



# Scaling up the UK's response to the global TB epidemic:

AN AGENDA FOR ACTION



**All-Party Parliamentary Group  
on Global Tuberculosis**

March 2007



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Produced by the All-Party Parliamentary Group on Global Tuberculosis

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# Foreword

**By Dr. Mario Raviglione, Director of the World Health Organization's Stop TB Department**

In 1993 the World Health Organization (WHO) declared TB a global emergency. This announcement helped to generate renewed attention to a disease that many thought had disappeared.

More than a decade later TB is still a major cause of death worldwide. In 2005, there were 8.8 million new cases of TB and 1.6 million people died from the disease, yet it can be treated. The greatest burden of TB is felt in the developing world where the vast majority of cases are found but TB is also on the increase again in parts of the developed world, including the United Kingdom. Fighting TB therefore depends on effectively raising and addressing country-level challenges through a unified global campaign.



Progress is being made towards international targets to reduce the global burden of TB by 2015. However, in order to achieve the WHO's vision of a world free of TB there is much further to go. To help overcome the challenges that keep TB a global threat, there is an urgent need to push for full funding and implementation of the Global Plan to Stop TB (2006-2015) and the WHO's Stop TB Strategy. It is time for all governments and the donor community to meet their full responsibility to Stop TB, and for decision-makers to stand alongside people and communities affected by the disease.

The United Kingdom Government has been a strong ally in the fight against global TB through its political direction and financial generosity. Although the funds available for TB control are greater than ever, reaching US\$2 billion in 2007, interventions on the scale required by the Global Plan to Stop TB would cost an extra US\$1.1 billion this year alone. The new threat of Extensively Drug-Resistant TB (XDR-TB), which is having a devastating effect in high HIV-prevalence settings, is not only a wake-up call, but also a rallying cry for additional resources to enable it to be effectively contained.

I commend the All-Party Parliamentary Group on Global TB for its leadership in helping to put TB high on the political agenda in the United Kingdom and further afield. I support their call for the United Kingdom to maximise its contribution to the implementation of the Global Plan to Stop TB and look forward to working in partnership with the Group in the future.

## **Acknowledgements**

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# Introduction

**By Andrew George MP, Nick Herbert MP and Julie Morgan MP**  
**Co-Chairs of the All-Party Parliamentary Group on Global Tuberculosis**

In September 2005, two weeks after tuberculosis (TB) was declared a continent-wide emergency in Africa, we participated in a Parliamentary delegation to Kenya at the invitation of the advocacy organisation RESULTS in order to witness the impact of TB firsthand.



During our week in Kenya we saw the scale of the TB epidemic and its burden on individuals, communities and wider health systems. We learned about the many challenges faced by the Kenyan National TB programme in trying to manage this growing epidemic, in particular the deadly interaction between TB and HIV/AIDS.

We left Kenya with a sense of hope that some progress was being made and that overseas aid was helping to save lives. Of concern however, was the failure of many people in Kenya – from local health officials to representatives of donor agencies – to acknowledge the scale of the TB problem that surrounded them. Despite stark evidence to the contrary, we were continuously told that TB was not a major priority. This situation is true in many countries and reinforces the view that the single biggest barrier to the eradication of TB globally is insufficient awareness and political will.

The world is slowly waking up to the need for accelerated action to stop TB. Over the past few years, the global TB problem has received greater attention and increased resources have begun to follow. In January 2006, the Global Plan to Stop TB, 2006-2015 (Global Plan) was published outlining what action is needed to halve TB prevalence and death rates based upon 1990 levels, and what resources are required to achieve this target.

The All-Party Parliamentary Group on Global Tuberculosis was formed in 2006 to ensure that the UK remains at the forefront of international efforts to meet the objectives expressed in the Global Plan. The UK has already demonstrated leadership in responding to the global TB problem but the full realisation of the Global Plan requires the UK and all other nations to do considerably more.

This agenda for action outlines steps that the UK Government and the Department for International Development (DFID) in particular can adopt to take its level of support for global TB control to the next level. Some of the actions recommended in this paper call upon the UK Government simply to fulfil commitments and policy recommendations that it has already made. Others call upon the UK Government, and the international community as a whole, to scale up support for the broad range of measures needed to implement the Global Plan.

TB is also on the increase again in the UK and the All-Party Parliamentary Group on Global Tuberculosis is committed to supporting the fight to eradicate TB within our own borders. A separate set of recommendations specific to managing TB in the UK will be made by the group later this year. TB outbreaks in the UK and the epidemic elsewhere in the world are inextricably related. As the theme for this year's World TB Day on March 24<sup>th</sup> reminds us, "TB anywhere is TB everywhere."

**March 2007**



# The global TB problem

## A short history of TB

TB is an airborne disease that usually attacks the lungs, although it can affect any part of the body. Anyone can get TB but it is most likely to affect people whose immune systems are already weakened.

*Mycobacterium tuberculosis* – the bacterium that causes TB – was discovered in 1882 but has probably existed for as long as mankind. In the mid-Nineteenth Century, TB brought about the death of almost one in every seven people in Britain and was considered the single biggest killer of Europeans and North Americans.<sup>1</sup>

Between 1940 and 1980, improved socio-economic conditions, widespread Bacillus Calmette-Guérin (BCG) vaccination, anti-TB treatment and preventative therapy for latent infection, led to a steady decline of TB cases and deaths in the Western world. This progress led to complacency and decreased interest in TB as a global public health problem. TB evolved from being Europe and North America's most feared and talked-about disease to a low public health priority overshadowed by the threat of AIDS and other newly emerging diseases. The fact that TB rates remained high in many other parts of the world went largely unnoticed.

A number of factors in the late 1980s and early 1990s brought about renewed attention to the global TB problem. The further collapse of global health systems, the emergence of HIV/AIDS and outbreaks of multidrug-resistant TB (MDR-TB) fuelled a massive resurgence of TB in most parts of the world, particularly in sub-Saharan

Africa where cases have tripled since 1990 and death rates doubled. With the rise of globalisation and increased international travel there became greater awareness that for as long as the disease existed anywhere, no country was immune from the threat of TB.

