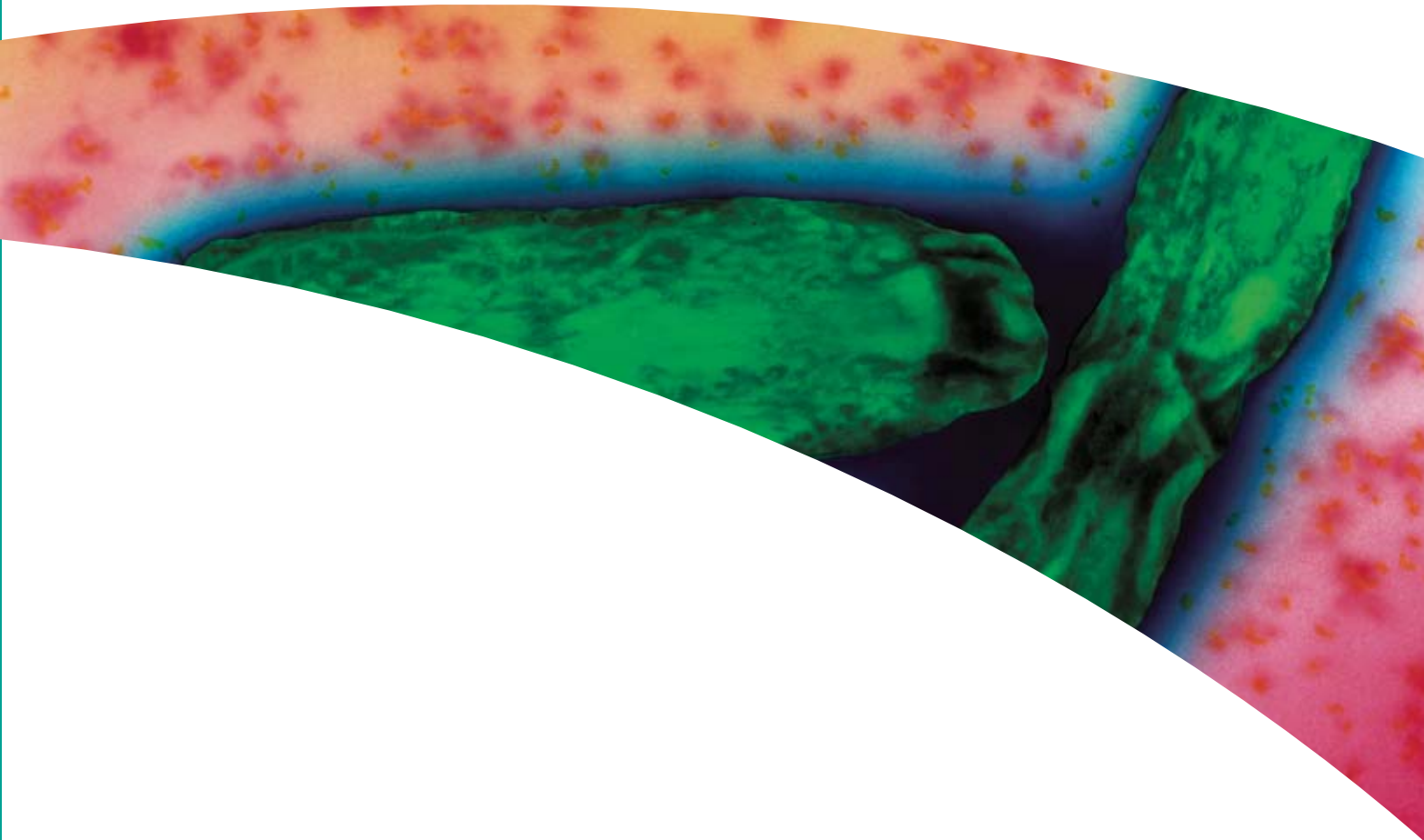


# Stopping Tuberculosis in England

*An Action Plan from the Chief Medical Officer*

October 2004



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# TB Action Plan

## Preface

Over the past century we have made enormous progress in combating the infectious diseases which once preyed upon our people. We have achieved this through better health care, better preventative measures and generally higher standards of living.

