Public Health England

Protecting and improving the nation's health

Consultation on Collaborative Tuberculosis Strategy for England

Summary report

January 2015

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Executive summary

The *Collaborative Tuberculosis Strategy for England* was launched for consultation on World TB Day, 24 March 2014. It set out the need for urgent action to control tuberculosis (TB); a vision, ambitions and areas for action, including aspects of diagnosis, treatment, and prevention.

A wide range of stakeholders were consulted during the three-month consultation from 24 March to 24 June 2014. Approximately one quarter of the 111 responses were from local authorities, a quarter from the NHS, a quarter from PHE (including collective responses of local stakeholders made up of PHE, NHS, clinical commissioning groups, local government, the third sector and others) and a quarter from other stakeholder groups including the National Institute for Health and Care Excellence, the British Thoracic Society, local government, the Association of Directors of Public Health and third sector organisations. Once received, all consultation responses were analysed through a rigorous three-phase process.

This report is a summary of the findings, highlighting the key comments made and PHE responses to the comments. The overwhelming majority of stakeholders greatly welcomed the strategy, felt that it was timely and important, and agreed with the general content. Most comments related to fine-tuning particular detail in the strategy or changing the wording.

Responders also sought greater clarity on the following main areas: the geographic footprint of TB control boards and their accountability mechanisms, inclusion of information on funding, details of latent TB infection (LTBI) screening and detailed comments pertaining to the indicators.

Although each individual comment was considered, the number of comments did not allow for individual responses to be included in this document – instead they were summarised and categorised.

Chapter 1. Background

The *Collaborative Tuberculosis Strategy for England* was launched for consultation on World TB Day, 24 March 2014. It was developed by the National TB Oversight Group (TBOG) and co-ordinated by PHE on behalf of the multi-partner group. The consultation process involved a wide range of stakeholders including the National Institute for Health and Care Excellence (NICE) to the British Thoracic Society (BTS), local government, the Association of Directors of Public Health (ADPH), TB Alert, and third sector organisations.

Why TB?

TB is a significant cause of avoidable disease and suffering, and of significant health inequalities. TB incidence in England increased steadily from the late 1980s to 2005, and has remained at relatively high levels ever since. England now has one of the highest TB rates in western Europe,[1] and this is nearly four times that of the US.[2] There are also considerable health inequalities in the socioeconomic and geographic distribution of TB cases, with new migrants, ethnic minority groups and those with social risk factors disproportionately affected.

Experience from the US and many western European countries demonstrates that rigorous TB control programmes with clear accountability arrangements can lead to major reductions in TB. PHE has therefore identified TB as a major priority, and indicators of TB incidence and TB treatment outcomes are included in the Public Health Outcomes Framework. PHE believes that concerted local action, supported by national expertise, can significantly reduce the suffering and harm caused by TB.

The strategy

The strategy sets out the need for urgent action to control TB, a vision, ambitions and areas for action, which include aspects of diagnosis, treatment, and prevention, with the stated ambition of aiming to bring together “best practice in clinical care, social support and public health to strengthen TB control, with the aim of achieving a year-on-year decrease in incidence, a reduction in health inequalities, and ultimately the elimination of TB as a public health problem in England”.

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1 European Centre for Disease Prevention and Control. Tuberculosis surveillance and monitoring in Europe 2013. Available from: http://www.ecdc.europa.eu/en/publications/_layouts/forms/Publication_DispForm.aspx?List=4f55ad51-4aed-4d32-b960-af70113dbb90&ID=811

2 Centers for Disease Control and Prevention. Trends in Tuberculosis, United States, 2012. MMWR. 2013 Mar 22;62(11):201–2

The strategy emphasises the need for a TB control program in England with clear lines of responsibility and accountability, and appropriate resourcing for both clinical and public health outcomes, using lessons learnt from international TB control programs.

The consultation

The strategy presented a vision of how TB services could be organised and resourced with a focus on building on the assets that already exist in the NHS and public health system. The consultation response was organised into seven questions, targeted at specific proposals (Appendix 1). There was also an opportunity to provide free text comments to any aspect of the strategy. A wide range of stakeholders was consulted during the three-month consultation from 24 March to 24 June 2014.

The consultation complied with government requirements[3] and aimed to ensure that the final Collaborative TB Strategy for England was based on the diverse range of experiences and knowledge represented among stakeholders. It also helped to raise awareness of the issues, to provide a mechanism for shared responsibility and problem solving and to allow supportive relationships and opportunities to develop in the long-term.

Stakeholders were encouraged to join the TB consultation process through various methods to ensure a good response from a wide variety of partners. Methods included individual communication, group consultation exercises and collaboration between local partners to produce joint responses. There was a public launch of the consultation document with an introduction by the Minister for Public Health and short presentations from PHE's director of health protection, the NHS England national clinical director for respiratory services, and the chair of the All-Party Parliamentary Group (APPG) on TB. PHE stakeholders received a PHE briefing note and a formal letter to inform them of the consultation.

PHE centres and local authorities were encouraged to raise awareness of the strategy and the consultation process with colleagues and partner organisations including local CCGs, local authority health and wellbeing boards, the third sector, academia and the NHS. A number of multi-agency stakeholder events and workshops were held during some of which PHE staff gave presentations.

The strategy consultation was sent to external TB stakeholders including the BTS, NICE, local government and the ADPH. The patient voice was elicited through patient groups via third sector organisations (TB-Alert) and a group of ex-patients from the 'TB Action Group' where a member of the National TB Oversight Group and TB strategy team

3 Cabinet Office. Consultation Principles [Internet].Cabinet Office; 17 July 2012. Available from: https://www.gov.uk/government/publications/consultation-principles-guidance

presented the strategy and supported discussions to obtain a collective patient response.

Downloadable consultation response documents, including a standardised response template for stakeholders to complete, were made available from PHE via: www.hpa.org.uk/Publications/InfectiousDiseases/Tuberculosis/1403TBstrategyconsultation2014/ as well as a link to this site through the gov.uk website: www.gov.uk/government/consultations/collaborative-tuberculosis-strategy-for-england-2014-to-2019. A consultation email inbox was created to receive responses and accept questions on the strategy.

Chapter 2. Consultation response

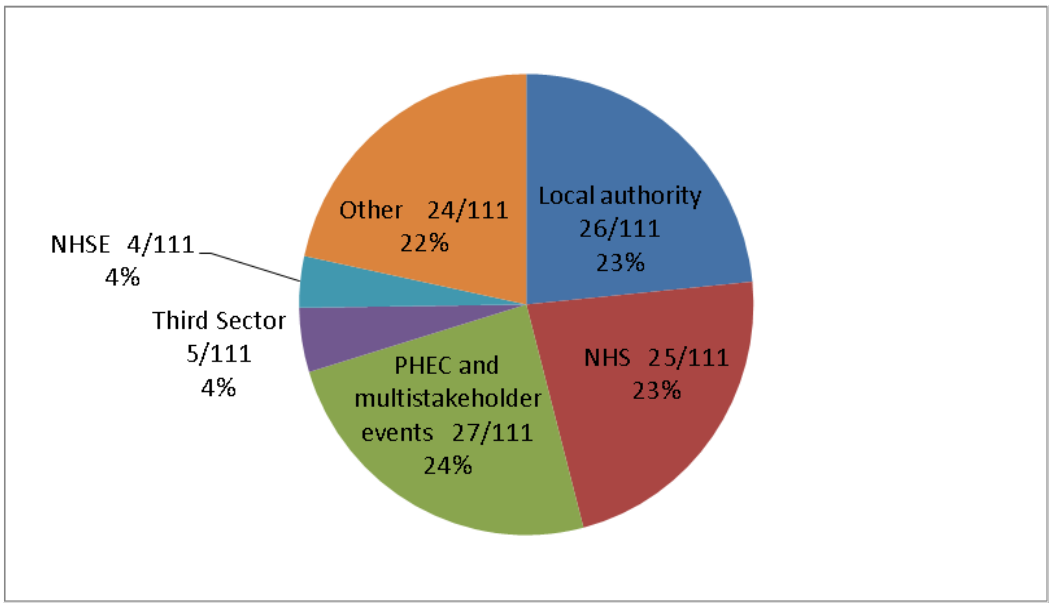
The 111 standardised template responses that were completed provided comprehensive feedback to help shape and inform the final TB strategy from a clinical, public health, social care and patient perspective.

It should be noted that some of the responses represented a large number of people so the consultation canvassed far more than 111 respondents' views.

Approximately a quarter of the respondents were from local authorities, a quarter from the NHS, a quarter from PHE (including collective responses of local stakeholders) and a quarter from other stakeholder groups including NICE, the BTS, the APPG for Tuberculosis, industry and academia. A breakdown of responses is shown in Figure 1. A complete list of all responders is found in Appendix 2.

The web page hosted on www.hpa.org.uk had 5,421 page views, including 3,339 unique page views between 24 March and 31 July 2014, demonstrating the interest in the consultation process. The webpage hosted on gov.uk had 1,043 page views including 840 unique page views. There were 1,469 unique page views of the actual collaborative strategy downloaded and 938 unique page views of the annexes downloaded.

Figure 1: Breakdown of responses to the TB strategy consultation by organisation



Chapter 3. Methodology of analysis

The consultation responses were tabulated into an Excel spreadsheet and analysed through a rigorous three-phase process.

First, individual consultation questions were analysed using qualitative methods including typological, thematic analysis of the material. Responses were grouped into themes relating to each individual question and to more general themes relating to the strategy as a whole, where necessary. Themes were formed during analysis and refined iteratively, adding new themes of coding where initial categories proved inadequate or insufficient. This was continued until coding could be applied consistently, grouping categories where appropriate.

Where a response was given many times, this was summarised into a single point. Throughout, there was clear indication of which stakeholders had made each comment. Where comments in one question, or the general comments, applied to specific earlier questions or a specific theme, these comments were moved to that alternate area for completeness and to prevent repetition.