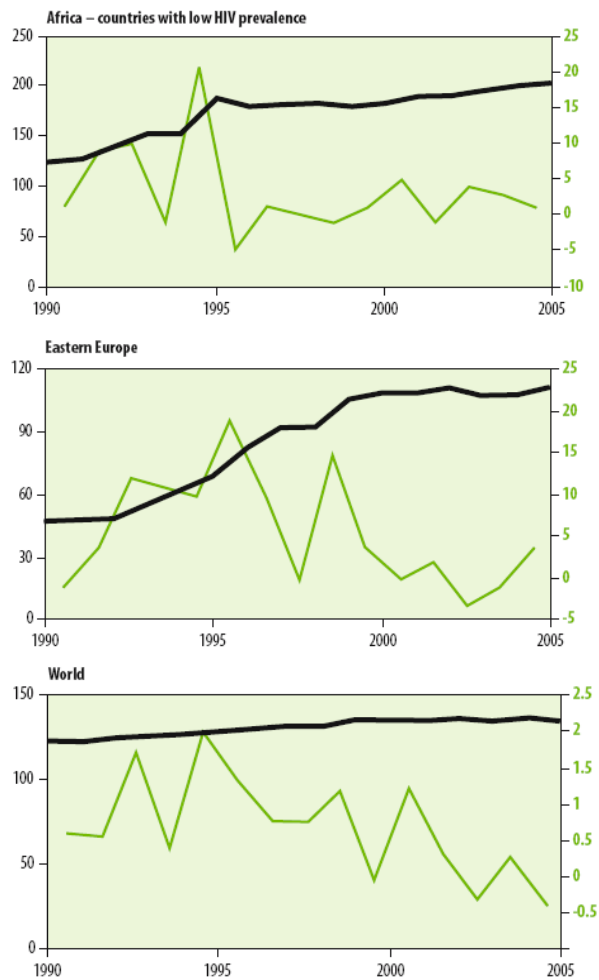
In the Twenty-first Century, TB still remains a leading cause of death worldwide.

## Trends in TB incidence rates (all forms of TB)

In the WHO sub-regions Africa (high HIV) and Eastern Europe, TB incidence rates increased for most of the period since 1990 but now appear to have stabilised or begun to fall.

The global incidence rate of TB peaked around 2002 and now appears to be on the threshold of decline. However, the total number of new cases arising each year is still increasing globally because of a growing case-load in the WHO regions of Africa, the Eastern Mediterranean and South-East Asia.

**Black line:** TB incidence rates (per 100,000 people)  
**Green line:** annual change in incidence rates



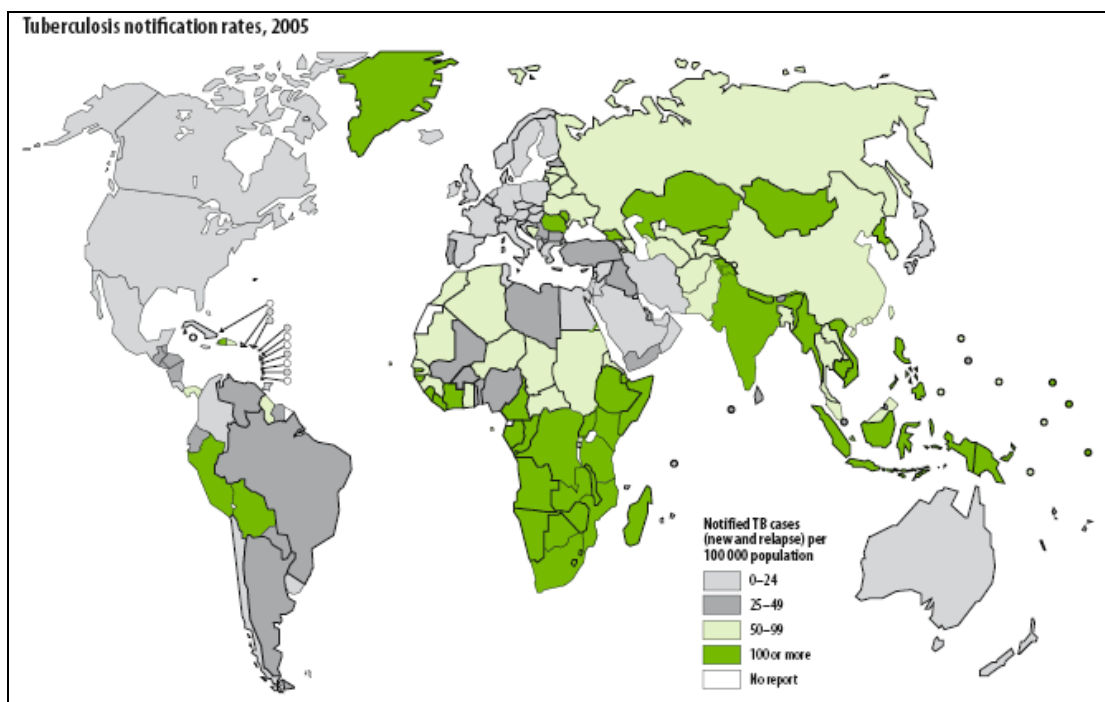
Source: WHO Global TB Control Report (2007)

## The current state of global TB epidemic<sup>2</sup>

- 2 billion people, or one-third of the world's population, are infected with TB bacilli.
- 1 in 10 people infected with TB will become sick with the active form of TB.

