

Tuberculosis in vulnerable groups

<http://publications.nice.org.uk/lgb11>

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Introduction

This briefing summarises NICE's recommendations for local authorities and partner organisations on identifying and managing tuberculosis (TB) in vulnerable people who may find it difficult to access services for diagnosis and treatment in traditional healthcare settings. This includes adults, young people and children from any ethnic background, regardless of migration status, whose social circumstances, language, culture or lifestyle (or those of their parents or carers) make it difficult to:

- recognise the clinical onset of TB
- access diagnostic and treatment services
- self-administer treatment (or in the case of children and young people have treatment administered by a parent or carer)
- attend regular appointments for follow-up.

In practice, people who experience these difficulties when accessing or completing treatment for TB using mainstream NHS services are more likely to include:

- prisoners
- vulnerable migrants
- people who are homeless, or who live in insecure, poor or temporary housing

- people who misuse alcohol or other substances.

This briefing is relevant to local authorities, particularly health and wellbeing boards, those commissioning services for vulnerable groups, and staff managing and delivering those services.

This briefing is endorsed by Public Health England.



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Key messages

Tuberculosis (TB) is a curable infectious disease, spread by inhalation. Initial infection is often cleared by a person's immune system, but if this doesn't happen and the infection remains it can cause no symptoms (latent TB) or develop into active TB over weeks, months or even years. If left untreated, 1 person with active pulmonary TB may infect as many as 10–15 people every year ([Department of Health 2004](#)). Untreated TB can be fatal.

TB is a notifiable disease. Doctors in England and Wales have a statutory duty to notify a 'Proper Officer' of the Local Authority or local Public Health England Centre of suspected cases of certain infectious diseases. All TB cases are notified by local clinicians to the Enhanced TB Surveillance System (ETS) either directly or, in London, using the London TB Register which then links to the ETS. Local authority staff can find out more about the incidence of TB in their area from their Director of Public Health, by contacting the regional Public Health England Centre and looking at [UK TB Surveillance Data](#).

TB incidence in the UK has increased since the early 1990s, but has remained relatively stable since 2005. However, it remains high compared with the majority of other western European countries. Cases tend to cluster in areas where populations of at-risk groups are high, with the highest proportions of TB cases in the UK reported in London (41.8 cases per 100,000) and the West Midlands (19.3 per 100,000) in 2012 ([Public Health England 2013](#)).

There is significant regional and local variation in rates of TB, depending on population characteristics and level of local risk. The majority of TB cases in the UK occur in people born in

countries with high levels of TB. Areas with higher rates of migration or established communities originating from countries with higher TB levels will likely experience a higher incidence of TB. Other factors such as existing illness, poor nutrition, poor access to healthcare, poor housing, problem drug use and imprisonment all increase a person's risk of developing active TB once infected. The same factors are associated with poor adherence to treatment, the development of drug-resistant strains of TB, onward transmission of the disease, and people being lost to follow-up.

Services provided or commissioned by local public health teams and other local authority departments tackle the factors that make people vulnerable to TB and which can stop them from completing treatment. Local authority support, welfare and housing services are a vital part of TB prevention and control for vulnerable groups of people. Working alongside clinical TB services (commissioned through NHS England and clinical commissioning groups), local authorities can help to raise awareness, assist in the identification of new cases and support those affected by TB as they complete treatment. Local authorities can also help to improve a range of health and social outcomes in vulnerable communities through service provision and through the commissioning and management of external service providers.

Working together, local public health departments and other local authority departments, NHS England, Public Health England, and voluntary and community organisations can adopt a 'whole system' approach to ensure relevant health, welfare and social care services link up, strengthen TB control and improve health and social outcomes for vulnerable groups of people.

The National Institute for Health and Care Excellence (NICE) provides national guidance and advice to improve health and social care.

For further information on how to use this briefing and how it was developed, see [About this briefing](#).

What can local authorities achieve by tackling TB in vulnerable groups?

Variations in local tuberculosis (TB) rates mean that different areas may need to adopt different approaches to tackling TB, depending on whether local incidence is high^[1] or low. However, relevant NHS and local authority staff in all areas should be aware of the symptoms of TB, and of local diagnostic and treatment services.