But now one such disease – tuberculosis – is on the march again. The Chief Medical Officer, Sir Liam Donaldson, has rightly identified it as a new threat which needs concerted action to deal with it.

His plan sets out clear steps which the Government, our health services and local communities need to take to reverse the rise in TB.

He also recognises this is a global problem. He and I are committed to working with our international partners – through the European Union and the World Health Organization – to do all we can to help fight this disease wherever it rears its head.

I am extremely grateful to Sir Liam for this valuable report. I am committed to doing whatever I can to ensure its recommendations become reality.

A handwritten signature in black ink, appearing to read 'John Reid', with a horizontal line underneath.

**John Reid**  
**Secretary of State for Health**

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# Factfile: Tuberculosis in England

- Tuberculosis (TB) is a serious, but treatable, infectious disease
- TB in England increased by 25 per cent over the last ten years and is still rising; over 1700 more cases occur each year than in 1987 when TB was at its lowest
- 6638 people were newly diagnosed with TB in England in the year 2002. That is 13 for every 100,000 people in our population – fewer than some, but more than several other western European countries where TB rates in 2001 ranged from 5 to 44 per 100,000 population
- About as many people in England develop TB each year as now become infected with HIV
- Every year around 350 people in England die from TB
- Most TB in England occurs among people who live in inner cities. Two out of every five cases are in London. The disease has doubled in London in the last ten years and a few London boroughs now have TB rates comparable with some developing countries
- People are at higher risk of TB if they have lived in parts of the world where TB is more common. The disease follows patterns of migration and is therefore more common in certain ethnic groups, especially if they were born abroad:
  - > in England, around seven out of every ten people with TB come from an ethnic minority population group
  - > nearly two thirds of our TB patients were born abroad
  - > about half of the TB patients who were born abroad are diagnosed with the disease within five years of first entering our country
- HIV infection weakens a person's immunity to TB. In England, this overlap is still relatively small compared to other parts of the world, but at least three per cent of people with TB are estimated to be HIV positive (higher in London)
- TB in cattle – bovine TB – is increasing in England. Very few human cases are due to this bovine form, but continued vigilance is required
- TB can be controlled by:
  - > promptly recognising and treating people with the disease
  - > ensuring that people with the disease complete their treatment. Lapsing on treatment not only fails to cure the disease but contributes to the growth of drug resistance

- > identifying and treating people with early infection, to prevent them later developing the full disease
- > prevention through BCG immunisation (BCG gives limited protection against TB so cannot, on its own, control the disease)
- Drug-resistant TB takes longer and is more difficult and expensive to treat. In England, around six per cent of the TB bacteria from patients with TB are resistant to one or more drug and one per cent show multi-drug resistance. Higher rates in other parts of the world threaten these low rates
- Left untreated, a person with infectious TB of the lungs infects on average 10-15 people every year. The risk of a contact acquiring infection depends on the nature and duration of their exposure:

#### TB risk from contact with an infected person

Nature of contact*	Risk of infection
None known	1 in 100,000
Casual social contact	1 in 100,000
School, workplace	1 in 50 to 1 in 3
Bar, social club	Up to 1 in 10
Dormitory	1 in 5
Home	1 in 3
Nursing home	1 in 20

Source: *New England Journal of Medicine* 2003; **348**:1256-66

\* The duration of exposure is another major factor in interpreting these data

# **Rising to the challenge: a can-do philosophy**

In the United States of America (USA) tuberculosis re-emerged during the 1980s and early 1990s. The disease was out of control. With a clear plan, a national focus, and a build up of infrastructure and resources at local, state and national levels, the tide was turned. Between 1992 and 2002, TB cases decreased by 45 per cent and rates of TB halved to five per 100,000 population, the lowest ever recorded.