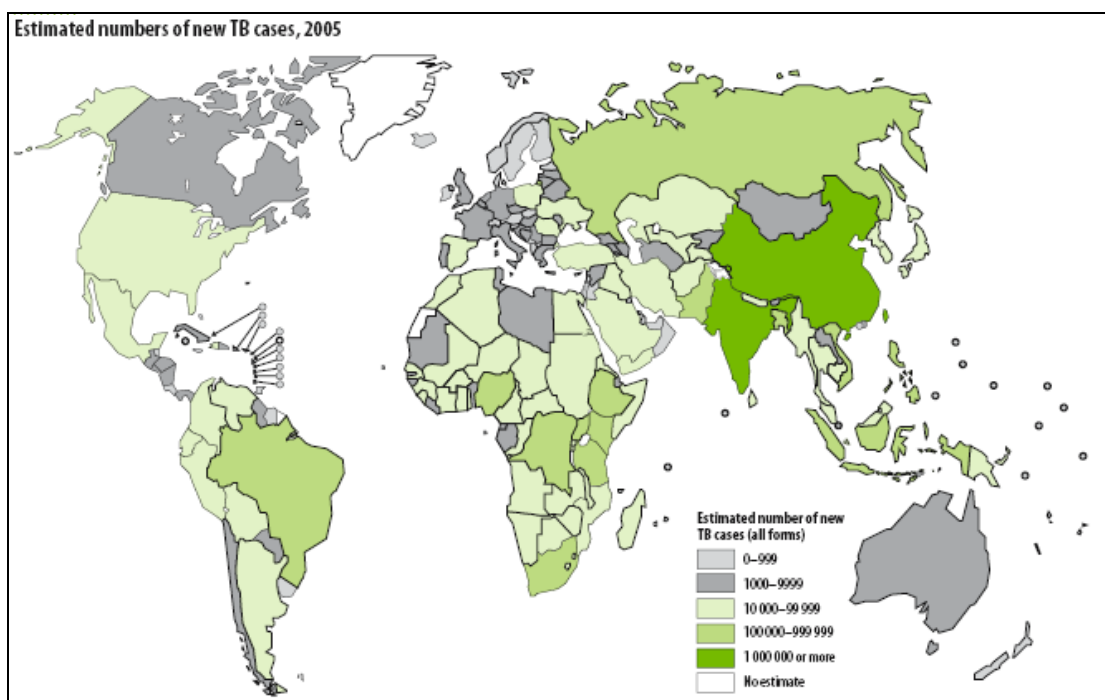
In 2005,

- Approximately 1.6 million people died from TB – equal to 4,400 deaths each day.
- There were 8.8 million new cases of TB worldwide. 80% were found in 22 countries.<sup>3</sup>



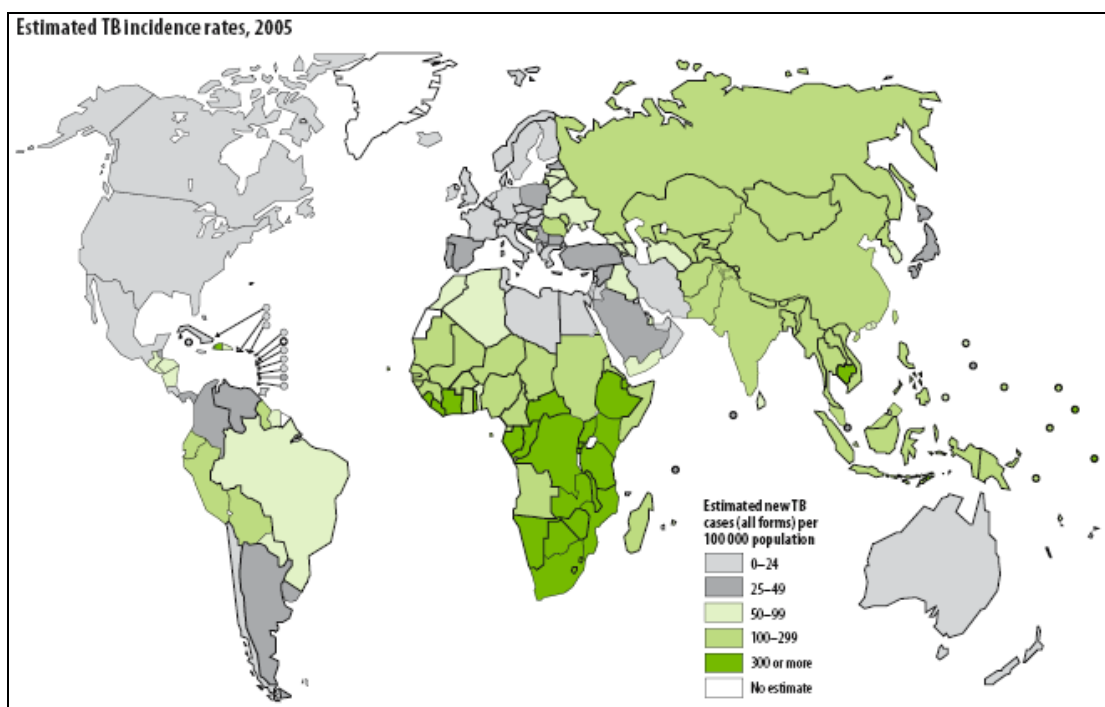
Source: WHO Global TB Control Report (2007)

- The majority of TB deaths are among people in the developing world. More than half of all TB deaths occur in Asia.



Source: WHO Global TB Control Report (2007)

- The highest rates of TB per capita are in Africa (28% of all TB cases).
- Among the 15 countries with the highest estimated TB incidence rates, 12 are in Africa. The high incidence rates estimated for these African countries are partly explained by relatively high rates of HIV co-infection.



Source: WHO Global TB Control Report (2007)

- TB mostly affects young adults in their most productive years.
- TB is a leading killer of people with HIV/AIDS. Around 200,000 people with HIV die from TB every year, the majority of them in Africa.
- 450,000 new cases of MDR-TB are estimated to occur every year. The highest rates of MDR-TB are in countries of the former Soviet Union and China.
- Extensively drug-resistant TB (XDR-TB) occurs when further resistance to second-line drugs develops. This form of TB is extremely difficult to treat and has been found in all regions of the world.

## Controlling TB

The WHO's Stop TB Strategy is based on the expansion and enhancement of 'DOTS'<sup>4</sup> and the need to address the major challenges to scaling up universal access to TB treatment and care.

DOTS is the internationally recognised strategy for delivering the basics of TB detection and treatment. It remains the most effective approach available for treating patients already infected with TB and preventing new infections and the development of drug resistance.

DOTS combines five elements: (1) political commitment with increased and sustained financing; (2) case detection through quality assured bacteriology; (3) standardised treatment with supervision and patient

### The six components of the Stop TB Strategy

1. Pursue high quality DOTS expansion and enhancement.
2. Address TB/HIV, MDR-TB and other challenges.
3. Contribute to health system strengthening.
4. Engage all care providers.
5. Empower people with TB and communities.
6. Enable and promote research.

support; (4) an effective drug supply and management system; (5) monitoring and evaluation system to measure impact.

DOTS has been identified as one of the most cost-effective health strategies available.<sup>5</sup> A full course of drugs to treat TB cost as little as £9 per patient. The entire cost of curing a TB patient with DOTS in low income countries is around £100 per patient.

DOTS is now being applied in 187 countries and 26.5 million TB patients have been treated by DOTS programmes between 1995 and 2005. The Global Plan reinforces the need for DOTS services to be expanded and strengthened.

#### International TB control targets

**2005** The World Health Assembly set international targets to detect at least 70% of infectious TB cases and treat successfully 85% of detected cases by 2005.