For the next phase, the senior members of the consultation team summarised and responded to the consultation comments making changes to the strategy document. Decisions were weighted based on the relevance and the appropriateness of the comments, by the number of congruent responses, and with particular focus on key stakeholders. Suggestions for change were categorised into: minor amendments (normally changed immediately); those relevant to TB but out of scope of the document (potentially useful for the implementation phase); those not valid for the strategy or mentioned in national guidance or other documents; and major points or amendments for the strategy (to be discussed in the final phase).

In the final phase, major points were discussed by all senior members of the TB strategy consultation team either in team meetings or via email to try to reach a consensus response. All changes went back to the relevant authors for review. All members reviewed all tracked strategy changes, the response document and suggested amendments where relevant.

This report is a summary of the main comments received through the consultation process and the PHE responses to these comments. Due to the large number of comments it was not possible to respond to each suggestion in this document. However, every single comment was considered as part of the rigorous three-phase analysis described above. Details of the minor changes made to the strategy document, such as changes in sentence structure or formatting, are not included in this document.

Chapter 4. Overview of the consultation responses

The overwhelming majority of stakeholders greatly welcomed the strategy, and felt that it was timely and important and agreed with its general content. Comments included:

"The Department of Health welcomes this consultation in recognition of the need to address TB control in England and which provides a clear basis on which to debate a range of alternative ways to improve and strengthen current TB control. The strategy… proposes an ambition, outcomes and indicators which we would generally support. Like viral hepatitis, TB is an important public health issue where the actions that need to be taken are clear."

"The Collaborative TB Strategy for England is a timely and welcome document. The document sets out some clear targets to reduce TB. It also takes account of the multi-dimensional nature of tuberculosis."

"Although aspirational, we agree with, and support, this ambition."

Most comments related to fine-tuning particular details of the strategy, such as amending the wording, or were requests for clarification. Responders sought more clarity on the following main areas: the geographic footprint of TB control boards and their accountability mechanisms, inclusion of information on funding, details of LTBI screening and detailed comments pertaining to the indicators.

Many respondents felt that the whole country should be covered by TB control boards and that it would be useful to have clear monitoring indicators. Many of the comments, while highly relevant and important, included detail that was beyond the scope of a high-level strategy document, but it is anticipated that they will be referred to and used during the strategy implementation phase.

Chapter 5. Summary of responses to individual consultation questions

Question 1. Is the ambition on page 5 of the strategy the right one to help deliver TB control in England?

Comments received

Most responders (61%) felt that the ambition was the right one to help deliver TB control in England. Many commented on “a year-on-year decrease in incidence”, saying specifically that a good strategy might lead to an initial increase in TB incidence, that this might be difficult in low incident areas and that there should be more tangible time scales or a specific target for this decrease within the ambition. Many comments focused on a need to define more clearly the “elimination of TB as a public health problem” and “a reduction in health inequalities associated with the disease”.

The last sentence of the ambition that “it will achieve this by stimulating action in all local areas, with a particular focus on areas where incidence is highest and the greatest reductions can be achieved” generated a number of comments. While several respondents commented that the focus should be on high incidence areas, many stressed that they believed that the ambition should focus on all areas, not just areas where incidence is highest, to ensure that areas with lower incidence are not overlooked or that these areas do not then under prioritise TB.

Response to comments received

The wording for the phrase “year-on-year decrease in incidence” was left unchanged and a specific target was not added as the aim was to keep the ambition broad. Furthermore, a decision had been made to remove targets and aspiration levels from the TB strategy document as a whole. It should also be noted that the views on this point varied, with many being supportive of the ambition as stated.

In response to comments relating to “reduction in the health inequalities associated with the disease”, the wording of the ambition has been changed to a “reduction in health inequalities”. Health inequalities are well understood and it was felt that in the context of the document it would be clear that this related to health inequalities in the context of TB rather than a reduction in health inequalities in general. Further detail and reference to health inequalities has been added to the body of the strategy in view of comments that, although mentioned as a focus in the strategy ambition, health inequalities were not referenced in the rest of the report.

On the same line, in response to a local authority request for more detail on how the social determinants of TB could be tackled, extra text and explanation was added to section A7 in the annexe.
A number of respondents wanted greater clarity around “the elimination of TB as a public health problem”. In response to this, the ambition has been altered to relate it to “England” and a definition of “TB elimination” added to the glossary.

The comments relating to the final part of the strategy “it will achieve this by stimulating action in all local areas, with a particular focus on areas where incidence is highest” were noted, however the phrase was not changed as it was felt that as it stands, the phrase references all areas, not just high incidence areas, and that the specifics would be covered in detail in later parts of the strategy, for example in the section dealing with TB control boards.

Question 2. Are the outcomes and indicators of success on page 11 the right ones, and if achieved will these improve TB control in England?

Comments received

The overwhelming majority of respondents agreed with the importance of having outcomes/indicators of success, and felt that they were an important part of the strategy. Only one respondent did not agree with the proposal to develop a suite of indicators, and felt that locally held data monitoring should be left to local discretion.

Some respondents commented that many indicators were unrealistic, especially those that aimed for 100% achievement of an indicator, which they felt was not realistic for performance monitoring. A small number of respondents felt that the target levels were not ambitious enough. There were comments that the indicators were too target-driven and prescriptive, and that reporting on actual performance, without target levels, would be more consistent with current health service arrangements.

A number of respondents mentioned the resource implications of collecting data for any new indicators, and stated that new data collection should only be implemented if funding mechanisms are identified. A small number of respondents explicitly stated that they felt that it was unhelpful for the strategy to include indicators that were not currently measurable.

A number of respondents from across the health economy felt that too many indicators were proposed, and that it would be better to concentrate on a more focused group of indicators initially. Some requested clarity on how the indicators would be used for monitoring performance, including who would be responsible for meeting indicator

targets and monitoring, and whether incentives or penalties would be used for performance management.

A number of the responses to question 7a and the 'general comments' (especially comments relating to the indicators in annexe 4) related to the indicators in section 4 and therefore these have been addressed here for completeness and to prevent repetition.

Response to comments received

In response to the many comments regarding section 4 – "What we are trying to achieve?" – this section has been rewritten under a new introductory sentence to "achieve the strategy ambitions and deliver significant improvements in TB control, improvements need to made in the following key areas (see annexe 1 for further details)". Ten key areas for improvement, based on those previously listed in section 5.2 and annexe 1, are listed following this sentence. The titles of the key areas in annexe 1 have been changed so that they are the same as this list to ensure consistency between the two lists.

The monitoring indicators that had been in section 4 have been moved to section 7 and now incorporate the indicators that were in annexe 4, to reduce repetition. In response to comments that there should be a smaller set of focused indicators and valid comments that some of the indicators were not ideally suited for monitoring progress, some of the proposed indicators were removed from section 7 and others modified. Given concerns about setting specific target levels, these have been removed from the indicators at this stage. Reports will be produced on actual performance levels for indicators that can currently be derived from national TB surveillance data, and will be provided to TB control boards and their constituent partners to monitor progress in improving TB control. At a national level, the indicators will be used to monitor national progress towards meeting the ambitions set out in the strategy. Further work on whether and how target levels should be set for individual indicators will be conducted by the national TB surveillance team in due course.

A wide range of additional indicators were suggested, although none were suggested by more than a few individual respondents. Additional areas included specific indicators for children, indicators to address the wider determinants of health and health inequalities, indicators for prisons/detained populations/irregular migrants and indicators around awareness raising/education. Given the majority view to reduce the number of indicators to a more focused set, and the caution expressed about introducing new data collection methods, additional indicators covering these areas have not been added at this stage.

Specific indicators/ambitions

As described above, note that the revised suite of monitoring indicators has been moved to section 7 on p19-21 of the revised strategy.

Indicator 1. Reduce TB incidence year on year. National and local indicator: annual TB incidence.

Comments received

The majority of those who commented specifically on this indicator agreed with it as it stood, and felt that it was an appropriate indicator for the strategy. Some respondents commented that a successful programme could lead to an initial increase in incidence due to improved screening and diagnosis. A minority of respondents favoured a quantified reduction target over a specific time frame, rather than a year-on-year reduction. Additional responses included having a separate indicator for the incidence in the UK-born and non-UK-born population, and the importance of using rolling averages when presenting data at local areas.

Response to comments received

In addition to total TB incidence, at national and TB control board level, TB incidence will be presented separately for the UK-born and non-UK born population. At local level (local authority) incidence will be presented as a three-year rolling average.

Indicator 2. Reduce diagnostic delay

All of those who responded specifically to this ambition supported having an ambition to reduce diagnostic delay. However, a large number of respondents had concerns about the specific measures proposed.

- **National and local indicator: "At least 80% of people with pulmonary TB should start treatment within three months and 100% within six months of the onset of their symptoms. Baseline 61% within three months and 85% within six months."**

Comments received

While generally supporting the indicator, several respondents commented that diagnostic delay is an imprecise measure because the date of onset of symptoms is difficult to determine and may be inaccurate. Many respondents commented that the current proposed quality measures were not ambitious enough, and that the timescales

used for the indicators should be shortened. A common proposed timescale was to report the proportion diagnosed within two months and four months of symptom onset. Respondents suggested a number of potential target levels for diagnostic delay, from 80% starting treatment within two months and 100% within four months to 60% starting treatment within three months and 80% within six months.

Several respondents stated that it would be helpful to separate outpatient delay (symptom onset to presentation at healthcare) and healthcare delay (presentation at healthcare to treatment start date). Some respondents mentioned the need to clarify exclusions for this indicator (eg cases diagnosed post-mortem).

Response to comments received

There was general support for the indicator and the specific comments have been useful in refining it. While determination of symptom onset in any particular patient is acknowledged to be imprecise, at an aggregate level the trend in the proportion of patients with a diagnostic delay is likely to be valid. While it would be helpful to distinguish between patient delay and healthcare delay, data completeness in the national TB surveillance system is not yet sufficient to enable these two time periods to be monitored. Efforts will be made to improve data completeness, and consideration should be given to monitoring patient delay and healthcare delay separately in the future.

