



Tuberculosis: Clinical diagnosis and management of tuberculosis, and measures for its prevention and control in Dumfries and Galloway.

Printed copies must not be considered the definitive version

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Purpose and scope

The purpose of this document and appendices is to implement the most recent national evidence based guidance on Tuberculosis: Clinical diagnosis and management of tuberculosis, and measures for its prevention and control in Scotland, within Dumfries and Galloway. The document is split into sections relating to screening/prevention, contact tracing, travel and the administration of the Mantoux test and BCG vaccination.

This document does not act as a treatment guide. All active and latent cases of Tuberculosis (TB) will be under the care of a specialist appropriate for the site of the TB and it is the responsibility of that specialist to initiate and coordinate treatment.

Human tuberculosis is caused by infection with bacteria of the Mycobacterium tuberculosis complex (M. tuberculosis, M. bovis, M. africanum, M. microti and M. canetti). Most cases (60%) are pulmonary although many other sites may be affected. Non-respiratory forms of TB are more common in young children in communities with connections to areas of the world with high prevalence, and in those with impaired immunity. Patients tend to present with non-specific features such as fever, loss of appetite, weight loss, night sweats and lassitude. Pulmonary cases usually have a persistent productive cough, often with blood stained sputum or frank haemoptysis.

Almost all UK cases of TB are acquired via the respiratory route by breathing infected respiratory droplets from a patient with infectious respiratory TB. Transmission is much more likely if the index case has sputum which is smear positive for the bacillus on microscopy, and often after prolonged contact such as living in the same household.

Patients who are infected will do one of three things;

- Eliminate the infection
- Develop **Latent TB** infection. This is where the TB bacillus causes no symptoms but the bacteria remain in the body. The significance of this is that the latent TB may reactivate in later life particularly if the patient's immune system is weakened. This may occur with disease (e.g. HIV), certain medical treatments (e.g. chemotherapy, steroids) or in old age.
- Progress to active TB over the following weeks or months.

In recent years Scotland has had a relatively low and stable incidence of tuberculosis. Compared with other parts of the UK and Europe the disease has not been a significant problem. However, the recent epidemiological evidence suggests that the picture may be changing. While tuberculosis is still at lower levels than elsewhere in the UK, the number of cases now being seen is suggestive of an increasing incidence.

Whilst TB can affect anyone the incidence of TB is influenced by risk factors such as exposure to, and susceptibility to, TB and levels of deprivation (poverty, housing, nutrition, problem alcohol use, and access to health care). TB tends to be found in certain high risk groups (e.g. individuals from communities with connections to higher – prevalence areas of the world, the homeless and alcohol misuse individuals). It also tends to be concentrated in certain areas such as inner city areas.

The scope of the policy is Board wide.

2 Aims

This guideline is to offer best practice to combat the spread of TB through the early identification of people with or at risk of contracting TB and adhere to national guidance and ensure consistency across Dumfries and Galloway.

- identify all possible cases and contacts and ascertain whether there are any other linked cases
- prevent further cases of tuberculosis by exposure to an index case
- prevent and reduce mortality / morbidity
- maximise opportunities to inform and advise on tuberculosis

3 Diagnosis, Management (including latent) of Tuberculosis and Infection Control.

This guidance is informed by the document produced by NICE National Institute for Health and Care Excellence Tuberculosis: NG33 <https://www.nice.org.uk/guidance/ng33>

3.1 Screening Overview

(NICE screening pathways available at <http://pathways.nice.org.uk/pathways/tuberculosis>)

3.1.1 Neonatal Screening (see also Appendix 1)

An assessment of all antenatal patients within Dumfries & Galloway Health Board will be performed at the time of booking by the midwife responsible for the initial assessment.

The following information is required;

- Country of birth of both parents
- Country of birth of all four grandparents
- Whether or not a household member has had TB in the last five years.