*The WHO has recently reported that globally, 60% detection rates and 84% treatment success rates have been achieved. Both targets were achieved in 26 countries.*

**2015** World Leaders adopted the Millennium Development Goal (MDG) target to have "halted and begun to reverse the incidence of" TB by 2015.

The Stop TB Partnership set the additional target of halving TB prevalence and death by 2015 in comparison with 1990 levels.

**2050** The ultimate goal of the Stop TB Partnership is to have eliminated TB as a public health problem by 2050.

#### Financing TB control

In January 2006, the WHO and the Stop TB Partnership launched the Global Plan. This Plan provides a blueprint for reaching the MDG target for TB of reducing incidence by 2015 and the Partnership's 2015 targets of halving TB prevalence and deaths from 1990 levels. The Global Plan estimates that a minimum of **US\$56 billion** is required to achieve these targets over the ten-year period.

Despite the heightened public and political profile given to TB following the launch of the Global Plan, a shortfall of **US\$31 billion** (or US\$3.1 billion per year) exists between resources currently available and/or pledged and the investment required to control the disease. To address this shortfall, there is an urgent need for increased funding commitments from governments of both wealthy and endemic countries, as well as multilateral donors such as the World Bank. The Global Fund to Fight AIDS, TB and Malaria (Global Fund) has made a significant impact on the financing picture for TB efforts at country level since its formation five years ago and currently provides two-thirds of all external financing for TB. Nonetheless, the Global Plan estimates that current donor funding, including the Global Fund, will need to increase some eight times and funding from developing country governments will need to double.

These estimates, however, based on data from 2004 and 2005, fail to take into account the additional resources needed to address XDR-TB which is now gaining ground in Africa and globally, representing a very substantial and growing challenge in many countries with threadbare health systems. Furthermore, a recent report by the Treatment Action Group (TAG) claims that the Global Plan underestimated the funding need for the research and development (R&D) of new TB tools over the next decade.<sup>6</sup> Whilst the Global Plan estimated that US\$9 billion would be needed between 2006 and 2015 to develop new drugs, diagnostics and vaccines, TAG projects that the amount of investment needed over the same period to meet TB R&D needs is in the region of \$20 billion requiring at least a five-fold increase in investment based on current levels.

# Recommended actions

## 1. Transform political commitment into action

### Recent global commitments to TB control

*"The World Health Organization's 'Two diseases, one patient' strategy should be supported to provide integrated TB and HIV care. The allocation of US\$0.25 billion each year for collaborative TB and HIV programmes would ensure that all patients with TB are offered VCT and all HIV patients are tested and treated for TB."*

'Our Common Interest' Report of the Commission for Africa, 2005

*"We will work to achieve [the] aims [of the UN Millennium Declaration] by ... Helping to meet the needs identified by the Stop TB Partnership."*

G8 Gleneagles Communiqué, 2005

*"We pledge our continued support to ... the WHO, the Global Fund to fight AIDS, Tuberculosis and Malaria (the Global Fund), the World Bank and other organizations, initiatives and partnerships actively working to fight these diseases."*

*"We will also support the Global Plan to Stop TB, 2006-2015 ... and call upon all donors and stakeholders to contribute to its effective implementation."*

*"We note with concern the rate of HIV/AIDS and tuberculosis co-infection and seek to promote unified coordination for activities in this regard."*

G8 St. Petersburg Communiqué, 2006

Strong leadership from the United Kingdom has helped put the global TB problem high on the international development agenda. The need for urgent action to fight TB, particularly in Africa, has been acknowledged at the highest levels, including at the G8 and the Commission for Africa. The UK was involved in the launch of the Global Plan helping to draw attention to the pandemic and mobilise the commitment of other nations to contribute to the Global Plan's implementation. The UK Government's strong position on TB has been clearly echoed across Parliament with both David Cameron and Menzies Campbell joining Tony Blair in signing the 'Call to Stop TB' in 2006.

For the objectives of the Global Plan to be realised and the MDG target on TB to be met, the international community must transform political commitment into concrete action. Recommendations made by the Commission for Africa and G8 must now be honoured. The UK should continue to lead the way by fulfilling commitments that it has signed up to and encourage others – donors and affected countries alike – to contribute to the effective implementation of the *Global Plan*.

DFID should also look to reflect the political prioritisation of TB control in its own policies and strategies and encourage recipient countries to do likewise. For example, DFID's health strategy (due to be published in 2007) should make specific reference to

TB as a major health problem and emphasise the importance of increasing investment in TB control to realise the objectives of the Global Plan. In practice this means strengthening programmes specifically targeting TB and TB/HIV co-infection and the development of new TB control tools. Implicit in this is the urgent need also to increase investment in health system strengthening, the foundation upon which successful TB programmes depend. Until the global burden of TB is significantly reduced, it must continue to be considered as an automatic development priority in the same way as HIV/AIDS and malaria.

The priority which has been afforded to TB by Ministers in Westminster must be backed up by the actions of staff working for DFID in countries where TB is prevalent. Given the process of decentralisation which the Department is undergoing, DFID country offices have an increasingly important role to play in promoting effective TB control and responding to national and regional priorities. In Africa, for example, where TB was declared a continent-wide emergency by its health ministers in 2005, DFID country offices

should support national responses by helping to develop, and then support, robust country-led TB and TB/HIV control plans within broader poverty reduction strategies.

**Recommended actions:**

- Cite TB and TB/HIV as priority areas within DFID's health strategy.
- Address global TB control as a spending priority alongside HIV/AIDS and malaria within the Comprehensive Spending Review for 2008-2011.
- Work in partnership with the G8 and other international partners to implement existing commitments made by the Commission for Africa and G8 on TB and TB/HIV.
- Ensure a continuation of G8 support for TB by endorsing specific language on TB at the 2007 G8 summit in Germany.
- Actively support the implementation of TB and TB/HIV control plans as part of broader poverty reduction strategies in countries where DFID has a bilateral presence.

## **2. Increase investment in TB control**

Low-cost effective interventions exist to prevent and treat TB but remain underused. Mechanisms exist to deliver on the Global Plan but remain underfunded. Greater investment is needed in order to scale up the use of effective current interventions and thus save some 14 million lives by 2015.<sup>7</sup> Further resources are also required for the development of more effective tools which will dramatically transform TB control in future years. Long-term commitment and investment in TB is necessary to achieve the ambitious TB control targets set by the international community. Emergency action is needed in Africa and Eastern Europe where HIV, MDR-TB, XDR-TB and broader health system issues continue to dramatically slow progress.

