TUBERCULOSIS (TB)

Millennium Development Goal 6: To combat HIV/AIDS, malaria and other diseases

Target 6.C: By 2015, to have halted and begun to reverse the incidence of malaria and other major diseases.

Progress: If current trends are sustained globally, the target to halt and begin to reverse the incidence of TB is likely to be achieved in all regions, except Europe

Are we on track to meet the target?

<table>
<thead>
<tr>
<th>Progress on halting and reversing the spread of Tuberculosis</th>
<th>Africa</th>
<th>Asia</th>
<th>Latin America &amp; Caribbean</th>
<th>Commonwealth of Independent States</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Northern</td>
<td>Sub-Saharan</td>
<td>Eastern</td>
<td>South-Eastern</td>
</tr>
<tr>
<td></td>
<td>low mortality</td>
<td>high mortality</td>
<td>low mortality</td>
<td>moderate mortality</td>
</tr>
<tr>
<td>Number of TB cases excluding people who are HIV-positive (per 100,000 population)</td>
<td>1990</td>
<td>60</td>
<td>352</td>
<td>319</td>
</tr>
<tr>
<td>2006</td>
<td>45</td>
<td>521</td>
<td>197</td>
<td>264</td>
</tr>
</tbody>
</table>

Line 1 (progress) - The words describe current levels. The colours show the trend towards meeting the 2015 target.
Key: Dark Green = target met. Light Green = almost met or on target. Orange = some/negligible progress but insufficient to meet target. Red = no change or negative progress.

Line 2 (level) – Number of TB cases (per 100,000 population) – Key: Please refer to map key below.

Progress

- Overall, progress in global TB control has slowed down compared to 2001-2005. 1 p1
- The target of halving prevalence and deaths by 2015 in comparison with 1990 could be achieved in South-East Asia, Western Pacific, Eastern Mediterranean and the Americas regions. It is unlikely to be achieved globally because the African and European regions are far from the targets. 1 p6
- The rate of cases detected increased only by 3%, compared to an average 6% increase per year between 2001 and 2005. 2 p1
- Worldwide, 84.7% of detected cases were treated successfully in 2005, the highest rate since reliable monitoring begun 1 p37

Key messages

- TB is a disease that disproportionately affects poor people, who are more vulnerable to infection and suffer more from the consequences. Poor countries are also less able to prevent the disease from spreading due to an inability to treat cases effectively.
- Success in eradicating tuberculosis rests on early detection of new cases and effective treatment. However globally, nearly 4 out of 10 TB cases are still not being properly detected and treated. 2 p1
- Two of the issues that have been slowing progress are the increasing rates of multi-drug resistant TB and the deadly combination of HIV and TB.
- The Global Plan to Stop TB (2006-2015) was launched in Davos in January 2006 by Gordon Brown, Bill Gates and the President of Nigeria. This lays out the actions and resources needed to halve TB prevalence and deaths by 2015. If the Global Plan is fully funded and implemented, 14 million lives will be saved and 50 million people treated. The plan costs US$ 56 billion. As of October 2008, there is still a shortfall of US$ 1 billion for the 86 countries with 91% of global TB cases for the same year. 6
Facts and figures

- TB is a disease caused by bacteria called Mycobacterium tuberculosis that can affect anyone, at any age, in any country.
- More than 2 billion people, equal to one-third of the world’s population, are infected with TB (which is usually inactive). If not treated, each person with active TB infects on average 10 to 15 people every year.
- In 2006 1.7 million people died from TB, including 231,000 people with HIV. This is equal to 4,500 deaths a day.
- In 2006 there were 9.2 million new cases of TB; 55% of which were in Asia (South-East Asia and Western Pacific regions) and 31% in Africa. Population growth has boosted the number of new cases compared to previous years.
- Africa, China and India collectively account for more than two thirds of undetected TB cases. In 2006 the detection rate in Africa was only 46%.
- There are an estimated 40,000 new Extensively Drug-resistant TB (XDR-TB) cases annually. They have occurred in more than 45 countries and in all regions of the world.
- Since 1993, nearly 32 million TB patients have been treated under DOTS (Directly Observed Short Treatment Course). The DOTS strategy, developed by WHO, has been adopted by 184 countries, but services in many countries need to be strengthened. The global average cure rate was 85% in 2006, with lowest levels in Africa (76%) and Europe (67%).
- A recent World Bank and WHO analysis estimated that investment in TB control efforts can reap benefits that equal ten times the costs.

Drug resistance challenges

Multidrug-resistant TB (MDR-TB) and its even more lethal cousin Extensively Drug-resistant TB (XDR-TB) are worrying developments. MDR-TB and XDR-TB do not respond to standard drug treatment. XDR-TB is virtually untreatable. They invariably occur as a result of poorly-managed TB care and control programmes and weak health systems.

China

Together with other main partners, DFID has contributed to increase national detection rates from 30% in 2000 to over 70% in 2007 in 16 provinces, covering half of China’s population. Cure rates are now well above 85%. 1.5 million TB patients are being successfully treated. This will increase to 2 million by 2010.
Challenges and Solutions

Current efforts to control TB need to be sustained and intensified because TB is still a major cause of illness and death worldwide, especially in Asia and Africa. Prompt diagnosis and effective treatment require fully-functioning laboratories, reliable drug supplies and skilled health workers. It is essential to ensure that TB treatment is delivered in the correct way; patients are informed of the need to complete the course of their medication (that usually lasts six months) and are supported in doing so.

