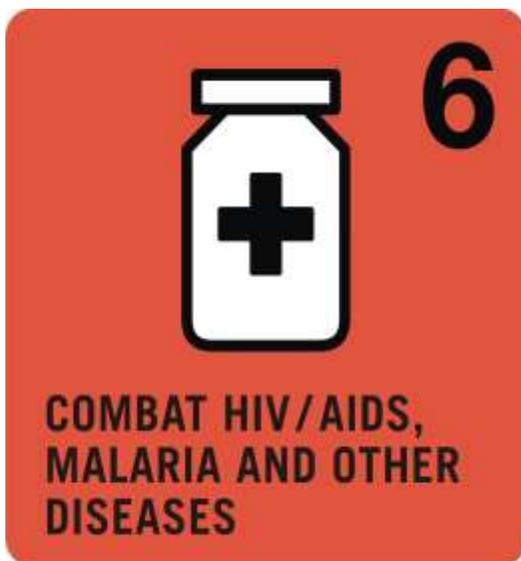
There are multiple organizations that continually provide funding for research and vaccinations to prevent the spread of Malaria, Tuberculosis, and HIV/AIDS. However, as new research provides additional vaccinations, a new problem develops. Countries have grown more dependent on this medicine, but have less money to fund research and medicine. WHO's World Malaria Report of 2009 indicated that approximately 243 million cases of malaria led to 863,000 deaths in 2008 alone. Still, the hard work of the international community has paid off. Global control efforts have resulted in a drop in the number of deaths from 1 million in 2000 to 781,000 in 2009.⁷

While there is a large amount of funding allocated for malaria control, the 2010 World Malaria Report indicates that most of it went towards the African region and only a small percentage went to the South-East Asia region, further stating that these funds are disproportionately distributed within smaller countries with less severe cases of malaria. The Report also states that a little more than a third of all countries affected with malaria have seen reductions, though mostly in Africa.

CRITICAL THINKING

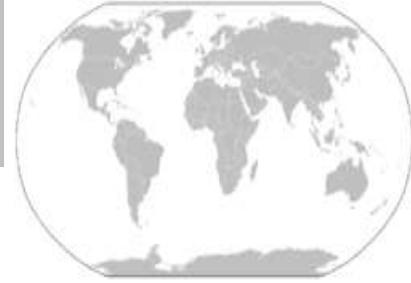
People living in extreme poverty are vulnerable to infectious diseases. These diseases, in turn, make poverty worse. They can also cause decline in the economy, education, environment, political stability and gender equality of a country. How do you think this happens?

INTERNATIONAL ACTION



Through the Millennium Development Goals (MDGs)—a set of achievements that all nations agreed to work toward in the 21st century—the international community acknowledged that infectious diseases hold back development. Goal number six calls on countries to combat HIV/AIDS, malaria and other diseases. The target for this goal is to reverse the spread of these diseases by the year 2015.⁸

The World Health Organization is the primary UN agency that coordinates efforts against infectious diseases. WHO has offices around the world and works closely with nongovernmental organizations (NGOs) to fight a variety of infectious diseases. It also tries to improve health conditions and make sure that diseases cannot flourish.



International Action on Malaria

The Roll Back Malaria global partnership (RBM) is another initiative of WHO, UNDP, UNICEF and the World Bank. The partnership works with governments, international agencies, nongovernmental organizations and corporations to reduce the costs of malaria. RBM sets annual “road maps” of goals for countries to achieve in a push to control malaria.

A meeting of health officials and business representatives held in Johannesburg, South Africa in September 2004 addressed preventing the spread of malaria. The meeting focused on making chemically treated mosquito nets more widely available. UNICEF, which purchases and distributes the most nets worldwide, estimated that the production would have to increase from 13 million nets per year to 30-40 million nets per year to meet the demand.⁹

Some countries have adopted policies that are cheaper and more effective than nets, though they have other costs. South Africa, for instance, has begun a very effective anti-malaria campaign by providing communities with an insecticide to protect houses from mosquitoes. Unfortunately, this insecticide may be damaging to the environment if overused. Officials in South Africa assert that the amount used to spray houses and the way the procedure is done limits environmental problems. However, the World Health Organization still advises against this method, even if it may be more effective and cheaper.