In response to concerns that the time periods proposed were too long, this indicator has been changed to “proportion of pulmonary TB cases starting treatment within two months and four months of symptom onset”. Appropriate exclusions have been added (eg cases diagnosed post-mortem).

- **National and local indicator: “100% of suspected infectious TB cases should be seen by specialist services within 48 hours.”**

Comments received

The majority of those who specifically commented on this indicator felt that it was problematic. The definition of a “suspected infectious TB case” was felt to be unclear, and clinicians commented that very few referrals stated that a patient was thought to have suspected infectious TB. There is currently no mechanism for recording the date of referral or the date first seen by specialist services, so this would not currently be measurable. In addition, the majority of respondents felt that the timescale was unrealistic, with a few offering a range of alternative suggestions, from two working days to two weeks, with two weeks being the most common suggestion.

Response to comments received

Due to problems with definition and measurement, this indicator has been removed from the current suite of indicators in the strategy. Future consideration will be given to developing a specific indicator with monitoring capability around acceptable waiting times for TB referral.

Indicator 3. Improve high-quality diagnostics

- **National and local indicators: 100% of pulmonary TB cases should have a sputum smear result reported. 100% of pulmonary TB cases should have a sputum culture result reported. 80% of pulmonary TB cases should be culture confirmed.**

Comments received

A number of respondents highlighted problems with obtaining sputum if this is not spontaneously produced, and a number stated that this is a particular problem for children. Many respondents pointed out that sputum is not the only appropriate sample that should be sent for microscopy and culture, and that to encourage further diagnostic efforts (eg induced sputum, bronchoalveolar lavage (BAL), gastric aspirates), including in children, the appropriate indicator would be the proportion of cases with a microscopy result/culture result from any sample, not just sputum. The need for appropriate exclusions (eg post-mortem patients) was also highlighted.

Some respondents commented that the target level set for the proportion of TB cases that are culture confirmed was inappropriate. Some commented that it would be more appropriate to report on the proportion of TB cases that were microbiologically confirmed by either phenotypic or genotypic methods (to include PCR, and future developments using genomics.) A small number of respondents requested an indicator for culture confirmation in patients with extra-pulmonary TB.

Response to comments received

It is acknowledged that reporting on the proportion of patients with sputum smear/culture result is not a good indicator of service quality, as services should be encouraged to take alternative respiratory samples if a patient is not spontaneously producing sputum. The proportion of pulmonary TB cases that have a microscopy result or a culture result on any respiratory sample cannot currently be measured using data collected in the national TB surveillance system, so this indicator has been dropped.

The proportion of pulmonary TB cases that are culture confirmed has been retained as an indicator but without a target level. Once it is possible to collect systematic data on a wider range of microbiological tests (including PCR, and sequencing data), this indicator will be changed to “The proportion of pulmonary TB cases that are microbiologically confirmed”

Additional proposed indicators of high quality diagnostics:

Several respondents proposed adding an indicator on drug susceptibility testing. A couple of respondents proposed an indicator around a 24-hour turnaround time for smear results.

Response to comments received

An additional indicator has been added to monitor “the proportion of culture confirmed cases with drug susceptibility testing reported for the four first line agents”. This data is currently collected in the national TB surveillance system, and so can be reported without additional data collection mechanisms. Once it is possible to collect systematic data on a wider range of microbiological tests (including PCR, and sequencing data), this indicator will be changed to “the proportion of microbiologically confirmed cases with drug susceptibility reported for four first-line agents”. Data is not currently collected at a national level on laboratory turn-around time for smear results and a new indicator has not been developed for this.

Indicator 4. Improve support to under-served population

Comments received

While generally supporting this aspiration, a number of respondents commented that this required clearer definitions of what constitutes “under-served” populations, access, and how outreach diagnostic and treatment services were defined. A number of respondents mentioned the success of the current ‘Find and Treat’ service in London.

Response to comments received

The NICE PH37 definition of under-served populations has been used for the TB strategy, as set out in the strategy glossary. Further detail on the service requirements for improving access to outreach diagnostic and treatment services for under-served populations will be developed in the implementation plan/service specification for the TB strategy.

- **National and local indicator: 100% of TB patients should be assessed for social risk factors for TB (a history of drug or alcohol misuse, homelessness or imprisonment).**

Comments received

While those that responded were generally supportive of an indicator around social risk factors, some commented that the current social risk factors that are recorded in the TB surveillance system do not encompass all those in the under-served populations, and requested that information on additional risk factors be incorporated. A couple of respondents requested clarification of what constitutes an assessment, and how children should be assessed.

Response to comments received

At present, the national TB surveillance system only collects data on the presence or absence of four social risk factors. However, it is acknowledged that presence or absence of this data is not an ideal proxy for whether an appropriate risk assessment has been conducted. As part of the process of reducing the number of indicators in the strategy, this indicator has been removed.

- **National and local indicator: 100% of TB patients with social risk factors should receive enhanced case management**

Comments received

While respondents were generally supportive of this indicator, a number highlighted the fact that not only those with the four social risk factors required enhanced case management—those with alternative social risk factors and those with co-morbidities often required enhanced case management (ECM) as well.

Response to comments received

A broad definition of ECM is in the glossary of the strategy. However, it is acknowledged that clearer criteria for what constitutes ECM are required. For example, the four social risk factors stated do not encompass all those that require ECM. It is felt however, that monitoring the proportion of patients with the risk factors that do receive ECM would be an important indicator of whether the needs of this critical group are being met. Data to monitor this indicator is not currently collected in the national TB surveillance system, so this indicator cannot currently be reported on nationally. Cohort review collects data on whether a patient has received ECM and there are plans to incorporate this field into national TB surveillance. The indicator for the “proportion of TB patients with social risk

factors recorded who received enhanced case management" should be reported on once the data is available.

- **Improve uptake of directly observed therapy (DOT)**

Comments received

A number of respondents commented that this is not a suitable indicator because patients have a right to refuse DOT if offered DOT, and that ECM, without DOT, may be an appropriate intervention for many patients with complex social risk factors. Some respondents felt that without an objective measure of the denominator (number of patients with indications for/requiring DOT) this is not a meaningful measure of service performance.

Response to comments received

Given the concerns about using this indicator for monitoring, and the fact that data cannot currently be collected for this indicator at national level, this indicator has been removed.

Indicator 5. Improve TB treatment completion and thus outcomes

- **National and local indicator:**
  Option 1: At least 90% of TB cases with drug sensitive TB should complete a full course of treatment within 12 months (cohort assessed includes all diagnosed TB cases, except those with rifampicin resistance).
  Option 2: At least 90% of TB cases with drug sensitive TB should complete a full course of treatment within 12 months (cohort assessed includes all diagnosed TB cases, except those with rifampicin resistance, those who died with TB incidental to death, and those transferred abroad).

Comments received

The majority of respondents were supportive of this indicator, although a number questioned whether the target level set was ambitious enough. Although many respondents supported the option of excluding patients who died with TB incidental to death or transferred abroad from the reporting cohort (option 2), others pointed out that the data quality on the cause of death (and so whether patients died with TB incidental to death) was poor, and that there was currently no mechanism for collecting data on whether a patient had been transferred abroad. Some suggested that the cohort should exclude all those that were lost to follow up abroad.

Several respondents mentioned additional potential exclusions from the cohort (patients requiring a treatment duration of 12 months eg those with CNS or spinal TB). Several respondents stated that it was also important to have an indicator about deaths and lost to follow up cases, not just those that complete treatment.

Several respondents commented on the importance of reporting on treatment completion for drug-resistant cases in addition to drug-sensitive cases.

Response to comments received

Given current data quality and availability considerations, the indicator has been retained as “proportion of drug sensitive TB cases who had completed a full course of treatment by 12 months” but those with a site of disease requiring a treatment of 12 months will be excluded from the reporting cohort. To address the need to take into account types of adverse outcomes (death and loss to follow-up), additional indicators on the proportion of cases with drug-sensitive TB who died and were lost to follow up have been added.

Local services/TB control boards are best placed to review their treatment completion data in further detail, taking into account additional information about causes of death and reasons for loss to follow up, and so determine whether adverse outcomes would have been avoidable. Given the small number of patients with rifampicin resistant/MDR-TB, it would only be appropriate to report on the outcome for this cohort at the national level. National indicators on the proportion of patients with rifamipicin resistance/MDR who have completed treatment at 24 months, and the proportion who died or were lost to follow up have been added.

- **National and local indicator: 100% of TB cases whose HIV status is not already known to be offered an HIV test**

Comments received

Respondents supported the inclusion of an indicator acknowledging the importance of TB/HIV co-infection. While one respondent suggested that children should be excluded from the reporting cohort, others highlighted the importance of including children, and not taking HIV status of the mother as a proxy for HIV status of the child.

Response to comments received

This indicator has been retained as “proportion of TB cases offered an HIV test”, with exclusions of those with HIV status already known, and those diagnosed post-mortem.

Indicator 6. Improve close contact screening

- **National and local indicator: Pulmonary TB cases to have an average of at least five contacts screened.**

Comments received

While respondents welcomed an indicator on contact screening, a large number of respondents questioned the rationale for the selection of an average of five contacts screened. Many respondents commented that this was an inappropriate number of contacts to be screened for some patients, especially those living alone/with few contacts, while it could discourage more extensive screening for patients when required. Alternative indicators suggested included the proportion of pulmonary cases who had contacts identified, the proportion of contacts identified that were evaluated, and the proportion of contacts that were identified with LTBI and successfully treated.

A small number of respondents felt that it would be helpful to have an indicator on the time taken to conduct screening, and whether a home visit has been conducted. A number of respondents pointed out that this data could be derived from cohort review.

Response to comments received

The proposed indicators for close contact screening have been changed to “proportion of pulmonary TB cases who had close contacts identified” and “proportion of identified close contacts of pulmonary TB cases that were evaluated”. Data collection methods do not currently exist for this indicator at national level, although a number of services collect this information during cohort review. To enable systematic data collection and reporting, consideration should be given to adding appropriate fields on aggregate contact screening to the national TB surveillance system.

Indicator 7. Improve screening for latent TB infection.