### **2.1 Expand access to effective TB services in high burden countries**

Latest data indicates that 89% of the world's population live in areas where DOTS (the core element of WHO's Stop TB Strategy) has been implemented by public health services<sup>8</sup>, but these statistics conceal stark variations in the quality of TB services provided, both within and between countries. In many countries, DOTS is not implemented by all public and private health care providers, resulting in inaccurate diagnosis of TB, low treatment success rates, drug resistance, wasted resources and ultimately needless morbidity and mortality from TB.

At the end of 2005, only 60% of active TB cases are believed to have been detected, falling far short of the international target of 70%. Of these, 84% are being cured, just short of the international target of 85%.<sup>9</sup> Access to quality diagnosis and treatment should be regarded as a human right. Much greater effort must therefore be directed towards identifying and successfully treating people with TB. Particular focus should be given to targeting those groups most vulnerable to TB, notably those in the poorest sections of society, infants and young children, people living with HIV/AIDS, prisoners and those living in remote rural areas. Accessing such groups will involve greatly increased efforts to enhance community awareness of the disease and locally available services.

The UK has the opportunity to be at the forefront of the drive to provide equitable access to quality TB control. DFID in particular can help to expand the availability of effective TB services in high burden countries by strategically directing its flow of resources towards those organisations and institutions best placed to deliver them. DFID should continue to demonstrate a broad and flexible approach to TB and health funding by channelling resources through a range of bilateral and multilateral routes. In many settings, it is civil society that is best placed to increase community awareness of TB and even to deliver TB services in certain settings. Where this is the case, DFID should work in partnership with civil society to ensure that quality TB services are made available to all.

The UK should also continue to help to remove one of the major barriers to TB treatment: the unreliable availability of TB drugs. The Global TB Drug Facility (GDF) has been essential



for increasing access to quality TB drugs in many countries with high TB burden. The UK has already enabled India to procure TB drugs through the GDF with a contribution of £41.7 million over five years and should look to support other countries in a similar fashion. This, together with continued and increased support for UNITAID (an international drug purchasing facility established by the UK, France, Norway, Brazil and Chile to help to bring down the price of medicines for TB, malaria and HIV/AIDS), will increase and sustain the availability of affordable, high quality TB drugs in all countries where there is need.

**Recommended actions:**

- Maintain long-term funding for global TB control through a range of effective multilateral and bilateral channels to help meet the Global Plan's funding need<sup>10</sup> and encourage support from other donors.
- Target at-risk populations and invest in TB awareness activities.
- Work in partnership with civil society organisations to increase access to quality TB control.
- Help to ensure drug availability through long-term support of the GDF and UNITAID.

## 2.2 Prevent and control MDR-TB and XDR-TB

The increasing incidence and virulence of drug resistant strains of TB presents a major public health challenge that needs to be addressed with urgency. Drug resistant TB is present in all regions of the world, including the UK and threatens the success of TB control efforts as well as those to fight HIV/AIDS and other conditions. The treatment of MDR-TB presents a significant financial burden for National TB Programmes (NTP). MDR-TB treatment is hundreds of times more costly than 'standard' TB treatment and requires a patient to endure up to two years of treatment.

The existence of MDR-TB, and now XDR-TB, highlights the failure of the international community to respond adequately to the global TB epidemic and a failure to implement the measures recommended in the WHO's Stop TB Strategy. It also highlights the political unwillingness of some high burden countries to invest adequately in their national health systems. Drug-resistance arises as a result of poorly managed and inadequately resourced TB control programmes where inappropriate drug regimens are administered or patients fail to complete their full course of treatment.

Urgent investment is needed to halt the spread of drug-resistant TB. DFID has already responded to the emerging XDR-TB crisis by committing £1.6 million in 2006 to support the WHO in addressing XDR-TB in Southern Africa. The UK has also made a 20-year commitment to UNITAID starting at €20 million in 2007 which will help increase access to second-line drugs needed for MDR-TB and XDR-TB. Further action is needed to ensure that NTPs around the world are fully equipped to correctly diagnose and treat drug-resistant TB cases, particularly in areas where HIV is prevalent.

In order to prevent new cases of drug resistance from arising, DFID can support healthcare providers in the countries where it has a presence to follow good practices and to strengthen TB Programmes in line with the WHO's Stop TB Strategy. The UK can also play a role in helping to generate greater political will, commitment and action in affected countries to make TB control a priority.

**Recommended actions:**

- Help to strengthen National TB Programmes (NTPs) to provide proper diagnosis and treatment of MDR-TB and XDR-TB and encourage all NTPs to follow the Stop TB Strategy to prevent further cases.
- Provide further financial support to WHO and encourage other donors to do the same to help raise the US\$650 million needed to address XDR-TB globally in 2007.

## 2.3 Support global partnerships

The successful implementation of the *Global Plan to Stop TB* depends on the activities of many diverse partners working together in concert towards a common objective – a world free from TB. Global partnerships and funding streams play an extremely important role in setting strategic directions for TB control and providing resources and technical assistance to those fighting the disease on the ground.

The UK has been a strong supporter of a number of international organisations working to address TB including the WHO's Stop TB Department, the Stop TB Partnership, the World Bank and the Global Fund to Fight AIDS, TB and Malaria. The UK is also a founding member of UNITAID which will help to improve access to quality drugs for AIDS, TB and malaria and is funding the Government of India to purchase quality TB drugs from the Global TB Drug Facility.

In line with MDG 8,<sup>11</sup> the UK should continue to support global partnerships and funding mechanisms as part of its portfolio of activities to fight TB in the developing world and scale up support for those that have proven especially effective. In particular, the UK should maintain its commitment to the Global Fund which provides two-thirds of external funding for TB control. In the five years since its establishment, the Global Fund has enabled 2 million people to be treated with effective TB treatment and has thus saved around 910,000 lives.<sup>12</sup> In 2007, the Global Fund begins its second 'Voluntary Replenishment' process where donors will be called upon to commit resources to the Global Fund for the period 2008-2010. The UK should continue to provide long-term support for the Global Fund and respond proportionately to its growing resource needs.

### Recommended actions:

- Continue to provide predictable finance to WHO, the Stop TB Partnership and other international organisations involved in global TB control.
- Renew the UK's commitment to meet its fair share of the Global Fund's resource need for the period 2008-2010 and encourage the European Union and other donors to do the same.
- Encourage more countries to participate in UNITAID and make UNITAID a major agenda item at the next Commonwealth Heads of Government Meeting in Kampala, Uganda, 23-25 November 2007.
- Provide technical assistance to recipient countries to help them manage increased resources and to prepare strong funding proposals to the Global Fund, UNITAID and other financing mechanisms.