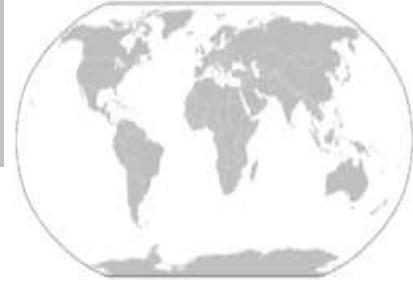
International Action on Tuberculosis

The Stop TB Partnership is a global campaign to halt the spread of tuberculosis. The partnership seeks to eliminate TB entirely within the next 50 years. In 2003, the Stop TB Trust Fund was established at the World Bank to help fund the initiative. The partnership seeks to expand DOTS worldwide.



The Roll Back Malaria Organization is determined to decrease those that are affected by Malaria.

Source: www.rollbackmalaria.org



RECOMMENDATIONS FOR CREATING A RESOLUTION

The issue of infectious diseases has been addressed widely by UN bodies, but continues to be a problem. Therefore, delegates should focus on looking for new and innovative ways to address the challenges outlined above.

Delegates should address the following when creating draft resolutions:

- Stating how preventing disease is needed to achieve other economic and social goals;
- Specifying which methods of preventing malaria, TB, and other diseases are best; and
- Stating how the international community can raise money for these programs.

Questions to Consider:

1. How has your country been affected by infectious diseases? TB? Malaria? Other tropical diseases?
2. Has your country been involved in any initiatives to halt the spread of an infectious disease?
3. In your country's opinion, who should pay to stop diseases?
4. According to your country, what are the best ways of stopping the spread of TB, malaria, and other infectious diseases globally?

RESEARCH AID

This video by “Nothing But Nets” shows how insecticide treated bed nets are making young children and pregnant moms safe.

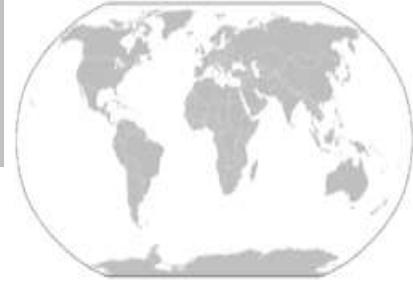
- <http://www.youtube.com/watch?v=P71LHMF3gpk&feature=related>

The **World Health Organization** is the UN agency committed to decrease the number of inflicted people with Malaria, Tuberculosis, HIV/AIDS, and other infectious diseases.

- www.who.int

The **Roll-Back Malaria** Partnership is committed to stopping malaria in a decade.

- <http://rbm.who.int>



Nobel laureate Dr. Harold Varmus offers alarming statistics on the massive numbers of malaria and TB in the world, plus the political and economic reasons for addressing malaria and other diseases.

- <http://www.youtube.com/watch?v=QE0UhXokL8w>

The **Millennium Development Goals** of the United Nations measure certain actions that must be taken in the new millennium to promote development in all parts of the world.

- www.developmentgoals.org

The **Stop TB Partnership**, established in 1998, is comprised of organizations that recognize tuberculosis as a public health problem and aim to eliminate TB.

- www.stoptb.org

US Centers for Disease Control and Prevention is dedicated to protecting health and quality of life through the prevention of diseases. It currently worked with a Kenyan Institute to decrease malaria in Kenya.

- www.cdc.gov

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⁵ “Tuberculosis,” World Health Organization.

⁶ “TB Treatment Plus HIV Tests Could Save Half-Million African Lives Annually,” *UN News Service*, September 21, 2004.

⁷ World Health Organization, *World Malaria Report 2010*, page xv.

⁸ “6: Combat HIV/AIDS, Malaria and Other Diseases,” Millennium Development Goals.

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⁹ “UN-Backed Talks Look For Production Boost in Anti-Malaria Nets,” *UN News Service*, 2004 United Nations, 23 September 2004, www.un.org/news.