Comments received

Respondents wanted more clarity about the eligibility of migrants for screening, as well as which areas should be targeted and how systematic screening would be defined. A large number of commentators suggested that LTBI screening should be implemented nationally – in high as well as low incidence areas. Arguments for this included: the changing geographic distribution of migrants; that needs and rates are not the same (for example, Leeds has a high need but a rate lower than 20/100,000); and that a migrant’s origin and not the destination determine the risk.

Further comments were that more guidance and support was required surrounding LTBI screening including: that additional nursing staff may be needed for LTBI treatment; that clear pathways are needed, including how migrants would be identified; queries regarding illegal migrants; whether there should be GP targets and if we have enough evidence from pilots. There was also an additional comment around who would be responsible for delivery and who would fund it. Suggestions for this included commissioners, the Home Office, clinical commissioning groups (CCGs) and some form of national level funding.

Response to comments received

In response to all these comments the new indicators are:
“National: TB control board and local level: The number of local authorities that have a systematic new entrant LTBI screening initiative in place.
“National: TB control board and local level: Proportion of eligible new entrants covered by screening programmes who accept LTBI screening.
“National: TB control board and local level: Proportion of individuals who complete LTBI treatment amongst those who start treatment.

These are all under the heading “implementing screening for latent TB infection in new entrants”.

There were some additional suggestions that, while valid, were thought to be outside the scope of the strategy. These included: details of how eligible new entrants would be offered screening, that data collection methods for LTBI need improving, that there should be provision for migrants with TB who do not wish to be identified by immigration services, changing the overall strategy of TB screening: for example to screen migrants for LTBI prior to entry and to extend active TB pre-entry screening to persons planning to stay for shorter than six months.

In addition, we have not commented here on those with underlying conditions as this is recommended by NICE and should be performed on an individual patient basis. The detailed comments around the further guidance required for LTBI screening were thought to be very relevant, but better tackled as part of the implementation phase.

Indicator 8. Improve BCG vaccine uptake

- **National and local indicator: At least 95% of eligible babies to received BCG vaccine.**

Comments received

While respondents supported an indicator on BCG vaccine uptake, they commented on measurement difficulties outside areas with a universal neonatal vaccination programme, due to lack of denominator data. Some respondents queried the 95% target level, either feeling that it was not ambitious enough (should be 100%) or that it was too high as it not take into account vaccine refusal.

Response to comments received

This indicator has been changed to “proportion of babies in areas with a universal BCG programme who received BCG vaccine” without a target level. Data for this indicator is not currently collected, although proposals have been put forward to collect this data as part of the routine COVER data collection. Future consideration should be given as to whether it would be possible to collect data on BCG uptake in areas with a selective vaccination programme.

Inidcator 9. Reduce drug-resistant TB

- **National indicator: “Achieve a year-on-year reduction in the incidence of drug-resistant TB in UK-born cases”**

Comments received

There was general support for this indicator. A number of respondents stated we should aim to reduce drug resistance in all patients, not just UK-born patients and that we should report on any first-line drug resistance and multi-drug resistant cases separately, although the latter would only be appropriate at national level. Some respondents pointed out that it would be more appropriate to monitor numbers and proportions of cases with documented drug resistance rather than incidence, as the high proportion of cases which are not culture confirmed means that incidence cannot be directly measured. Some respondents commented that due to small numbers, even at the national level, a year-on-year reduction target was not appropriate.

Response to comments received

This indicator has been modified to:
National: TB control board and local level: Number and proportion of culture confirmed TB cases with any first line drug resistance (exclusions: *Mycobacterium bovis* cases with resistance to pyrazinamide)
National: Number and proportion of culture confirmed TB cases with multi-drug resistant TB

- "**No patients should develop MDR while on treatment in the UK."**

Comments received

Few respondents commented on this indicator. Those that did, felt that this was too small an issue to warrant an indicator, or that it was inappropriate due to the fact that occasional cases can develop drug resistance on treatment despite appropriate therapy

Response to comments received

This indicator has been removed.

Indicator 10. Reduce TB transmission

- **National indicator: "Achieve a year-on-year reduction in the proportion of TB cases estimated to be due to recent transmission on the basis of MIRU-VNTR clustering (or whole genome sequencing)."**

Comments received

Respondents commented on the problems with using MIRU-VNTR data to confirm recent transmission and other problems with data interpretation.

Response to comments received

This indicator has been removed. If advances in sequencing technologies enable more accurate determination of cases due to recent transmission, it may be possible to develop a future indicator based on such technologies.

- **National indicator: "Achieve a year-on-year reduction in the incidence of TB in UK-born children."**

Respondents were generally supportive of this indicator, but requested clarification on the age cut-off.

Response to comments received

The wording of this indicator has been refined to: "Incidence of TB in UK-born children under fifteen years of age."

Indicator 11. Establish regular cohort review

Respondents were generally supportive of this ambition, although again a number questioned how this would be resourced. A small number of respondents questioned the proposed frequency of cohort review, particularly in low incidence areas.

Response to comments received

The requirement for regular cohort review is included in the strategy as a responsibility of TB control boards.

Indicator 12. Ensure an appropriate workforce to deliver TB control.

Comments received

This indicator prompted a large number of comments, with respect to this question and throughout the consultation responses. Comments centred on what is an appropriate staff ratio to deliver TB control particularly with reference to the differences in rural and urban geographical areas. There were many comments about what would constitute an appropriate workforce, including the need for administrative support and the relevant training needs that should be considered.

Response to comments received

This was removed as an indicator as further work is needed to develop this area. However, the relevant comments have been taken on board and amendments have been made to the strategy document in section A10 in annexe 1. Additional work will be undertaken in this area and shared during the implementation phase.

Question 3a. Do you agree with the responsibilities proposed for local TB control boards on pages 12 and 13 and in annexe 2?

Comments received

The vast majority of respondents agreed with the responsibilities proposed in the strategy for TB control boards, with one or two additional suggestions. One such suggestion was for the responsibilities listed under section 5 to be consistent with those in annexe 2; another was for there to be greater clarity of people's roles, and another to ensure that TB control boards linked via a lead local authority representative or director of public health to all appropriate local authority groups including scrutiny boards and not just health and wellbeing boards. A number of respondents also suggested greater use of the director of public health's assurance role to hold commissioners to account.

Respondents mentioned the need for clearer inclusion of the following people as part of the TB control board or its subgroups: a paediatric specialist, a secondary care TB specialist, a front line nursing representative and a TB patient advocate. In addition, suggestions were made that one of the TB control boards' responsibilities should be awareness-raising – or at least linking with those who can provide this – and a greater use of the terms "collaboration" and "collaborative-working" both within this section and the TB strategy document as a whole.

It was acknowledged that TB control board responsibilities were all encompassing and might not sit easily with the organisational structures of the NHS and local authorities; and that to achieve the ambitions of the strategy, collaborative working of different organisations would be important. Although many people agreed with the responsibilities of TB control boards, it was felt that they would need to be adequately resourced to be able to deliver the responsibilities listed. The lack of financial information within the strategy has been a major criticism and will be rectified in the revised strategy. Resources and the financial aspects of the strategy are further discussed in the answer to question 5a.

Response to comments received

A number of small changes were made to the responsibilities text of the revised strategy in response to the comments received. Specifically, section 5 and annexe 2 were amalgamated, and key people added to the list of those on the TB control board. The request for greater clarity of people's roles on the TB control board will be met in the implementation phase of this strategy.

Question 3b. If TB control boards are implemented, should they focus solely on the areas of high incidence (option 1) or should they cover every local community (option 2)?

Comments received

The vast majority of respondents (71/111, 64%) wanted TB control boards to cover the whole country and not just areas of high incidence (ie option 2). Reasons given included: to share expertise/knowledge between high and low incidence areas, to ensure low incidence areas are not neglected and to minimise the risk of worsening health inequalities. While it was appreciated that areas of low incidence may not have the capacity, or inclination, to run a TB control board, it was felt that the majority of such areas would like to be linked to a TB control board. A number of respondents proposed a "hub and spoke" model as a way of ensuring universal coverage for improved TB control but concentrating the work of the TB control board in areas of highest incidence, the "hub".

Although the vast majority choose option 2, a large number of these respondents felt that the work of TB control boards should concentrate on areas of highest TB incidence and liaise with areas of lower incidence, ensuring universal coverage for improved TB control. Of the two-thirds wanting universal coverage, 32% worked for the NHS, 17% for local authorities, 25% for PHE and the rest included, among others, responses from TB Alert, the BTS, the Royal College of Nursing and the third sector. In comparison, 20% preferred option 1 and, of these, 45% worked for the local authority and 23% for PHE; there were no NHS staff who wanted only high incidence areas covered by TB control boards. Overall, nearly equal numbers of local authority staff wanted option 1 (10) as compared to option 2 (12), however, NHS responders clearly wanted universal coverage of TB control support.

Response to comments received

It was very clear that the vast majority of respondents wanted universal coverage of enhanced TB support. To this end, nine TB control boards are proposed to provide overarching support to large geographic areas but with a focus on the highest incidence areas. This will allow an efficient use of resources, focusing on the high incidence areas but at the same time ensuring lower incidence areas are not neglected. The nine TB control boards were selected to coincide with PHE Centre boundaries and the strategy was revised accordingly. Giving areas of low TB incidence representation on TB control boards will empower them to voice issues or concerns and ensure that the boards offer appropriate support to these areas. A map has been added to the strategy to show the proposed TB control board areas and the number of TB cases (2013) per geographic footprint.

It is envisaged that the TB control boards will link to a number of locally focused TB networks, or local TB delivery boards, and support these in delivering and responding to local TB needs. The mechanism for doing this will need to be determined locally so that the needs of the local TB caseload are met.

Question 3c. If TB control boards are only established in areas of high TB incidence (option 1), how should arrangements for the diagnosis and treatment for those people who develop TB in lower incidence areas be strengthened?

Comments received

Respondents supplied a multitude of responses in answer to this question. Ideas included: sharing of information including good practice, clinical policies and rapid referral pathways; access to specialist clinical advice for MDR or HIV co-infected and paediatric cases; access to specialist microbiology; a named clinical and PHE lead for TB and joint educational or continuing professional development events.