## 2.4 Promote the research and development of new tools

The tools used to prevent, diagnose and treat TB are outdated. The vaccine BCG is only partially effective; the main diagnostic test for TB dates back to the 1880s and lacks precision, and no new anti-TB drugs have been developed since 1966.

Current interventions can control TB if rigorously applied but without new and more effective tools, the elimination of TB as a global public health problem will not be achievable. Furthermore, the advent of XDR-TB has publicly exposed the limitations of existing tools - as well as underlining the need for collaboration between TB and HIV services - and reinforced the need for a new approach to TB control.

New tools for TB are on the horizon. Great progress has been made in the past few years and must be accelerated. Moreover, some of the most exciting developmental work happening worldwide is being undertaken by UK researchers and companies.

### Diagnostics

Despite being ineffective in diagnosing TB in children, drug-resistant TB and TB in people with compromised immunity, the Tuberculin skin testing (TST) designed for detecting TB infection is still widely used today, including in the UK. The only diagnostic tool widely available in most developing countries is the microscopic examination of sputum in a

laboratory. Like TST, this method also has low sensitivity and can misdiagnose a high proportion of cases, particularly in the presence of HIV co-infection.

New diagnostic tools that could be used in well-equipped referral laboratories are near to fruition. More desirable for diagnosing TB in low resource settings would be a simple, accurate and inexpensive diagnostic tool that can be used at the point of patient care. Such tools are in development but greater investment is required to accelerate the process.

### **Vaccines**

The BCG vaccine has been used to immunise children against TB since the 1920s. Despite being one of the most widely used vaccines in the world, it has had no impact on reversing the global TB epidemic. Although BCG reduces the risk of serious forms of TB in children, it does not protect well against pulmonary TB in children and adults.

A more effective vaccine is urgently needed to protect against TB infection. Without it, the goal of eliminating TB as a global health problem by 2050 will not be feasible.

### **New Drugs**

Effective drug treatment for TB has been available since the 1940s but the normal regimen for standard TB, whilst robust and effective, requires at least six months of treatment, placing considerable strain on patients and health services.<sup>13</sup>

New drugs could shorten the current regimen from at least six months to three to four months by 2010, and hopefully cut that time further to one to two months five years later. Researchers are working to deliver affordable new TB drugs that will shorten treatment, be effective against susceptible and resistant strains, be compatible with antiretroviral therapies for those TB/HIV patients currently on such therapies, and improve the treatment of latent infection. The ultimate goal is to reduce TB treatment to only 10-12 days, as with other bacterial infections.

The UK has a long history of supporting research on TB. Today, the main sources of support to individual research programmes are the Medical Research Council and the Wellcome Trust. Additional support is also coming from DFID, via a number of British Universities and WHO's programme on Tropical Disease Research (TDR), and a little from the Department of Health.<sup>14</sup>

As well as specific research projects, Product Development Partnerships (PDPs) provide a very cost-effective way through public-private collaboration to stimulate development of tools for diseases of poverty like TB, where development risks are high but potential returns low. The Foundation for Innovative New Diagnostics (FIND), the Global Alliance for TB Drug Development, and Aeras Global TB Vaccine Foundation are notable examples of PDPs working on new tools for TB.

A recent study has shown that of the US\$206 million invested globally in new TB tools in 2005, new drugs received the most investment (US\$120 million or 31% of all TB R&D); followed by new vaccines (US\$70 million or 18% of all R&D); with new diagnostics receiving the least (\$16.5 million or just 4% of all TB R&D).<sup>15</sup> DFID pledged £6.5 million in 2006 to the Global Alliance but drug trials are costly so support for new drug development needs to be maintained. Furthermore, there is also an urgent need for the UK and other donors to enhance the support given to work on new diagnostics and vaccines.

#### **Recommended actions:**

- Invest in PDPs stimulating development of new tools for TB, particularly those focused on diagnostics and vaccines.
- Support research by British institutions working on the development of new TB drugs, diagnostics and vaccines.
- Work with other UK government departments and countries to develop incentive mechanisms such as advance market commitments to encourage companies to develop new tools for TB and other disease of poverty.

### 3. Integrate TB control in efforts to improve global health

Successful TB control is dependent upon the removal of barriers that negatively impact the delivery of basic healthcare. Many of the challenges to TB control are common to other areas of health or are the result of the inadequate co-ordination of different health services. Efforts to improve access to healthcare services are therefore fundamental for TB control and, similarly, targeted support for TB can help to strengthen wider health systems and support the fight against other diseases of poverty. It is therefore important that TB control is recognised as an essential component of national and international efforts to improve global health and is fully integrated into broader health plans and policies. DFID and its partners should therefore help TB programmes to collaborate with other disease-specific interventions and general health initiatives in order to reduce duplication and maximise impact.

#### TB control strengthens health systems

1. TB control helps the scaling up of infrastructure for service delivery, laboratory diagnosis and surveillance.
2. Many of the interventions developed in controlling TB (e.g. combination therapy to prevent resistance; the Global TB Drug Facility etc) have been replicated for other diseases.
3. Successful treatment through DOTS helps to build staff morale.
4. Detection and provision of DOTS can involve the wider community.
5. TB control reduces sickness and death among health workers.

#### 3.1 Manage TB/HIV co-infection

HIV/AIDS poses a major challenge to global TB control efforts and threatens to reverse progress made towards reaching MDG targets on TB and HIV. TB is also a leading killer of HIV-infected people with weakened immune systems; approximately 200,000 people with HIV die from TB every year, the majority of them in sub-Saharan Africa.

As the relationship between TB and HIV becomes increasingly intertwined, the UK's approach to fighting the two diseases must be equally integrated. Effective TB diagnosis and treatment is integral to reducing HIV-related deaths and achieving universal access to HIV treatment and care. TB services can provide an important entry point for HIV testing, counselling and referral to treatment for those found to be HIV positive, and vice-versa.

The UK should continue to support interventions that promote collaborative TB/HIV activities particularly in countries with high co-infection rates. The need to integrate TB and HIV activities has been recommended by the G8 and the Commission for Africa, but delivery on commitments is now urgently needed. Action should be taken by the UK to fulfil pledges that it has made and to encourage other donors and institutions such as the World Bank and European Union to scale up their response to TB/HIV.