If the country of birth of any one or more of the above is a high incidence country (Incidence >40:100 000¹) or there has been a case of TB in the household in the last five years, then the neonate is eligible for BCG vaccination. In Scotland any baby at an increased risk of TB should be offered a BCG following consent from parents or legal guardian preferably before discharge from hospital or before the handover to primary care.

BCG vaccination will also be required if the child is returning to live, or stay for over 3 months, in a high prevalence country

If BCG is required:

- Inform the parents and give the leaflet “BCG and your Baby”
<http://www.immunisationscotland.org.uk/uploads/documents/22166-BCGAndYourBaby.pdf>
- Complete the relevant section of the Scottish Women’s Handheld Maternity Record (SWHMR).
- Raise a purple alert (see Antenatal guidelines 3.6 and 3.7). Write on the PURPLE page in hospital case notes that BCG is required for the infant.

If there is active TB in the home raise a Purple alert

Post natal

PURPLE page is **photocopied** after delivery and added to baby case notes when they are made up.

When paediatrician, ANNP or suitably qualified midwife, carries out routine examination of the newborn, they check photocopied purple sheet and the list of high risk countries.

If a BCG is required, the examiner completes the referral form (Appendix 1.1) and sends it to Public Health and the Health Visitor (HV) is notified.

Health Visitor (HV) and School Nurse (SN)

The HV will complete a TB risk assessment at the first visit for all new neonatal contacts. This will include;

- Confirmation of data of vaccination as above.
- For all neonates identified as high risk from the above assessment, the HV will conduct a similar assessment on any other household members up to the age of sixteen.
- If this household assessment reveals any individuals who would have been eligible for neonatal vaccination, any other household members up to the age of 16 years should be referred to the Health Protection Team (HPT) for Mantoux testing and BCG vaccination as above.

The HV completes the Child Health Surveillance Programme (CHSP) First Visit Form. The information is entered on to the Child Health System (CHS) by Screening and Immunisation Services.

¹ More than 40 cases per 100,000 per year, as listed by Public Health England

If the HV/SN is made aware of any new children registering in the area they are to perform a TB risk assessment on these children and any other household members up to the age of sixteen as outlined under neonatal screening above

All individuals identified as being eligible for BCG vaccination using the neonatal criteria should be referred to the HPT using the BCG Referral form (appendix 1.2) and the relevant CHSP documentation completed e.g. Primary 1 Screening questionnaire or unscheduled review form. The information is entered on to the Child Health System (CHS) by Screening and Immunisation Services.

CHS will keep an updated list of patients at risk of TB and this will be notified on an annual basis to the HV/SN, as appropriate, until the age of sixteen.

Health Protection Team (HPT)

When a referral is received by the HPT from Cresswell or Galloway Community Hospital the child is invited to the next BCG clinic (held monthly in NHS Dumfries & Galloway Occupational Health Department and as required, but at least 3 times per annum, in Stranraer). Included with the letter of invite is the NHS Scotland leaflet "BCG and your baby."

Each baby/child is offered a maximum of 3 appointments for BCG, if they fail to attend all appointments offered the GP/HV is informed by letter.

Mantoux testing should not be done routinely before BCG vaccination in children younger than 6 years unless they have a history of residence or prolonged stay (more than 1 month) in a country with a high incidence of TB.

3.1.2 New Entrant Screening (See also Appendix 2)

New Entrants are defined as those people entering the Dumfries & Galloway catchment area who are Mantoux-or interferon-gamma release assay-negative who:

- are from high incidence countries and
 - are previously unvaccinated (that is without adequate documentation or a BCG scar)
- and
- are aged
 - Younger than 16 years or
 - 16-35 years from sub-saharan Africa or a country with a TB incidence of 500 per 100,000 or more.

The following groups will be screened:

- New registrations with primary care
- Entry to education (including Universities)
- Patients identified through their workplace
- Patients identified via statutory and voluntary groups.