Other suggestions were: sharing of locally developed educational materials for healthcare workers and patients; surge capacity; incident and outbreak support; development of service specifications and the sharing of these; combined cohort reviews; locally managed TB networks with access to TB control boards for advice and formal reporting mechanisms to be created for local health and wellbeing boards, CCGs and others.

Response to comments received

With the revised strategy now including nine TB control boards providing universal coverage of England, responses to 3c provide potential ways for the TB control boards to support the TB networks in delivering better TB control, these responses will be made available to support the preparation of the strategy implementation phase.

Question 3d. Local TB control boards must have the authority to bring together partners to effectively control TB in the patch. How can TB control boards be empowered to carry out their functions and what mechanisms can be used so partners hold each other to account for improved TB control?

Comments received

- Empowering TB control boards

Strong leadership and a clear, collective, local vision for TB control were seen to be important to empower TB control boards. Some felt that it would be important to have a single, named person (the TB control board director) who would be accountable for the TB control board's activities and TB control in a geographical area.

Some respondents felt that TB control boards could be empowered by developing collaborative local relationships including perhaps a "partnership agreement" underpinning the arrangement of collaboration. Others felt that a memorandum of understanding between agencies involved in local TB control, the TB networks and the TB control board, that clearly documented the roles and responsibilities of members of the TB control board, would aid TB control boards undertake their role.

Valuing and supporting the roles and responsibilities of TB control board partners including local TB networks, directors of public health, health and wellbeing boards and commissioners was also mentioned.

Respondents felt that TB control boards could be empowered if they had enough resource for local partners to deliver their vision and if their membership included individuals with responsibility for funding and service delivery or at least those who could influence these areas. A number of respondents noted that ultimate authority is through

commissioning and therefore commissioning input to the TB control board needs to be strong, with some respondents mentioning that it was important to establish a lead commissioner as a key TB control board member, potentially within a collaborative commissioning framework to avoid fragmentation of services.

As the majority of TB commissioning is the responsibility of CCGs, those consulted felt it was important that TB control boards work directly with CCGs and through their NHSE representative to ensure delivery of TB control by CCGs. Suggestions included: developing specific commissioning intentions (and not leaving TB as part of general acute respiratory contracts); supporting CCGs with a commissioning specification; and monitoring a set of TB commissioning intentions such as standards of cohort review and contact tracing. It was suggested that CCGs could provide NHS England and the TB control board with measurable outcome data, such as the data generated at cohort review, key performance indicators and Commissioning for Quality and Innovation (CQUIN).

- Accountability

Notably, areas of the world that have brought TB under control have had clear lines of responsibility and accountability for TB control. The strategy recommends improving responsibility and accountability for TB in England, and specifically asked respondents how this might be achieved.

Many useful suggestions were made, the most cohesive of which was to establish accountability structures through NHS England. As CCGs commission the majority of TB services, it was suggested that NHS England could potentially hold CCGs to account if they signed up to jointly agreed TB commissioning intentions. The CCGs, in turn, could hold to account those from whom they commission their TB service, ie acute and community trusts. It was noted that such an arrangement has already been successfully implemented in London, with the inclusion in 30 London CCG commissioning intentions of two TB key performance indicators for contact tracing and cohort review.

Alongside NHS England accountability mechanisms, local/existing mechanisms could also be used. A number of respondents felt that for TB control boards/TB networks to be effective at a local level they would need to work with, and through, local directors of public health and health and wellbeing boards. In particular, some respondents advocated using the director of public health “assurance role” that requires the director of public health to seek assurance that appropriate measures are in place to protect the health of the local population. Using this role, a director of public health could seek assurance from CCGs and other commissioners about the success of local TB control, and from the local authority itself with respect to improved housing and social services support for under-served populations. So, at a local level the director of public health

and health and wellbeing board can hold local partners to account and influence improved TB control.

Respondents felt that directors of public health have a clear role in local assurance, scrutiny and challenge; and that they can be the public health voice for TB on the health and wellbeing board, bringing to the attention of CCGs and others in the local authority any TB issues that need resolving. However, to do this directors of public health will need regular data and documentary support from TB control boards.

Other suggestions to help increase accountability were to use local authority scrutiny committees to hold to account those responsible for local TB control and for TB control boards to report to a national TB control board.

Among the mechanisms suggested for TB control boards to hold partners to account, and to be held to account, were: formal reporting mechanisms, regular reports to include measurable key indicators and the development of a national TB service specifications with a clear outline of areas where partners are responsible for improved TB control. It was also suggested that in areas of high TB incidence there should be an expectation that directors of public health and health and wellbeing boards should receive an annual report on TB for assurance purposes. Additionally, in these areas, TB should feature in the joint strategic health needs assessment and the annual report of the director of public health.

It was also felt that data from TB service providers and commissioners should be provided to TB control boards; for example in the form of a summary of local TB cohort review outcomes. Clear reporting pathways between providers, commissioners, local directors of public health, local TB networks and TB control boards was also thought to be needed.

Some respondents felt cohort review could provide a framework to hold the system to account locally and nationally by virtue of the fact that cohort review outcomes can be fed back to commissioners, enabling accountability and peer review of the local TB services. Statutory requirements (ie Public Health Outcomes Framework) and legal obligations (contracts between providers and commissioners) were also seen as possible options to hold partners to account and that TB control boards should review the use of these mechanisms in a collaborative way with their multi-stakeholder board members.

Response to comments received

There were many useful suggestions on how TB control boards could be empowered to carry out their functions and how partners could be held to account and some raised issues that need further thought. Many of these suggestions will be further considered

and utilised in the TB strategy implementation phase as they were too detailed for the high-level strategy document.

Question 3e. How do we ensure that local authorities and local health and wellbeing boards have adequate involvement in TB control board work, particularly when TB control boards are likely to cover a number of local authority areas?

Comments received

To ensure adequate involvement of local authorities and local health and wellbeing boards in TB control board work, respondents made three main suggestions. Firstly, that a local authority representative should attend the local TB network, secondly, that a representative of a number of local authorities should sit on the overarching TB control board and, thirdly, that clear reporting/information mechanisms should be set up. This would enable the local authority representative to feed back any action to be taken, by local directors of public health and health and wellbeing boards, to support improved local TB control and for them to be a conduit for data/information provided by the TB control board to support such action.

Timely, regular, standardised and easily understood reports from the TB control board/local TB network to the director of public health were recommended as a way to engage them with the wider TB agenda and the work of the TB control boards and local TB network. In this way, local TB issues could be escalated as necessary to the local authority health and wellbeing board by the director of public health and TB activity reported on regularly. Respondents commented that to engage local authorities and local health and wellbeing boards any TB reports would need to be locally focused and present monitoring data disaggregated at local authority level and benchmarked against other authorities.

While the majority of local authority responses to the consultation were supportive of TB control boards (including the response from the ADPH), the Local Government Association stated that it was not yet convinced of the need for TB control boards and favoured continuing with existing local governance arrangements. This will need reviewing in more detail to help understand and resolve this issue. Respondents noted that the majority of TB services are commissioned by CCGs and although local authorities have a role in TB control it is on a much smaller scale and currently is mostly around housing for the homeless and general TB awareness raising.

Others felt that health and wellbeing boards have large remits and unless TB is a major and increasing issue in a local authority area, the health and wellbeing boards should in the main receive update reports to understand the local strategic approach and then delegate any action to the director of public health or CCG. It was recognised that TB is

a small issue for many local authorities and improved TB control may therefore not be prioritised. The consequence of this might be that health and wellbeing boards are not yet able to provide the accountability mechanism needed to bring about TB control in a timely manner.

Of note, the vast majority of local authority respondents supported the proposal for TB control boards, and felt they would provide a forum for improving leadership and co-ordination of local TB control and tackling fragmented commissioning. They typically requested greater clarity on roles, responsibilities, accountability arrangements and funding, and emphasised the importance of fitting in with existing governance arrangements. A common response from local authority respondents was the need to include more detail on how the social determinants of TB would be tackled, including access to housing.

Response to comments received

This question provided many useful suggestions on how local authorities and local health and wellbeing boards could have adequate involvement in TB control board work. These suggestions will be further considered and incorporated in the TB strategy implementation phase as they were too detailed for the high-level strategy document.

Question 4a. Do the proposed "Areas for Action" on page 14 and in annexe 1 include all the required clinical and public health actions that should be included in an integrated service specification?

Comments received

This question elicited a very positive response. Twenty-one per cent of respondents (23/111) felt that the proposed Areas for Action included all the required clinical and public health actions that should be part of an integrated service specification.

However, many responders, although they agreed with the Areas for Action, felt that there were other actions needed within these broad areas and many suggestions were received. Some suggestions included: the need for workforce considerations; raising awareness of TB in primary and social care staff and the third sector; and considering new entrant TB screening for all areas in the UK. There was a request for a more prominent mention of DOT as an independent action. Respondents also suggested a range of other upstream interventions including vitamin D supplementation, socioeconomic interventions, changes to immigration policies, interventions to target underlying lung diseases and the potential to link work on TB with other public health issues, for example smoking. Detailed comments relating to the ten areas for action and the responses to these comments are included below.

Many of the comments relating to this section were mentioned in other parts of the consultation responses, especially the general comments, perhaps as the ten Areas for Action cover such a broad range of issues. Again, to prevent repetition and ensure completeness, all responses have been brought together here.

Response to comments received

In response to the comments received during the consultation many improvements have been made to the strategy. The action areas are now outlined in section 4, and changes have been made to the relevant action areas (A1-A10) in annexe 1.

In particular, more reference has been made to paediatric TB in the strategy, and detail on TB in children has been added to two of the ten areas. Some of the suggestions made in answer to question 4a are already current practice and therefore those comments are not included here. In addition, some of the upstream suggestions received were felt to be important but probably beyond the scope of the strategy.