Control of TB in this country can be achieved with a similar level of commitment to that shown in the USA.



# The TB Programme goals

Our long-term goal is a reduction, and ultimately elimination, of tuberculosis in this country.

Working towards this goal, the immediate aims of our national TB programme are to:

- reduce the risk of people being newly infected with tuberculosis in England
- provide high quality treatment and care for all people with TB
- maintain low levels of drug resistance, particularly multidrug resistant (MDR) TB

In the short term, even with the more concerted action described in this plan, there will be no immediate reduction in the total number of new TB cases reported each year. They may even rise because:

- *firstly*, TB is so common in certain parts of the world that we must expect a continuing influx into this country of people who were infected or developed the disease abroad. Our aim, as with everyone with TB, is to detect their infection or disease and ensure they receive effective treatment
- *secondly*, many people born or settled in this country have ‘dormant’ (latent) TB as a result of infection they originally caught months or even years ago. They may still develop the disease in older age or if another disease weakens their immunity
- *thirdly*, the total number of cases reflects the size of the population groups most at risk of TB, and some of these groups are increasing in size

# What will success look like?

If tuberculosis is being controlled successfully we expect to see within the next three years:

- a progressive decline (of at least two per cent per year) in rates of TB in population groups born in England
- a reduction in the incidence of disease among people who entered the country and became resident here within the previous five years
- no more than seven per cent of new cases resistant to the anti-TB drug isoniazid and two per cent multidrug resistant
- a reduction in the number of human cases of bovine (cattle) TB in people under the age of 35 years and born in the UK

Evidence and experience show that TB control is likely to be achieved if:

- all patients with suspected pulmonary TB are seen by the TB team within two weeks of first presentation to health care
- at least 65 per cent of patients with pulmonary TB have the diagnosis confirmed by laboratory culture of the organism
- all patients diagnosed with TB have the outcome of their treatment recorded, and at least 85 per cent successfully complete their treatment

# Regaining the upper hand

During the 1960s and 1970s, tuberculosis in England came largely under control after centuries of being one of our major killers. Control was achieved through: better nutrition and housing; pasteurisation of milk; the introduction of effective drug treatments; early detection through mass miniature chest x-ray programmes; public health programmes to detect and treat infection in close contacts of people with newly diagnosed TB; and BCG immunisation.

This level of control was lost from the early 1990s onwards when TB re-emerged in this country as a public health problem. Cases began to rise mainly as a result of increased migration of people from areas of the world where TB is more prevalent than it is in England. Ageing of the established population and TB in people with HIV infection made small but important contributions.

We now need to go back to basics if control of TB is to be reasserted within our public health services.

- **Public health effort needs to be better organised...**

There is much good practice, but TB control is not consistent across the country and activities are not well co-ordinated. Many people are involved in different aspects of the work and their skills need to be used effectively and efficiently. They need a common focus on what needs to be achieved and how, a clear structure to work within and clear accountability. This will be achieved through local multi-disciplinary TB networks with a designated named co-ordinator in each area

- **... and targeted where it is most needed**

The main focus of action should recognise the increasing proportion of TB cases in ethnic minority groups. People from the Indian Subcontinent and Sub-Saharan Africa have very high rates of TB. These rates are highest in the few years after they first come to this country. But the risk of their developing TB remains higher than average throughout their lives, and extends to their children born in this country. Other high risk groups include the homeless and those with HIV infection. *Although anyone can get TB, our effort needs to be most intense in those cities with the highest burden of disease and among those population groups most at risk, recognising that these differ in different parts of the country*

- **The capability to detect TB at the earliest opportunity needs to be regained.** Delays in diagnosis are happening because too many people – health professionals included – think TB has disappeared. Others think it is a disease to be ashamed of. We need to break these myths so that people with TB seek treatment early, in the interests of their

own health and before the infection spreads to others. It is also vital that health professionals recognise it at the first opportunity. Action should be directed towards:

- > making all relevant groups of people more aware of the facts about TB in this country
  - > strengthening more active case finding among high risk groups, for example through increased awareness and greater use of targeted screening
  - > ensuring everyone suspected of having the disease has rapid access to diagnosis and treatment
  - > making healthcare professionals more aware of best practice for the prompt diagnosis of TB
- **Care of people with TB needs to be orientated around helping them take their treatment consistently over the long period of time it takes to achieve a cure.** This means supporting each patient throughout their treatment, if necessary arranging for the treatment to be taken under supervision, at a clinic or elsewhere; or helping with other aspects of their lives so that they can give their TB treatment the priority it needs. It may mean a translator being available during consultations, and providing materials in an appropriate language
  - **Accurate diagnosis is essential. Laboratory processes need to be refined** and laboratory tests for TB performed only in experienced laboratories, making full use of modern technical advances. This is in keeping with other work on modernising pathology services, for which funding has been allocated, aimed at making best use of technology, improving quality and improving clinical governance arrangements
  - **Population surveillance of TB needs to improve and incorporate modern laboratory techniques** in order to understand better how TB spreads within communities and to improve outbreak investigation and control
  - **Best practice for following up contacts of people with newly diagnosed TB needs to be applied consistently.** Current practice needs to be reviewed and best practice agreed and put into use
  - **TB treatment and control must be properly resourced.** TB has tended to be a 'poor relation' in the family of public health practice. Resources have not always taken account of the increasing workload of recent years. Some of the most essential components of TB control such as the continuing care of patients after they have been diagnosed and started on treatment; identifying, screening and managing the people

who have been in contact with new cases; screening newly arrived residents from high prevalence countries; and investigating incidents and outbreaks, are all time-consuming and labour intensive. Best practice indicates they are most effectively achieved with a team of people with the appropriate skills, working across conventional boundaries, and with strong links with the local community. These teams need clerical staff and modern information systems to support their work. Under the new General Medical Services contract, primary care trusts are free and able to commission enhanced services they consider appropriate to meet local health needs. Some additional funding has been allocated to those areas with the highest TB burden to help them achieve this

- **Research needs to be geared to finding better ways to treat and control TB.**  
This means understanding the disease better as well as finding a better vaccine and improved treatments
- **This country must play its part in the international fight against this disease.**  
In many countries, and especially those where TB is being fuelled by the HIV epidemic, TB will not be controlled without a huge international effort

# Recommended actions

**The actions on the following pages are regarded as essential to bring TB under control and achieve the aims of this plan**

## Action 1: Increased awareness

**Aim: Maintain high awareness of TB, particularly among**

- **health professionals**
- **high-risk groups and people who work with them**
- **teachers, and**
- **the public**

### Five point plan

- > Produce multilingual and culturally appropriate public information and education materials for national and local use and make them widely available
- > Ensure that general practitioners and other primary and community care staff are aware of: the symptoms and signs of the disease; local TB services; and local arrangements for referring patients with suspected TB
- > Use World TB Day in March each year to increase awareness, particularly among healthcare professionals and high risk communities, and encourage relevant national organisations to do the same
- > Maintain awareness, including through the media and community groups, and develop initiatives to support local awareness-raising among high risk groups
- > Seek greater professional awareness through undergraduate, postgraduate and continuing professional education

## Action 2: Strong commitment and leadership

***Aim: Create a strongly led, well co-ordinated and adequately resourced national TB programme, with all those working to deliver the programme having a clear focus on what needs to be achieved and best practice for doing this***

### Five point plan

- > Provide strong national leadership and co-ordination, involving all key stakeholders in developing best practice standards for the national TB programme
- > Foster the health protection partnerships being formed between the Health Protection Agency's local and regional services, local NHS organisations and local authorities to include TB control in their local health protection planning
- > Establish the leadership role of strategic health authorities in developing local arrangements for TB services designed to deliver on local action planning. These should include consideration of the need to commission specialist services and facilities (e.g. for multidrug resistant TB) at an appropriate level
- > Advise chief executives and boards of primary care trusts to give appropriate priority to TB and to commission the full range of TB services to agreed criteria
- > Create local TB clinical networks at population levels to be determined locally, with a designated local TB co-ordinator mandated to work across organisational boundaries, backed up by the local tuberculosis control plans