The three front-line challenges for tackling TB are drug resistance; managing patients who are infected with HIV and TB; and the need for more research, better drugs and diagnostics and a vaccine.

Drug resistance

The emergence of drug-resistant strains, particularly in settings where many TB patients are also infected with HIV, poses serious threats to TB control. Multi-drug resistant TB is TB resistant to the two most powerful anti-TB drugs; extensively drug-resistant TB is TB resistant to most commonly used drugs, and is virtually untreatable.

HIV and TB

TB is one of the most common infections of people living with HIV. During the past 15 years the number of new TB cases has tripled in countries with high HIV prevalence. Investing in joint TB and HIV/AIDS interventions will strengthen health systems and contribute to the achievement of the MDGs by keeping people healthy and productive. The new DFID AIDS Strategy calls for stronger integration between HIV and TB services. In many countries there has been good progress, including Kenya, Rwanda and Tanzania where between 40-60% of TB patients are tested for HIV.

Drugs, diagnostics and vaccines

Laboratories and diagnostics are crucial in the effort to control TB. We need a rapid test that correctly identifies people with the disease and that is simple to use. The current diagnostic test is over 120 years old, impractical in certain settings, and does not detect all cases. No new TB drugs have been introduced in over thirty years. The current TB vaccine, in use since the 1920s has limited effectiveness. In particular, we need new tools (drugs, diagnostics and vaccines) that work in the presence of HIV/TB co-infection.

HIV and TB co-infection

Every three minutes a person living with HIV dies of TB.\(^9\)

HIV and TB form a deadly combination, each increasing the other’s impact. TB is harder to diagnose in HIV-positive people. Somebody infected with HIV and TB is far more likely to become sick with TB than someone with TB alone. In Africa, HIV is the single most important factor contributing to the increase in incidence of TB since 1990.

India

India has the highest number of TB cases in the world - over 3.4 million.\(^1\) DFID’s support of the national TB programme has helped achieve considerable progress in disease control. The programme has treated 6.3 million patients and saved 1.1 million lives since 1997.\(^7\) The drug supply has improved with nationwide monitoring of drug stocks, logistics, distribution and quality procurement of quality TB drugs.

Pakistan

Pakistan has the sixth highest burden of TB in the world. DFID budget support to seven National Health Programmes has helped the Government dramatically improve its treatment of TB. The case detection rate increased from 51% in 2006 to 69% in 2007 (compared with 13% in 2002) and treatment success is 87%.\(^7\)
What the UK government is doing to help

DFID has committed £6 billion over seven years to help improve people’s health and build stronger, integrated, health services in poor countries. DFID is providing support through:

- **Country programmes**: Increasingly DFID funds the broader health sector plans of developing country governments through sector wide programming and poverty reduction budget support. This helps to build capacity in health systems to improve the way health services diagnose and treat all major causes of illness.

- **International organisations and Global Partnerships**: such as the Stop TB Partnership (c. £13 million between 2002-2011), the Global Fund to Fight AIDS, TB and Malaria (GFATM) (with up to £1 billion pledged for 2008-2015), and through core funding for WHO. DFID is a founding member of UNITAID, which particularly helps to purchase the drugs needed to deal with drug-resistant TB and paediatric TB. We have made a 20-year commitment to UNITAID, starting with €20 million in 2007.

- **Developing new research evidence**: DFID supports the research and development of TB drugs and diagnostics via the Special Programme for Research and Training in Tropical Diseases (TDR)

Impacts and Results

**Global Fund**: By mid-2008, GFATM-supported programmes detected and treated 4.6 million additional cases of infectious TB.\(^3\) A number of high-burden TB countries - including China – have increased TB detection levels from 45% to 79% and are beginning to show declines in TB prevalence and incidence.\(^4\)\(^5\)

However, TB in Africa remains a serious problem, largely due to HIV.

**Stop TB**: the Stop TB Partnership has played an important role in the progress towards achieving the TB target. The Partnership has built consensus among countries around the Global Plan to Stop TB and mobilised significant support to the Plan. Thanks to the Global Plan, money for TB control has been spent more efficiently and countries have made progress in improving access to effective TB treatment, including availability of high-quality drugs.

Effect on poorest households

The cost of treating TB in already impoverished settings can be catastrophic. Even where treatment is free, there are often costs associated with diagnosis or travel to medical facilities. The poor spend a higher proportion of income on treatment compared to the better off. High costs can trigger risky coping strategies - such as selling property, taking out loans, incurring in debt – which may lead to further impoverishment. Finally, the financial hardship caused by TB is likely to deter many poor people from seeking treatment.

Sources

1 WHO, Global Tuberculosis Control 2008
2 Stop TB, Tuberculosis Facts April 2008
3 GFATM website accessed 29 October-2008
4 GFATM Partners in Impact Results Report 2007
5 Laxminarayan et al, Economic Benefit of Tuberculosis Control, 2007
6 Communication from Stop TB, 28 October 2008
7 DFID Annual Report 2008
8 DFID China Briefing Paper: Health 2008
9 HIV/TB Global Leaders Forum 2008, Key messages