DFID must also do much more to integrate TB into its own HIV portfolio, in both policy and practice. No reference to TB/HIV was made in *Taking Action*, the Department's official strategy to tackle HIV/AIDS<sup>16</sup> despite recognising the need for increased collaboration in its corresponding HIV/AIDS treatment and care policy paper.<sup>17</sup> DFID must therefore revise its current HIV strategy to fully incorporate TB/HIV and reflect this by supporting high burden countries to respond to the co-epidemic.

#### Recommended actions:

- Provide technical support and resources to affected countries to enable effective collaboration between national TB and HIV programmes.
- Mainstream the TB/HIV co-epidemic into the UK's HIV/AIDS strategy and policies.
- Support the development of stronger integrated TB and HIV diagnostic and care systems in countries with high co-infection rates.
- Lead the response to the Commission for Africa's recommendation to allocate US\$0.25 billion each year for collaborative TB and HIV programmes in Africa.

### 3.2 Address the human resource crisis

Inadequate human resources can be found at the centre of health system problems. A shortage of health workers in 57 countries, 36 of which are in sub-Saharan Africa, is impairing the provision of essential, life-saving interventions. More than four million additional doctors, nurses, midwives, managers and public health workers are urgently needed to fill this gap.<sup>18</sup> The severe shortage of well-trained and motivated staff is one of the greatest barriers to achieving international targets on TB, HIV and other diseases. In developed countries, a rise in chronic health problems among ageing populations, as well as ageing of their own workforces, has led to an ever-growing demand for health workers. The pull of higher salaries and better standards of living in industrialised countries combined with the push of low salaries, lack of training and career development prospects and poor working conditions at home drive thousands of health workers to seek jobs abroad or in the private sector each year.

The main human resource issues constraining TB control are insufficient quantity, quality and distribution of staff.<sup>19</sup> These problems are not just restricted to TB but are common to the health sector in general. TB programmes should therefore facilitate the continuing development of all staff involved in TB control and promote the development of skills that could be used across the health sector.

DFID should work with developing country governments to develop comprehensive workforce strategies for increased staff retention through the provision of improved pay, conditions and increased training and support. These should include comprehensive situation analyses of all existing public and non-government workforce and long-term support, to enable countries to follow through on commitments such as salary increases for health workers, and hiring new health workers whose salaries must be sustained.

#### Recommended actions:

- Work with developing country governments and civil society organisations to address the fundamental reasons for health worker migration to developed countries and to increase the capacity of existing health workers.
- Commit a proportion of future aid already designated for health towards support for health training institutions in countries facing severe health worker shortages in order to attain the desired number of health workers with the right skills in the medium and long term.
- Facilitate training partnerships between the UK and developing countries involving exchanges of faculty and students.

### 3.3 Strengthen health systems

TB control programmes rely upon systematic, well-functioning and fully resourced public health systems for the delivery of quality and equitable services. The achievement of the MDG target on TB and other health-related targets depends greatly on the strengthening of broader health systems at local, regional and national level. Resources invested in efforts to fight TB and other diseases of poverty will be ineffective if high burden countries do not have systems and competently trained staff in place to deliver comprehensive diagnostic and treatment services.

A very serious constraint on the quality of TB control programmes in high burden countries today is the poor capacity and limited availability of laboratory services. Basic services such as microscopy for sputum samples are often difficult to access or of poor quality. The emergence of drug-resistant forms of TB increases the need for drug-sensitivity testing (analysing culture samples over several weeks to test whether the person is responding to the drugs being given). New tools will also increase the need for good laboratory services to be made available throughout high burden regions.

Limitations imposed on wider public sector spending in developing countries have had a detrimental effect on TB control and health systems generally, resulting in inadequate laboratory capacity and severe human resource constraints. Insufficient investment in

public spending also prevents basic health services from being given free at the point of delivery. Fees charged by health facilities (including for complex diagnostic services for TB such as x-rays) deter people from accessing health care and generate or deepen poverty for those most poor and vulnerable. The UK should actively oppose macro-fiscal policies imposed by the international community and the International Monetary Fund (IMF) in particular, which prevent developing countries from making the necessary increases in public spending needed to respond to epidemics and to address weak health systems. The UK should particularly encourage the efforts of African Union Member States to honour commitments made in 2001 in Abuja to spend 15 per cent of their national budgets on health.

Investment made by countries in their health sector pays dividends over the longer term. TB kills people in their prime whilst they are economically productive and socially mobile. Investing in health is key to sustainable economic development yet too many countries are prevented in the short term from expanding their budgets to allow them to hire more health workers. In Kenya, for example, the Ministry of Health has claimed that there are approximately 4,000 unemployed nurses who cannot find work because the government cannot afford to hire them.<sup>20</sup>

DFID should therefore continue to invest in basic healthcare alongside efforts to address specific diseases such as TB. By providing long-term and predictable support for the strengthening of broader health systems, including laboratory capacity, donors such as the UK can help countries to build the strong healthcare infrastructure that is essential for overall development.

**Recommended actions:**

- Provide long-term and sustainable financing to allow developing countries to implement ten year national health plans and to abolish user fees.
- Encourage the efforts of African Union member states to honour the 2001 Abuja Declaration to spend 15% of their national budgets on health.
- Help to ensure that WHO is sufficiently resourced to provide the technical capacity-building needed to strengthen health systems including laboratory capacity.
- Leverage the UK's position on the IMF board to ensure that macro-fiscal policy allows greater flexibility for countries to undertake expanded investment in the public sector.

# Conclusion

The Global Plan projects that its full implementation will result in:

- 14 million lives being saved during the period 2006-2015.
- The MDG target to have halted and begun to reverse the incidence of TB by 2015 being achieved.
- The Stop TB Partnership's target to halve TB prevalence and death rates from 1990 levels being met globally.
- The first new TB drug for 40 years and a shorter drug regimen; new, more effective diagnostic tests and a new, safe and affordable vaccine with the potential for a significant impact on TB control in later years.

However, these achievements will only be possible if the international community is able to mobilise the resources necessary to increase current levels of funding for global TB control. Of the US\$56 billion needed to fund the Global Plan over the next decade, less than half is likely to be available based on current funding trends.