### Action 3: High quality surveillance

**Aim: Provide the information required at local, national and international levels to**

- **identify outbreaks**
- **monitor trends**
- **inform policy**
- **inform development of services, and**
- **monitor the success of the TB programme**

#### **Five point plan**

- > Improve the current national systems for routine enhanced surveillance and drug susceptibility monitoring, better aligning and co-ordinating local and national surveillance to improve their timeliness and meet local, national and international needs
- > Enhance the national collection and analysis of information on incidents and outbreaks to learn from them and develop more consistent responses
- > Strengthen the surveillance of TB in prisons
- > Develop and implement protocols for the public health use of laboratory techniques such as DNA fingerprinting and molecular typing, and establish a central database linking fingerprinting and epidemiological data
- > Monitor the BCG immunisation programme more effectively

## Action 4: Excellence in clinical care

***Aim: Provide uniformly high quality, evidence based treatment and care for patients with suspected and diagnosed TB, with all patients having their outcome of treatment recorded and at least 85 per cent successfully completing treatment***

### Five point plan

- > Improve the consistency of clinical care, through, for example, establishing systems and making them widely known so that all patients with suspected TB are seen by the TB team as soon as possible following the date of first presentation to a healthcare professional; entering all patients, and their treatment outcome, in a local database and managing them according to national guidelines (currently those from the British Thoracic Society)
- > Recommend as best practice the creation of 'clinical care pathways' with a named case manager assigned to every TB patient. Routinely supervised continuing care and increased use of directly observed therapy are regarded as essential if the chances of a successful outcome are to be improved. The case manager may need to work closely with other local services such as housing and social services
- > Produce guidance on the management of TB patients with complex and challenging needs
- > Advise on the management of patients requiring preventive chemoprophylaxis according to national (currently British Thoracic Society) guidelines
- > Include high quality TB management reviews in the public health inspection programme of the Commission for Healthcare Audit and Inspection (CHAI)

## Action 5: Well organised and co-ordinated patient services

***Aim: Provide high quality co-ordinated services for TB diagnosis, treatment and continuing care, which also meet the needs of individual patients***

### Five point plan

- > Develop national quality standards for TB services and best practice models of service delivery with the aim of achieving equal access and the same standards of diagnostic and clinical services for all
- > Put improving patients' experience at the centre of service planning, for example:
  - provide materials about TB and its treatment in locally appropriate languages
  - promote the establishment of family clinics and of joint services for patients co-infected with TB and HIV
  - develop services for children in line with the Children's National Service Framework, but integrated with the TB service as a whole, so that the aims of this Action Plan are achieved
  - consider the needs of patients in isolation rooms, particularly if their stay is prolonged
  - explore ways of reducing the cost of TB drugs to patients and of facilitating their dispensing
  - capture local patient feedback on the services provided
- > Achieve good coverage of prisons, with arrangements in particular for rapid assessment of suspected cases, supervision of prisoners' TB treatment, and maintenance of uninterrupted care by liaising with the services in their new area of residence prior to their release
- > Identify, facilitate access to and ensure staff are aware of the appropriate isolation facilities and infection control precautions to be taken for patients with infectious, or potentially infectious TB or who have drug resistant TB
- > Develop and introduce operational software to make local TB activities more effective

## Action 6: First class laboratory services

***Aim: Provide laboratory services of consistent high quality which support clinical and public health needs, in keeping with the overall pathology modernisation programme***