Specific Areas for Action

Area for Action A1. Improving access and early diagnosis

Comments received

There were a number of comments on A1 and respondents supported the need for interventions to improve access and early diagnosis. There were some generic comments, emphasising the importance of tackling healthcare worker associated delays, particularly in primary care, the mention of structural barriers to access (eg transport) as well as the need to raise awareness among professional groups and the public. In addition, a number of very specific suggestions were made, such as introducing incentives for primary care to tackle diagnostic delays or catering for specific groups, such as students and migrants.

Response to comments received

Where these comments demonstrated a gap, small amendments were made to A1 such as including the need for addressing structural barriers and mentioning the need for improving healthcare access in culturally appropriate ways. In response to comments relating to access, an additional action was added to A1 to ‘improve the accessibility of clinic venues and times, this should also include exploring and addressing structural barriers to access such as geography and transport and give due consideration to a rapid referral system’. Many of the other very specific comments will require further

discussion and work, which is beyond the scope of the strategy document, but will be further explored and worked up as appropriate during the implementation phase.

Area for Action A2. High-quality diagnostics

Comments received

A number of respondents requested that interferon-gamma release assay (IGRA) tests be specifically mentioned in the strategy to ensure that they appear in any specification for commissioning. In addition, a collective response from the BTS and a number of PHE centres, local authority and NHS respondents suggested that some key specifics on high-quality diagnostics were missing. Respondents wanted to "ensure all suspected pulmonary cases have a sputum sample sent for a smear at first point of contact with the NHS. Similarly, all positive microbiology and radiological cases of suspected pulmonary TB should be notified directly to the TB team".

Response to comments received

In response to the comments, IGRA testing has been added to A2. The revised strategy also specifies that all suspected pulmonary cases have a sputum sample sent for a smear at first NHS contact and that positive microbiology and radiological cases of suspected TB are notified directly to the TB team.

Area for Action A3. Treatment and care services

Comments received

A number of comments referenced cohort review, with strong support from a number of responders from both high and low incidence areas.

Some of the comments included:
"We strongly support the development of TB cohort review as a tool to support and educate TB clinicians, in particularly nurses working in low prevalent areas. It is an invaluable method of data collection assisting TB teams measure their performance on a regular basis"
"adequate sessional time built into people's work programmes is required"
"Cohort review for areas of low incidence should not be mandated"

There were comments as to whether TB cohort review should be more pragmatic and cover an agreed subset of cases (rather than all cases) because areas with high TB burdens cannot physically review every TB case, even with a quarterly full day of cohort review. A number of respondents commented that outcomes are what are important

and, if built into nurse documentation at the start of treatment, cohort review does not add hugely to individual workload but does lead to useful grass root identification of issues.

ECM was mentioned by a number of respondents. One response said: “TB nurses often underestimate the use of this term, and therefore workforce is planned inappropriately. ECM needs to be clearly defined at a local level for this to be achieved.” Another stated: “The North West have undertaken detailed work to understand the social and clinical needs of [768] patients” and that this had led them to differentiate between ECM and DOT – the reason being that very few patients who required ECM required DOT and instead they now use the term ECM to refer to patients needing support with social and/or clinical needs.

Response to comments received

The strategy was adapted to take account of the issues raised. It was recognised that it would be important to develop cohort review in a way that was appropriate for local incidence, running cohort review on a quarterly basis in areas of high incidence and less frequently in areas of low incidence. It was suggested that feedback from cohort review should go to the TB control board and this was fed into the strategy.

Some queries were raised about TB clinical networks such as who would be part of these, who was responsible for setting them up and leading them and what they should do. This was clarified by including a formal definition in the glossary and by adding a reference to a BTS document that discusses these issues.[4]

Many responders commented that paediatric and TB/HIV co-infected cases should be specifically mentioned in the strategy. In A3 two additional sentences have been added to address this. These are:
“For paediatric cases ensure that they are managed by a paediatric TB specialist or by a general paediatrician with advice from a paediatric TB specialist, that they are discussed at regional and local MDTs and that any service specification considers TB in children as a separate entity.”
and
“For TB/HIV co-infected cases ensure they are managed by a physician with joint HIV/TB expertise or in conjunction with an HIV specialist.”

In response to comments concerning ECM, this has now been clearly defined in the glossary, strengthened in A3 as well as being added as an indicator in Section 7. With

4 British Thoracic Society. Defining a model for a Gold Standard for a TB MDT group and associated networks [Internet]. British Thoracic Society; 2014 Mar. Available from: https://www.brit-thoracic.org.uk/document-library/clinical-information/tuberculosis/defining-a-model-for-a-gold-standards-for-a-tb-mdt-group-and-associated-networks/

reference to comments from the North West around ECM and DOT, it was noted that further work would be needed in this area during the implementation phase.

Area for Action A4. Contact tracing

Comments received

Respondents recognised the benefits of contact tracing (CT) and the need to improve CT services. There were a number of specific comments to amend A4, including contact tracing for specific cases (eg those who died or extra-pulmonary cases), as well as specific suggestions for interventions, such as increasing home visits for example within the remit of enhanced case management. While respondents seemed to agree on the need for comprehensive case finding, the feasibility of identifying five contacts per case was questioned. Suggestions were also made about facilitating extended contact tracing as appropriate.

Response to comments received

A4 has been amended in keeping with the above comments to denote the importance of home visits and to ensure clarity that contact tracing is required for all TB cases, though in the interest of brevity without mentioning specific groups. The target of five contacts per case was removed. In addition, A4 has been amended to make clear that contact tracing includes identification and appropriate follow up for active and latent TB. The text has also been amended to indicate that contact tracing may need to be extended beyond the immediate household in appropriate circumstances, and that provisions for this should be made. In addition, a reference to TB in young children has been included that says: ‘ensure robust contact tracing mechanisms are in place particularly in incidents involving young children’.

Area for Action A5. Vaccination

In response to comments, A5 has been renamed ‘Improve BCG vaccination uptake’. A line has also been added to the action ‘strengthen local pathways for delivery of BCG vaccination as part of infant and risk group immunisation’ that says ‘with clear lines of accountability for commissioning, delivery and monitoring.’ A further line has been added to the action ‘improve systems for monitoring BCG uptake through its inclusion in the Coverage of Vaccination Evaluated Rapidly (COVER) programme’ to say ‘to enable reporting on uptake in areas with a universal programme.’

Area for Action A6. Tackling drug resistance

In response to comments, additional lines have been added to the first paragraph of A6 starting “The risks to public health of antibiotic resistance have been highlighted in the Chief Medical Officer for England’s 2011 annual report (Advocacy Volume) and in the UK Five Year Antimicrobial Resistance Strategy 2013 to 2018.” A line has been added to say “and the importance of consolidated action across Europe has been set out in the WHO-Euro Roadmap to Prevent and Control Drug Resistant TB”. To the end of the second paragraph another line has been added to the risk factors for developing drug resistance, which says “or due to lack of support to enable a patient to comply with the demands of the lengthy treatment regimen”.

An additional action has also been added to this section, which is to “ensure that all culture confirmed cases have drug susceptibility testing, and all MDR TB cases have second-line drug susceptibility testing”.

Area for Action A7. Tackling TB in under-served populations

Comments received

A number of respondents commented on the term “under-served”. Some described the term as helpful, others preferred the old “hard-to-reach” term, and many asked for a definition. There were also comments about available resources for this group and that there should be a provision of a central fund, incentives and subsistence support. Establishing a comprehensive support package for TB patients on treatment was thought to be particularly important, not only to achieve treatment completion but to preserve and maintain dignity while in care. Support initiatives were thought to be important to include financial support, counselling services and peer-led support

Response to comments

Following the request to change all wording relating to the “under-served” population to the “under-served”, this has been changed throughout the document. A definition of “under-served” was already provided in the glossary and this was highlighted, together with an explanatory note that “under-served” was a replacement term for “hard-to-reach” as defined by NICE. Access to housing for the under-served was noted to be important and this is included in the strategy. Details of resources for this group was seen to be important, and this has been strengthened in the strategy as a whole.

Note that in section 4 “what are we trying to achieve” and annexe 4, considerable comments were made that related to tackling TB in under-served populations. These have been drawn together and added to improve the text of the annexe.

Area for Action A8. New entrant LTBI screening

Comments received

Almost all respondents were very supportive of LTBI screening among migrants. Some felt that the need for LTBI screening and treatment among other population groups (such as people with immunosuppression) should be made clearer. There were a number of requests for clarification – to determine eligible groups and areas. Queries were also raised about what a high incidence area was (for example a local authority with overall >20/100,000 or where there are high incidence wards) and whether the 20/100,000 should be calculated as three-year rolling average. There were also comments on the appropriate cut off for determining eligibility, in keeping with the observation that some high-burden countries have observed decreases in incidence over the last few years (such as Nigeria).

Suggestions were also made to combine LTBI screening with other “migrant health checks”. In addition, there were many specific comments on details of the screening programme and to amend the linked indicators.

Response to comments received

In keeping with above, the decision was made to broaden the suggestion for LTBI screening to all areas in England, but to emphasise the importance of “getting it right” in high incidence areas. The eligibility criteria for screening migrants from specific countries has also been amended to include all countries from sub-Saharan Africa, as well as those with a TB incidence of 150 per 100,000 and above. The reason for this is the weakness of surveillance systems in some of these countries as well as the fact that there are significant health inequalities in many sub-Saharan Africa countries. Both of these lead to uncertainties around using WHO incidence estimates alone. The indicators have been consolidated and the target levels taken out – these are now suggested monitoring standards. Based on the fact that LTBI screening could be combined with other initiatives such as other screening programmes (HIV, hepatitis), an additional line was included that says “and as appropriate embedded in local health check procedures for other illnesses such as hepatitis or HIV.” Other small amendments have been made to the strategy in keeping with the comments received. A number of specific comments were psssed to the PHE TB Screening team to inform future developments of this service.

Area for Action A9. Effective surveillance and monitoring

Comments received

A number of respondents requested clarity on how service monitoring/performance management would be conducted, including who is responsible for meeting indicator targets, who is responsible for monitoring, and whether incentives /penalties would be used for performance management.