As acknowledged throughout this paper, the UK already contributes considerable sums to global TB control and broader health system strengthening through a range of bilateral and multilateral channels. The UK is also a firm supporter of the Global Plan and is committed to making its vision a reality. The argument of this paper is that, if the fight against TB is to be won, the international community must continue to scale up its response to the epidemic under the guidance of the Global Plan which has set out what needs to be done. The UK is just one of many actors in the battle against TB but has an important role to play in setting the trend for accelerated and concerted action against the epidemic.

There is a diverse range of channels through which the UK can direct resources for global TB control. This paper has recommended those which particularly merit support. The UK should continue to work with partners to improve the effectiveness and co-ordination of existing funding mechanisms and help to maximise the impact of bilateral contributions.

In addition to long-term and sustainable financing, the implementation of the Global Plan also requires TB to remain high on the political agenda. The All-Party Parliamentary Group on Global TB is committed to ensuring that the UK continues to lead the world in making TB control a priority for as long as this curable and preventable disease continues to devastate lives.

We hope that this paper has shown that significant progress can be made in controlling TB through the strategic and co-ordinated efforts of the UK Government and other partners. Using the recommended actions outlined in this paper as a measure, the APPG on Global TB will regularly review the UK's response to the global TB problem. This Agenda for Action will also form the foundation of the APPG's work in the future and provide a basis for reviewing the effectiveness of its own actions.





# References and sources of further information

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- <sup>2</sup> World Health Organization *Global tuberculosis control: surveillance, planning, financing* (2007)
- <sup>3</sup> The 22 countries with the highest TB burden are (in order of incidence) India, China, Indonesia, Nigeria, South Africa, Bangladesh, Pakistan, Ethiopia, Philippines, Kenya, DR Congo, Russian Federation, Vietnam, Tanzania, Uganda, Brazil, Afghanistan, Thailand, Mozambique, Zimbabwe, Myanmar and Cambodia.
- <sup>4</sup> 'DOTS' originally stood for 'Directly Observed Treatment Short-course' highlighting the importance of observing TB patients taking their medication to ensure medications are taken in the right combination and for the correct duration. The name 'DOTS' is now used to describe a broader TB control strategy.
- <sup>5</sup> World Bank, *World Development Report: Investing in Health* (1993) <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTWDRS/0,,contentMDK:20227703~pagePK:478093~piPK:477627~theSitePK:477624,00.html>
- <sup>6</sup> C. Feuer, Treatment Action Group, *Tuberculosis Research and Development: A Critical Analysis* (2006) [www.aidsinfonyc.org/tag/tbhiv/tbranddd2.html](http://www.aidsinfonyc.org/tag/tbhiv/tbranddd2.html)
- <sup>7</sup> Stop TB Partnership, *Global Plan to Stop TB, 2006-2015* (2006) [www.stoptb.org/globalplan](http://www.stoptb.org/globalplan)
- <sup>8</sup> World Health Organization *Global tuberculosis control: surveillance, planning, financing* (2007)
- <sup>9</sup> Ibid.
- <sup>10</sup> According to the Commission on Macroeconomics and Health (2001), one-third of the total global need for implementation of current interventions and 100% of R&D needs should be met by the UK and other high income countries.
- <sup>11</sup> Millennium Development Goal 8: Develop a Global Partnership for Development
- <sup>12</sup> The Global Fund to Fight AIDS, TB and Malaria, *Partners in Impact, Results Report 2007* <http://www.theglobalfund.org/en/files/about/replenishment/oslo/Progress%20Report.pdf>
- <sup>13</sup> Two months of isoniazid, rifampicin, pyrazinamide and ethambutol followed by a further four months of isoniazid and rifampicin.
- <sup>14</sup> See C. Feuer, Treatment Action Group, *Tuberculosis Research and Development: A Critical Analysis* (2006) [www.aidsinfonyc.org/tag/tbhiv/tbranddd2.html](http://www.aidsinfonyc.org/tag/tbhiv/tbranddd2.html) for details of the 30 top funders for TB research and development in 2005
- <sup>15</sup> Ibid.
- <sup>16</sup> UK Department for International Development, *Taking Action: The UK's Strategy for Tackling HIV/AIDS in the Developing World* (July 2004) [www.dfid.gov.uk/pubs/files/hivaidstakingaction.pdf](http://www.dfid.gov.uk/pubs/files/hivaidstakingaction.pdf)
- <sup>17</sup> UK Department for International Development, *HIV and AIDS Treatment and Care Policy* (July 2004) [www.dfid.gov.uk/pubs/files/HIVAIDStreatmentcare.pdf](http://www.dfid.gov.uk/pubs/files/HIVAIDStreatmentcare.pdf)
- <sup>18</sup> World Health Organization, *The World Health Report 2006: Working Together for Health* (2006) <http://www.who.int.whr/2206/en/>
- <sup>19</sup> Stop TB Partnership, *Global Plan to Stop TB, 2006-2015* (2006) [www.stoptb.org/globalplan](http://www.stoptb.org/globalplan)
- <sup>20</sup> RESULTS Educational Fund [www.results.org/website/article.asp?id=2208](http://www.results.org/website/article.asp?id=2208)

## For further information visit:

All-Party Parliamentary Group on Global Tuberculosis: [www.appg-tb.org.uk](http://www.appg-tb.org.uk)

The Stop TB Partnership: [www.stoptb.org](http://www.stoptb.org)

World Health Organization, Stop TB Department: [www.who.int/tb/en](http://www.who.int/tb/en)

The Global Fund to Fight AIDS, TB and Malaria: [www.theglobalfund.org/en](http://www.theglobalfund.org/en)

The UK Department for International Development: [www.dfid.gov.uk](http://www.dfid.gov.uk)

# Abbreviations

<b>AIDS</b>	acquired immunodeficiency syndrome
<b>APPG</b>	All-Party Parliamentary Group
<b>BCG</b>	Bacille Calmette-Guérin
<b>DFID</b>	UK Department for International Development
<b>HIV</b>	human immunodeficiency virus
<b>MDG</b>	Millennium Development Goal
<b>MDR-TB</b>	multidrug-resistant TB
<b>NTP</b>	national TB programme
<b>PDP</b>	product development partnership
<b>TB</b>	tuberculosis
<b>WHO</b>	World Health Organization
<b>XDR-TB</b>	extensively drug-resistant TB





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The All-Party Parliamentary Group on Global Tuberculosis was formed in 2006 to demonstrate cross-party concern for the growing scale and impact of the TB epidemic. The purpose of the Group is to raise the profile of the global TB problem and to help accelerate efforts to meet international TB control targets.

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