### Five point plan

- > Establish a network of laboratories with dedicated facilities, staff with expertise in mycobacteriology and sufficient throughput of TB work to provide timely, high quality routine mycobacterial diagnostic services, including rapid and sensitive diagnostic tests
- > Ensure that all clinicians investigating patients with TB have access to such laboratory services
- > Define the requirements for regional and reference laboratory services and ensure all isolates are referred to the regional mycobacteriology centre for identification and drug susceptibility testing
- > Standardise laboratory methods through the introduction of agreed standard operating procedures (SOPs) and quality assurance and performance monitoring programmes, both for routine (microscopy and culture) and for reference (drug susceptibility and molecular diagnostic testing) mycobacteriology, with protocols covering
  - liquid culture for all specimens
  - molecular confirmation
  - unique typing designation
- > Keep laboratory methods at the cutting edge of developing technology and international best practice

## Action 7: Highly effective disease control at population level

**Aim: Increase the evidence base for, and the consistency of application of public health interventions for TB**

### Five point plan

- > Transform practices for improving case finding, including targeted screening among high risk groups, in particular:
  - improve the quality, consistency and efficiency of practice for screening contacts of TB cases
  - disseminate models of good practice for screening new entrants to this country (e.g. the use of ‘one stop shops’)
  - secure much quicker and much higher coverage of screening for refugees and asylum seekers
  - strengthen active case finding among other high risk groups (e.g. settled migrants, homeless people, alcohol dependent people, injecting drug users, prisoners )
  - widen access to primary care for ‘hard to reach’ high risk groups
- > Clarify the role of mobile digital x-ray vans for screening high risk groups
- > Achieve comprehensive occupational screening of healthcare workers joining the NHS
- > Review the BCG immunisation programme
- > Produce best practice guidance and advise the NHS on contingency planning for unexpected incidents and outbreaks, including the need for ‘surge capacity’

## Action 8: An expert workforce

***Aim: Ensure TB control has an appropriately skilled workforce and that physicians and nurses with expertise in TB continue to be recruited, trained and retained***

### Five point plan

- > Issue advice on matching consultant and specialist TB nursing posts to the TB burden in the population being served
- > Advise the service on how to ensure the skill mix in TB multidisciplinary teams reflects the needs of the local caseload (additional skills may include trained health advocates, outreach and social workers and administrative and clerical support staff)
- > Advise on the need for clinic and office space to accommodate local TB teams, noting that good TB control means seeing patients in a variety of locations
- > Advise on how recruitment and retention of specialist TB staff may be improved
- > Strengthen coverage of tuberculosis in undergraduate, postgraduate and professional training, including through multidisciplinary team meetings and audit

## Action 9: Leading edge research

***Aim: Increase our understanding of TB and its control; improve the evidence base for its control; and develop better tools for its diagnosis, treatment and prevention***

### Five point plan

- > Use routinely collected 'outcome of treatment' data to
  - evaluate service performance in the management of TB patients (including children and those with non-respiratory TB or HIV infection), and
  - inform service development
- > Maintain up-to-date national clinical guidelines on best practice for TB management and control, and establish a national HIV-testing policy for patients with TB
- > Formulate a TB research strategy to fill evidence gaps, especially in the fields of:
  - better drugs, diagnostics and vaccines
  - service delivery
  - risk factors
  - latent TB infection, its diagnosis and management
- > Undertake a national audit of treatment failures and deaths from TB, learn lessons from it and implement improvements
- > Foster academic interest in clinical tuberculosis and international research collaborations

## Action 10: International partnership

**Aim: *Contribute effectively to the global control of TB***

### Five point plan

- > Agree common aims between the Department of Health and the Department for International Development (DfID) and liaise closely on international activity related to TB control
- > Use government resources to support the development and implementation of well run and innovative programmes likely to achieve sustainable TB control in the recipient country or area
- > Support the principles and the work of the World Health Organization's Stop TB programme
- > Facilitate involvement of our country's experts in the work of international bodies and the development of bilateral programmes
- > Encourage the exchange of know-how between our country and TB endemic areas abroad





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