Response to comments received

An additional action has been added which is “to support the TB strategy, a formal monitoring framework will be put in place to ensure clear lines of accountability for monitoring TB service performance at local and national level”.

Area for Action A10. Workforce planning

Comments received

Respondents made a wide range of comments about the workforce element of the strategy and welcomed the focus on this aspect of TB prevention and control. Many of the comments highlighted the lack of a consistent approach to TB workforce planning across the country and raised a number of local issues around workforce planning. The overall message from those consulted was that an appropriately skilled workforce is vital to achieve the ambitions set out in the document and that more work was needed to develop a more responsive approach to workforce planning.

A number of comments related to current nursing ratios, which are generally seen as helpful to workforce planning, but may not always reflect local circumstances, particularly in rural areas or where the caseload is complex. More clarity was requested around the capacity requirement for enhanced case management and LTBI screening. It was also recognised that the role of support functions, such as administrative provision, needs to be properly planned and provided for. There were also suggestions regarding the development of a skills framework and a career path for case managers as well as the need to ensure there are appropriate skills for working with children with TB.

Response to comments received

In response to the large number of very valid comments surrounding A10 this section was adapted. The changes recognise the need to mention a multi-disciplinary, multi-level, multi-skilled workforce from a range of professions including administrative

support, community workers and physician input, and the need for a stronger community focus. Additional training needs were also added to A10.

While only some changes were made to the strategy document, it is envisaged that all workforce comments will be revisited in the implementation phase of the strategy, when a comprehensive workforce review will be carried out by PHE and NHS England in collaboration with Health Education England.

Question 4b. What are the key features of high-quality local commissioning for an integrated TB control service covering both the clinical and public health interventions?

Comments received

Respondents made various comments in answer to this question corresponding to three key areas: clinical services, organisational arrangements, and performance management and targets.

With respect to clinical services, comments included: a need for a patient-centered service that considers a holistic patient journey from point of access to good quality language translation services and specialist paediatric TB services. It was felt that PHE should be the evidence champion and where evidence of effectiveness exists this should be highlighted to inform commissioners and the development of the TB service specification.

Comments relating to organisational arrangements included the need for a clear service model agreement with pathways for referral to other services such as housing, social care and DOT input from multi-agencies. Another area highlighted was that that there should be clear commissioning arrangements, for example commissioning TB services against agreed evidence-based specification. Specific views on how to commission were also expressed.

On the topic of performance management, comments were made that there should be performance management/monitoring and auditing against quality indicators, that there is a need for publishing TB data with accountability for failure, and that there is a need for high-quality and up-to-date clinical information for TB control boards. Respondents also felt that there is a need to learn from previous experiences and the experiences of others.

Response to comments received

Many of the comments relating to clinical services are already happening or the comments were in more detail than was appropriate for a strategy document. However, many of the comments will be usefully fed into the implementation phase. To respond to the comments, the text of the strategy was adapted and the need for clear accountability, partnership working, an understanding of local issues and the need for strong strategic leadership were added, where possible.

Question 5a. What is the most appropriate way of ensuring adequate resourcing for TB control?

Comments received

The lack of financial information within the strategy was noted by many respondents. To ensure adequate resourcing for TB control a number of broad options were suggested: ring-fenced funding, a nationally commissioned service, a joint stakeholder funding approach (for example through pooling of resources of a number of organisations, between low and high incidence areas or between primary and secondary care) or a local funding approach commissioned through TB control boards.

Other suggestions included a co-ordinated funding approach that integrates TB with other key conditions, funding from PHE, or an attempt to secure EU funding. The joint strategic needs assessment (JSNA) process was mentioned as a vehicle several times. Other comments included the suggestion that the strategy should be mandated, for example as part of the NHS mandate. It was noted that the TB strategy would “appear expensive in the short term but will pay for itself over time’.

Suggestions were made about how to allocate the funding, with the recognition that CCGs are responsible for commissioning diagnostic services which will be essential to ensure successful implementation of the strategy. General statements were made on the importance and clear allocation of robust funding for clinical management as well as ring-fenced funding for outbreak and incident management. It was felt that funding of clinical services should consider the entire workload, not just active TB cases and cater for more complex cases, ideally in a needs-based approach and that funding arrangements should also recognise the role of the third sector.

Specific funding suggestions included: ring-fenced funding, unbundling TB funds from the general respiratory budget of CCGs, a 3–5 years rolling plan, individual business cases, reallocation and creative use of existing resources, a needs-based approach possibly using the JSNA as a tool and payment by results/ performance against targets. Some respondents specified where resources could be directed–these suggestions

included vulnerable TB patients, or the under-served, possibly to keep them engaged with treatment.

Some of those consulted felt that the strategy does not "acknowledge the financial and practical implications of the proposals" or that there needed to be "clarity about commissioning and funding". Those responding felt that there needed to be a realistic costing to secure political support and that a business case would be beneficial. Some comments stressed the importance of fully costing the strategy. Many respondents commented on the need for additional resources for TB control across a range of clinical, social care and third sector providers to ensure that the ambitions/indicators could be met. Some respondents stated that clarity on where the resources would come from was needed before services could agree to meet any specific target levels.

It should also be noted that funding and implications on resources were referenced throughout many of the answers to the consultation questions, not just in answers to question 5. These were all considered in this question for completeness.

Response to comments received

In response to comments that finances were not mentioned sufficiently in the strategy, one of the five main actions proposed in section 5 has been changed from: "Develop the business case for establishing additional services to address specific gaps in current TB control arrangements" to "Establish arrangements to cover the cost of additional services to address specific gaps in current TB control arrangements." This section has been substantially re-edited so that it provides much greater clarity on what additional funding is needed and who will provide it.

An additional paragraph has also been added to the "Next steps" section to say:

"During and following the consultation period, PHE and NHS England worked together to map the current resources and future additional requirements of the actions recommended in the strategy and have agreed that the costs of the TB control boards and the national TB programme will be met by PHE, whilst the costs of clinical interventions to control TB as laid out in this strategy will be met by NHS.

Many of the responses to this question were beyond the scope of the strategy but will be useful to inform the implementation phase of the TB control programme. Part of this will involve an exploration of the best way to engage with CCGs who make decisions about prioritisation and resource allocation locally. One particular area that needs consideration is the promise of support for housing the homeless and support to under-served communities that includes food and transport costs to keep them engaged in treatment.

Question 5b. What additional steps should/could be taken to ensure that investment is sustained?

Comments received

Respondents mentioned that this could be achieved by keeping a high political profile for example through the APPG. One respondent suggested making it a priority for the Secretary of State for Health. Others felt that "buy in" from the Department of Health, NHS England and CCGs is needed. Strong partnerships were seen to be central to the successful implementation of the TB strategy, for example between local authorities and the TB control board and between TB commissioners and individual trust boards. Many respondents felt that the indicators would be helpful with regards to ensuring that investment is sustained, and with reporting and monitoring to ensure that national standards of care quality are provided. Suggestions relating specifically to sustaining LTBI screening included combining LTBI screening with other initiatives such as screening for HIV and Hepatitis, tieing it into the Quality and Outcomes Framework (QoF), or linking it to antimicrobial resistance and ensuring that it features in local authority JSNAs as well as on the agenda of health and wellbeing boards.

Other issues mentioned were the need for funding advocacy and awareness raising, and the risks associated with either national funding (disengagement of local commissioners) or local funding (risk of fragmentation).

Response to comments received

Again, many of the responses to this question were largely beyond the scope of the strategy but the responses will help to inform the strategy implementation phase. In response to the request to combine LTBI screening with other initiatives, a change has been made to A4 by adding "ensure local LTBI screening is well resourced, co-ordinated and quality assured and, as appropriate, embedded in local health check procedures for other illnesses such as hepatitis or HIV".

Question 6. Do you agree with the proposal on page 16 to strengthen national TB control functions?

Comments received

Of the 85 respondents to this question, 98% were in agreement with the proposal to strengthen the existing national TB control functions. Respondents did feel, however, that further clarification was needed on a number of aspects. It was also felt that national plans should be co-produced with local areas and detailed timescales shared.

Additionally, there was concern that annexe 3: “Proposed national TB control functions” and the detail in the text on p16 were not well aligned.

Response to comments received

There was agreement that further clarification would be highly desirable in the areas mentioned by those consulted, including the respective responsibilities and accountabilities of each stakeholder, the resource arrangements, and the membership of the national TB control board. Annexe 3 and the detail on p16 have been reworked to ensure they are aligned.

Some of the responses to this question may be worth considering in the future. These included: seeking partnerships with UK border control and the justice system to help with the management of high risk/vulnerable TB cases, to ensure clear and robust pathways for pre-entry screening, to adopt the US model of doing IGRA testing for new entrants, to introduce a legal requirement for TB screening, and legislation to require cases to comply with treatment and for their contacts to attend screening.

Question 7a. Are the proposed suite of indicators appropriate for monitoring the outcomes we want to achieve?

See response to question 2, which encompasses the answers to this question.

Question 7b. For Indicator B2, please comment specifically on which option would be most appropriate for monitoring performance at local level?

See response to question 3, which encompasses the answers to this question.

Question 7c. What would be the most appropriate geographical/organisational level to report these indicators to?

There was a wide variety of responses to this question including: individual trusts, CCGs, local authorities, NHS England local area teams, NHS England regions, PHE centres, TB control boards and TB networks. A number of respondents stated that TB control boards were best placed to decide which local level to report indicators to within their area (local authority/CCG/trusts) depending on numbers of cases and other local issues, and should have access to the data (in spreadsheets or web-based systems that can be interrogated) to be able to produce appropriate reports. Local authority respondents favoured reporting to local authority/CCG level. Some respondents stated that indicators should be reported to wherever the funding is allocated.

Response to comments
The initial suite of monitoring indicators will be reported at national/TB control board and/or local authoritiy level as specified for the individual indicators. Further work on reporting of monitoring indicators will be finalised by the implementation group.

Question 7d. Should indicators about individual patient management be monitored and reported separately for the cohort of complex patients requiring enhanced case management?