Local leadership and support

When a person is diagnosed with TB they enter a clinical care pathway led by NHS services. Local authorities can support NHS services to ensure people are diagnosed quickly, and that they complete treatment. They can also provide local leadership in key areas such as housing, and care of vulnerable people.

Reduce TB transmission rates

Evidence shows that the highest rate of TB transmission in London is among vulnerable groups (Story et al. 2007). This finding is likely to apply to most areas of the UK.

Local authorities can help to reduce TB transmission by addressing some of the contributory social factors that fall within their remit, for example, overcrowding, poor housing and homelessness, and access to healthcare. Making improvements across these areas will help to reduce inequalities and TB transmission and improve general health outcomes.

Protect local population health

Local public health departments and other local authority departments commission and manage many services used by vulnerable groups. They may also already work in partnership with local NHS, community or voluntary services or projects for high-risk communities.

Raising awareness of the symptoms of TB can help to ensure staff in regular contact with high-risk groups seek medical advice when necessary. Relevant local authority services may also be able to provide links for staff and service users to appropriate NHS services for immunisation, diagnosis and treatment.

Raising awareness of risk may also help to increase immunisation rates in key staff, for example those working in prisons, care homes, homeless hostels and facilities providing accommodation for refugees and asylum seekers.

Improve local rates of treatment completion

Data collected on treatment outcomes have shown that people with TB who have a history of problem drug or alcohol use, imprisonment or homelessness are less likely to complete

treatment than people without such a history. In 2012 only 75% of people with these social risk factors completed treatment versus 84% of those with no social risk factors. Furthermore, a higher proportion of people with social risk factors died from TB (7% versus 4% of people with no social risk factors) ([Public Health England, 2013](#)).

Local authorities, in collaboration with their partners, can provide support to NHS services to identify and manage TB cases at a local level. This in turn can help to improve local rates of treatment completion, as well as reducing onward transmission and levels of drug-resistant TB in the local community. It will also help improve other health, social and economic outcomes for those affected by TB.

Build strong local partnerships and share knowledge

Understanding local rates and risk factors for TB, and identifying and linking with relevant NHS and community services, can also help local authorities to improve services and outcomes in general for local vulnerable groups and communities. It can do this by improving inter-service communication and sharing information, identifying opportunities for joint work and activity, and through multi-agency support for health improvement.

Reduce health inequalities

People at risk of TB from vulnerable groups often have difficulties accessing health services through the usual routes.

Working in partnership with the NHS and relevant voluntary and community organisations to ensure services are effective and accessible will help people affected by TB to receive early diagnosis and treatment.

Although this briefing focuses on TB, the principles may be applied to the planning and delivery of services that target vulnerable population groups, and for other communicable diseases.

^[1] High incidence is defined in the guidance as greater than 40 cases per 100,000 per year.

What NICE says

This section highlights and summarises some of NICE's recommendations on identifying and managing tuberculosis (TB) among vulnerable groups. Those with responsibility for directly commissioning, managing or providing services are advised to read the recommendations in full by following the hyperlinks.

NICE recommendations

NICE guidance offers:

- recommendations based on the best available evidence to help local authorities plan, deliver and evaluate successful programmes
- an objective and authoritative summary of the research and evidence, reviewed by independent experts from a range of backgrounds and disciplines
- an assessment of the effectiveness and cost effectiveness of public health interventions.

Following all of NICE's recommendations on identifying and managing TB in vulnerable groups will help local authorities make the best and most efficient use of resources to improve the health of people in their area. Details of new guidance that NICE is developing on TB are on our website.

Informed commissioning

The incidence of TB varies widely across different local areas. Different strategies are needed to detect and manage TB depending on how frequently it is found locally.

NICE recommends:

- Local areas (for example, local authorities and NHS organisations) should include assessment of the number of TB cases in their area, and the size and composition of local at-risk groups in any local needs assessment.

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- Local authorities should work with the NHS to support informed commissioning and ensure services reflect the needs of their area, as identified by local needs assessment. TB should be included in the joint strategic needs assessment in areas of high need.
 - Local authority staff from departments including housing, alcohol and drug services, should link with multidisciplinary TB teams, taking part in cohort reviews when appropriate (these are reviews of individual TB case management in a given locality in terms of treatment completion rate and contact investigations over a specified time period). The outputs of these cohort reviews should be used to evaluate local services and should feed into needs assessments for TB services to enable commissioners to make informed decisions.