In order to

- detect active TB and start treatment
- detect latent TB and start treatment
- provide BCG vaccination to those in high risk groups who are not infected and who are previously unvaccinated
- provide relevant information to all new entrants

Assessment for and management of TB in new entrants should consist of the following:

- History and examination as clinically indicated
- Submission of sputum sample (or other sample as clinically indicated)
- Reliable evidence of a normal chest X-ray in the last 6 months, unless they are younger than 11 or are possibly pregnant.
- Risk assessment for HIV, including HIV prevalence rates in the country of origin, which is then taken into account for Mantoux testing and BCG vaccination

Refer for

- specialist clinical assessment those with an abnormal chest X-ray.

- a Mantoux test for people with normal recent chest X-ray who are
 - younger than 16, or
 - aged 16-35, from sub-Saharan Africa or a country with a TB incidence greater than 500 per 100,000.
- a Mantoux test for
 - children younger than 11 years
 - pregnant women

Interferon-gamma test in those aged 5 years and over if Mantoux test is positive (induration of 5mm or larger, regardless of BCG history .

Assessment for active TB if interferon-gamma test or Mantoux test is positive; Interpret chest X-ray first if it is not contraindicated.

Offer treatment for latent TB infection

- for people aged 65 years or younger in whom active TB has been excluded,
- with a positive Mantoux test or a positive interferon-gamma test

Consideration of BCG for unvaccinated people under 16 who are Mantoux negative or 16 to 35 years from sub-Saharan Africa or a country with a TB incidence of 500 or more per 100,000.

Provide 'Inform and Advise' information for people who do not have active TB and are not being offered BCG or treatment for latent TB infection.

Publicity materials and information regarding TB will be provided to all agencies supporting sign posting of new entrants for TB screening and will be available in local community venues.

Local businesses will be informed annually through the federation of Small Businesses, The Chamber of Commerce and Healthy Working Lives of the requirement for screening and to encourage their employees to register with a GP.

HPT will liaise with Student Support at the Higher Education Institutions in the board area to inform and educate staff about TB screening and to promote GP registration with students.

General Practice will be informed of the current status of TB Screening by the D&G NHS Board Public Health Directorate on an annual basis or when guidance changes.

3.1.3 Individuals who are immunocompromised or have HIV

If latent TB is suspected in children who are immunocompromised, refer to a TB specialist.

In adults who are anticipated to be or are currently immunocompromised, do a risk assessment to establish whether testing should be offered, taking into account their:

- Risk of progression to active TB
- Risk factors for TB infection, such as country of birth or recent contact with an index case with suspected infectious or confirmed pulmonary or laryngeal TB.

For adults who are severely immunocompromised, such as those with HIV and CD4 counts less than 200 cells/mm³, or after solid organ or allogeneic stem cell transplant, offer an interferon-gamma test and refer to HPT for a concurrent Mantoux test.

- If either test is positive assess for active TB
- If this assessment is negative, offer treatment for latent TB infection.

For other adults who are immunocompromised, consider an interferon-gamma test alone or an interferon-gamma test with a concurrent Mantoux test (Refer to HPT).

- If either test is positive assess for active TB
- If this assessment is negative offer treatment for latent TB

3.1.4 Prisoners in HMP Dumfries

HMP Dumfries serves the courts of Dumfries and Galloway. It holds up to 80 male prisoners who are remanded in custody for trial and those convicted but remanded for reports. Short-term convicted male prisoners may be retained at Dumfries or transferred to another establishment according to their length of sentence and the availability of spaces. Dumfries Prison also provides a national mainstream facility for holding up to 120 long-term and short-term prisoners who require to be separated from mainstream prisoners because of the nature of their offence, termed as offence related protection prisoners.

On arrival at the prison the prison healthcare staff should ask all prisoners if they are taking TB medication, to ensure continuity of treatment.

On each entry into the prison system prisoners should be screened for TB within 48 hours:

Screening questionnaire

Do you have more than one of the following?