While some respondents felt that it would be helpful to report a number of indicators separately for this cohort of patients, many felt that this level of monitoring would be an appropriate activity to be conducted at cohort review, with lessons learnt being fed back to TB control boards, trust management and commissioners of TB services to inform service improvement. Some respondents specifically stated that it would be helpful to report separately on treatment outcome for patients with social risk factors, to ensure that the needs of this complex group are being met. Given small numbers, it was felt that it would be inappropriate to report this at local level.

Response to comments
Proportion of drug-sensitive TB cases with at least one social risk factor who completed treatment within 12 months has been added as a national/TB control board level indicator.

Question 7e. Are there any indicators that would benefit from reporting more frequently than annually?

There was a varied response to the question with many respondents stating that annual reporting was most appropriate, while others favoured quarterly reports for some indicators, although the specific indicators suggested varied considerably.

Many recognised the potential administrative burden of reporting more frequently than annually, and stated that it should only be done if data could be readily produced and/or based on preliminary rather than cleaned data.

Many respondents pointed out that although the formal monitoring indicators may be best reported annually, reports from cohort review would be produced three or four monthly, providing more timely access to data relevant to patient management.

General comments

Although there was a section for “general comments”, many of the responses to this question applied to specific earlier questions or specific themes in the strategy, and therefore, consistent with our methodology, these comments were moved to that alternate area for completeness and to prevent repetition. There were also some comments in earlier questions that were not appropriate to that question but could be defined as general comments and therefore these were moved here. This section therefore includes all comments throughout the strategy consultation responses that were not relevant to an earlier question but were important to consider for the strategy as a whole.

These general comments included:

- Paediatric TB: A number of responders noted that the strategy included very little on paediatric TB cases or care and that it did not sufficiently take into account the many important aspects of managing TB in children. Suggestions included the need for family clinics and a family-based review with a paediatric specialist present when discussing children. Including a section on “TB in children” in any service specification was also mentioned “as children require different tools for screening and investigation”. It was felt that children with TB should receive input from paediatricians with TB expertise whether through a specialist service provided by physicians with experience in diagnosing and managing paediatric TB or by seeking links and support from such specialists in other centres. These comments were all very valid and, in response, additional text on paediatric TB was added to A3 and A4 in annexe 1 so that each specifically mentions paediatric cases and their management.
- HIV: HIV was also felt to be missing from aspects of the strategy. Respondents said that the strategy should be more explicit about support for the management of HIV/TB co-infected patients and this has been remedied by adding this to A3 in annexe 1.
- International role: there were comments relating to the international dimension of PHE’s interest in international TB control.
- Political will: The APPG felt that it was important for political will to be engaged, and for PHE to represent a voice for TB at a local level with local politicians and at national level with national politicans.
- Title: The strategy timeline as outlined in the title has been changed from “2014 to 2019” to “2015 to 2020” in response to a comment that the work of the strategy will only start in 2015.

Chapter 6. Next steps

The way forward following this consultation is to ensure that the comments made in this document are reflected in the *Collaborative Tuberculosis Strategy for England 2015 to 2020*, which will be launched jointly by NHS England and PHE.

The next steps will involve a strategy implementation phase. The implementation phase will be built on the foundations of the strategy and will utilise some of the content of the consultation responses. It will involve the drawing up of terms of reference for the TB control boards, including more detail on the roles and responsibilities of individuals on such boards, how boards can be empowered to carry out their functions and how arrangements for the diagnosis and treatment of TB can be strengthened. Each of the 'areas for action' will be reviewed and implementation plans developed. Part of the implementation process will involve establishing and setting up the TB control boards and appointing TB control board staff. Links between the TB control boards and local TB networks will need to be fostered or created to ensure universal coverage of TB control efforts is delivered.

In addition, the strategy implementation phase will work through the details of the specific funding arrangements. Another important aspect of the next phase of work will be finalising and publishing the monitoring indicators and undertaking the workforce review as detailed in the strategy. The "Next steps" outlined have been added to the modified "Next steps" section in the strategy.

Appendix 1: Consultation questions

Question	Consultation question
1	Is the ambition on page 5 of the strategy the right one to help deliver TB control in England?
2	Are the outcomes and indicators of success on page11 the right ones, and if achieved will these improve TB control in England?
3a	Do you agree with the responsibilities proposed for local TB control boards on page 12 and 13 and in Annexe 2?
3b	If TB control boards are implemented, should they focus solely on the areas of high incidence (option 1), or should they cover every local community (option 2)?
3c	If TB control boards are only established in areas of high TB incidence (option 1), how should arrangements for the diagnosis and treatment for those people who develop TB in lower incidence areas be strengthened?
3d	Local TB control boards must have the authority to bring together partners to effectively control TB in the patch. How can TB control boards be empowered to carry out their functions and what mechanisms can be used so partners hold each other to account for improved TB control?
3e	How do we ensure that local authorities and local health and wellbeing boards have adequate involvement in TB control board work, particularly when TB control boards are likely to cover a number of local authority areas?
4a	Do the proposed areas for action, on page 14 and in Annexe 1 include all the required clinical and public health actions that should be included in an integrated service specification?
4b	What are the key features of high-quality local commissioning for an integrated TB control service covering both the clinical and public health interventions?
5a	What is the most appropriate way of ensuring adequate resourcing for TB control?
5b	What additional steps should/could be taken to ensure that investment is sustained?
6	Do you agree with the proposal on page 16 to strengthen national TB control functions?
7a	Are the proposed suites of indicators on page 17 and in Annexe 4 appropriate for monitoring the outcomes we want to achieve?
7b	For Indicator B2, please comment specifically on which option would be most appropriate for monitoring performance at local level?
7c	What would be the most appropriate geographical/organisational level to report these indicators to?
7d	Should indicators about individual patient management be monitored and reported separately for the cohort of complex patients requiring enhanced case management?
7e	Are there any indicators that would benefit from reporting more frequently than annually?
General comments	General comments

Appendix 2: Consultees and respondents

Responses to the March 2014 consultation were received from 111 bodies:

Abbott Molecular
All Party Parliamentary Group -TB
Anglia and Essex - PHE Centre
Arden Community TB Service, Coventry
Avon, Gloucestershire and Wiltshire - PHE Centre
Barts Health NHS Trust
BHIVA
Bio-Tech Parmacal, Inc
Birmingham and Solihull TB Service
Brighton and Sussex University Hospitals NHS Trust
Bristol City Council
British Red Cross
British Thoracic Society
Cambridgeshire County Council
Chartered Institute of Environmental Health
Cheshire & Merseyside - PHE Centre
Cheshire West and Chester Council
City Health Care Partnership CIC
Cumbria and Lancashire PHE Centre
Department of Health
Devon County Council
Devon, Cornwall and Somerset PHE Centre and TB stakeholders
Doctors of the World UK
Doncaster Council
Dudley Metropolitan Borough Council
East Midlands PHE Centre and TB stakeholders
East Sussex County Council
Essex County Council
Find & Treat Service, London
Greater London Authority
Greater Manchester - PHE Centre
Greater Manchester TB Collaborative
Homerton University Hospital
Hull, Leeds, TB nursing teams
Imperial College Healthcare NHS Trust (St Mary's)
Independent Public Health Practitioner
Individual
Individual
Individual - London Borough of Newham
Jenton International Limited
Joint Paediatric response from – RCPCH, BPAIIG, BPRS/BTS), BAGP, London Paediatric TB Network, UK Paediatric TB Network, CHIVA
Kent Community Health NHS Trust East
Kent County Council
Lambeth & Southwark Public Health
Lancashire Area Team NHS England
Lancashire Care NHS Foundation Trust
Local Government Association
London Borough of Newham
London Borough of Waltham Forest
London Respiratory Clinical Leadership Group
London TB Control Board and London TB Clinical Leadership Group (combined response with contributions from NHSE-London, PHE-London, NHS and the Third Sector)
London TB Workforce
LSHTM TB Centre
LTBeX team, Public Health England Centre London
Luton Borough Council
Milton Keynes Hospital NHS Foundation Trust
National AIDS Trust
National Association for Voluntary and Community Action
National Institute for Health and Care Excellence (NICE)
NAZ Project London
NHS Dorset Clinical Commissioning Group
NHS England - Birmingham, Solihull & Black Country Area Team
NHS England (Midlands & East)
Norfolk County Council and Suffolk County Council
North Central London (non-inpatient) TB Service
North East – PHE Centre
North West London multi-stakeholder TB Network
North West TB Summit (partnership of NHS England, PHE, Local Government and clinical services across the North West of England)
Oldham Council
PHE – TB Section
PHE Centre Yorkshire & Humber consultation event
Public Health, Coventry City Council and Warwickshire County Council
Public Health, London Borough of Croydon

Public Health, London Borough of Redbridge
RESULTS UK
Royal Bolton Hospital
Royal Brompton Hospital
Royal College of Nursing UK
Salford City Council
Sheffield County Council
Sheffield NHS Trust
Somerset County Council
South East London Health Protection Team
South East London TB Network
South West London TB Group
South Yorkshire Health Protection Team, Barnsley Council and other TB stakeholders including commissioners
Stoke City Council
Surrey and Sussex Health Protection Team
Surrey County Council
TB Action Group
TB Alert
TB Nurse, Cornwall
Thames Valley PHE Centre & Berkshire stakeholders
Thames Valley PHE Centre & Buckinghamshire stakeholders
Thames Valley PHE Centre & Oxfordshire stakeholders
The Association of Directors of Public Health
The Royal College of Pathologists
The Tunbridge Wells Hospital at Pembury
The University of Southampton
Tower Hamlets Local Authority
UCL TB Centre
University Hospital of South Manchester
University Hospitals Bristol NHS Foundation Trust
Virgin Care Limited
Wessex PHE Centre and the HIOW TB Network
West Midlands East Health Protection Team - PHE
West Midlands PHE Centre, local directors of public health and other TB stakeholders
West Midlands Public Health England Centre
West Sussex County Council
Western Sussex Hospitals NHS Foundation Trust
Wolverhampton City Council and Royal Wolverhampton TB Service