For details see [commissioning tuberculosis services](#) in NICE's 'Tuberculosis' pathway.

Multidisciplinary TB support for vulnerable groups

NICE recommends:

- Local commissioners, and providers of TB services, should ensure multidisciplinary support, including enhanced case management, is available for people with complex social and health issues. They should also ensure:
 - Multidisciplinary TB teams have the appropriate range of skills, training, resources and access to services to manage people with complex social and clinical needs. Relevant local authority staff and services should be represented within these teams – this could include links to welfare services and benefits, housing or other support.
 - Multidisciplinary TB teams have the resources to provide a continuous service throughout the year with rapid access to TB clinics for vulnerable groups – local authority staff and services that link to these teams need to establish sustainable partnerships.
 - Multidisciplinary TB teams have access to funds that can be used flexibly to improve adherence to treatment among vulnerable groups, depending on local need and the services and partnerships available to them. For example, funds could be used to provide transport to clinics, to provide incentives for treatment, or for paying outreach workers or community services to support directly observed therapy. Funds may also be used to provide accommodation during treatment.

For details see [developing multidisciplinary teams](#) in NICE's 'Tuberculosis' pathway.

Raising and sustaining awareness of TB

NICE recommends:

- Commissioners ensure TB teams have the resources to provide ongoing TB awareness-raising activities for professional, community and voluntary (including advocacy) groups that work with vulnerable groups. Local authorities should therefore commission services that work with vulnerable groups and have links to a multidisciplinary TB team for support and educational materials to carry out awareness-raising activities.
- Multidisciplinary TB teams should identify and support an ongoing TB education programme for local professionals in contact with vulnerable groups. This includes, for example, staff in accident and emergency departments, GPs, housing officers, staff who support vulnerable migrants and those working in walk-in centres, hostels, [substance misuse](#) projects and prisons.

For details see [raising awareness of tuberculosis among those working with hard-to-reach groups](#) in NICE's 'Tuberculosis' pathway.

Accommodation during treatment

NICE recommends:

- Commissioners of TB prevention and control programmes should fund accommodation for homeless people diagnosed with active TB who are otherwise ineligible for state-funded accommodation. Health or public health resources should be used. Strategic housing leads and relevant services within local authorities should work with multidisciplinary TB teams to set up a process for assessing eligibility for people with TB for housing.
- Multidisciplinary TB teams should make people who would not otherwise be entitled to state-funded accommodation aware that they may lose this accommodation if they do not comply with treatment.
- Multidisciplinary TB teams should ensure plans are made to continue housing people once their TB treatment is completed.

For details see [providing accommodation during treatment](#) in NICE's 'Tuberculosis' pathway.

Examples of practice

An example of how NICE's advice on identifying and managing TB among vulnerable groups has been put into practice can be found in our [shared learning database](#):

- [Identifying and managing TB among hard-to-reach groups – The prison setting with a high incidence of TB.](#)

Note that the examples of practice included in this database aim to share learning among local organisations. They do not replace the guidance.

Developing an action plan

The table below poses a range of questions which could be asked when developing a comprehensive plan to help identify and manage tuberculosis (TB) among vulnerable groups at a local level.

Assessing opportunities to identify and manage TB among vulnerable groups	Links to NICE recommendations
<i>Informed commissioning</i>	
<ul style="list-style-type: none"> • How well does the local authority understand the epidemiology (the pattern, causes and effects) of TB among vulnerable groups in its local population? 	Needs assessment
<ul style="list-style-type: none"> • Do commissioning strategies and local policies for vulnerable groups support services to identify and manage TB (that is, promote partnership working across local government, the NHS and professional groups)? • Have the outcomes of a local needs assessment and cohort review been taken into account when planning the delivery and configuration of TB services and other services working with vulnerable groups by the local authority? 	Commissioning TB services

<i>Multidisciplinary TB support for vulnerable groups</i>	
<ul style="list-style-type: none"> • How does the local authority link to and support multidisciplinary TB teams? 	<u>Developing multidisciplinary teams</u>
<i>Raising awareness of TB</i>	
<ul style="list-style-type: none"> • Are local advice and awareness raising networks in place that are proportionate and relevant to the local TB burden? 	<u>Raising awareness of TB among those working with hard-to-reach groups</u>
<i>Accommodation during treatment</i>	
<ul style="list-style-type: none"> • Are housing and welfare professionals involved in planning and delivering support for vulnerable people with TB? • Can resources be identified and allocated to provide housing to homeless people diagnosed with TB? 	<u>Providing accommodation during treatment</u>

Costs and savings

Identifying and managing tuberculosis (TB) among vulnerable groups can lead to the following savings.

- The costs to the NHS of treating 'normal' and 'drug-resistant' TB are estimated at £5000 and £50,000–£70,000 respectively ([Department of Health 2009](#)). However, the costs are much greater for more socially complex cases. This is because of the need for more frequent and longer hospitalisation episodes and higher treatment support costs.
- Costs to local authorities are harder to estimate with recent changes to the public health, NHS and commissioning landscape. However, someone with undiagnosed active TB with complex social issues ('vulnerable') is likely to need significant social and welfare support to complete treatment.
- The more people who become infected with TB, the higher the burden of cost to the NHS and to welfare services. Early diagnosis and effective treatment will reduce those costs.

- Whether interventions to identify and manage TB among vulnerable groups are cost effective, cost saving or not cost effective depends on the burden of TB in a particular population. In settings where a medium to high proportion of the population^[2] will be treated as a result of screening, then mobile X-ray and enhanced case management are likely to be cost effective and (in some cases) cost saving. Likewise, the benefit of ensuring treatment is completed is greatest among groups where the prevalence of TB is highest.

^[2] High incidence is where TB notifications are greater than 40 per 100,000 people per year.

Facts and figures

Below are other facts and figures on identifying and managing tuberculosis (TB) among vulnerable groups:

- In 2012, there were 8751 reported cases of TB in the UK – a rate of 13.9 cases per 100,000 people. Among people in the UK reported to have contracted TB and whose place of birth is known, 73% were born outside the UK ([Public Health England, 2013](#)).
- While anyone can contract TB, the highest risk of TB for people born in the UK and living in London is among those who are homeless, problem drug users and prisoners ([Story et al. 2007](#)). This is likely to be true for other parts of the UK. In 2012, 7.7% of people with TB had at least one social risk factor defined as homelessness, imprisonment, drug or alcohol misuse ([Public Health England, 2013](#)).
- Data also indicate that resistance to isoniazid, a common first-line drug treatment for TB, is higher among vulnerable people. In 2012, 8.6% of TB cases in people with one or more social risk factors were isoniazid-resistant compared to 6.7% in people with no known social risk factor. Isoniazid resistance was particularly high (13.5%) in people with a history of homelessness ([Public Health England, 2013](#)).

Support for planning, review and scrutiny

Council scrutiny activities can add value to strategies and actions to improve the public's health. Effective scrutiny can help identify local health needs and check whether local authorities are working in partnership with other organisations to tackle the wider determinants of health. NICE guidance and briefings provide a useful starting point, by suggesting useful 'questions to ask' during the scrutiny process.

A range of other support tools are available on the [Centre for Public Scrutiny](#) website and via [Into practice](#) on our website.

Other useful resources and advice

The following resources may also be useful:

- [Health protection in local government](#) Department of Health, Public Health England, Local Government Association (2013)
- [Tuberculosis: clinical diagnosis and management of tuberculosis, and measures for its prevention and control](#). NICE clinical guideline 117 (2011)
- [Tuberculosis in the UK 2012](#) Public Health England (2013)
- [National Knowledge Service – TB](#)
- [TB Alert](#)
- [Stopping tuberculosis in England: an action plan from the Chief Medical Officer](#) Department of Health (2004)

About this briefing

This briefing is endorsed by Public Health England. It is based on NICE public health guidance published up to March 2012 about identifying and managing tuberculosis (TB) among vulnerable groups (see the [NICE website](#) for details of published briefings and briefings in development). It was written with advice from NICE's Local Government Reference Group and using feedback from council officers, councillors and directors of public health.

It is for local authorities and their partner organisations in the health and voluntary sectors, in particular, those involved with health and wellbeing boards. This includes local authority officers and councillors, directors of public health and commissioners and directors of adult social care and children's services. It will also be relevant to members of local authority scrutiny committees.

This briefing may be used alongside the local joint strategic needs assessment to support the development of the joint health and wellbeing strategy.

This briefing is intended to be used online and it includes hyperlinks to sources of data and further information.

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