- A persistent cough that is getting worse i.e. over weeks and months
- Loss of weight
- Fever and heavy sweats at night
- A general and unusual sense of tiredness and being unwell
- Loss of appetite
- Coughing up blood

For those with signs and symptoms of active TB a chest X-ray, and three sputum samples taken in 24 hours for TB microscopy including a morning sample should be obtained and a referral made to the Respiratory Team DGRI.

In prisons everyone with X-ray changes indicative of active TB, as well as those with symptoms who are awaiting X-ray should be isolated in an adequately ventilated individual room or cell and a referral made to the Respiratory Team at DGRI.

Prisoners should be retained on medical hold until they have:

- Proven smear negative and had an X-ray that does not suggest active TB or
- Had a negative risk assessment for multidrug resistant TB and completed 2 weeks of standard treatment.

3.1.5 People in under-served groups

Under-served groups include children, young people and adults whose social circumstances or lifestyle, or those of their parents or carers, make it difficult to:

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

Offer people younger than 65 years from under-served groups a single interferon-gamma release assay.

Substance misuse services and prison health services should incorporate interferon-gamma release assay testing with screening for hepatitis B and C and HIV testing. Individuals with positive interferon-gamma release assays should be referred to the Respiratory Service for further assessment.

If the interferon-gamma release assay is positive assess for active TB; if this assessment is negative, offer them treatment for latent TB.

Healthcare professionals working with people with TB should reinforce and update education about TB, and referral pathways, to Accident & Emergency, Primary Care, social worker and voluntary sector colleagues who work with homeless people, travelling communities, those who misuse substances or people in prison.

<https://pathways.nice.org.uk/pathways/tuberculosis#path=view%3A/pathways/tuberculosis/tuberculosis-in-under-served-groups.xml&content=view-index>

3.1.6 Person in contact with TB diseased animals.

The HPT are informed by the Animal Health and Veterinary Laboratories Agency of TB diseased animals within the region. The NHS Dumfries & Galloway Bovine Tuberculosis Information Leaflet is provided to individuals in contact with these animals.

3.1.7 NHS Employees (see also Appendix 3)

All new employees who will be working with patients or clinical specimens should not start work until *after* they have completed a TB screen, or documentary evidence is provided of such screening in the preceding 12 months. This includes clinical students, agency and locum staff.

All new employees who will not have direct patient contact should not start work if they have signs or symptoms of TB.

The following should be included in the health check

- assessment of personal or family history of TB
- symptom and signs enquiry
- documentary evidence of TB skin testing (or interferon-gamma testing) within the past 5 years and/or BCG scar check by an occupational health professional, not relying on the applicant's personal assessment

Employees who will be working with patients or clinical specimens and who are Mantoux-or interferon-gamma release assay-negative should have an individual risk assessment for HIV infection before BCG vaccination is given.

Offer BCG vaccination to employees of any age who are new to the NHS and are from countries of high TB incidence, or who have contact with patients in settings with a high TB prevalence, and who are Mantoux-or interferon-gamma release assay negative.

Offer BCG vaccination to all healthcare workers and other NHS employees who have contact with patients or clinical specimens who:

- Are previously unvaccinated (without adequate documentation or a BCG scar)
- And
- Are Mantoux (or interferon-gamma release assay) negative.

The Human Resources department are responsible for ensuring that all prospective employees meet the above requirements and are referred to the occupational health department for further assessment.

3.1.7.1 Occupational Health Measures

The following proactive measures should be taken for employed staff;

1. Reminders of the symptoms of TB and the need to report such symptoms should be sent out annually to staff working in areas with regular contact with TB patients or who have worked in a high risk setting for 4 weeks or more in the last 12 months.
2. One off reminders should be given after a TB incident on a ward.

3.2 Contact Tracing

<http://pathways.nice.org.uk/pathways/tuberculosis#path=view%3A/pathways/tuberculosis/tuberculosis-contact-tracing-and-testing.xml&content=view-node%3Anodes-child-or-young-person>

When a patient is identified as having active TB (the Index Case) all contacts as outlined below should be screened to identify those at risk of TB or with latent or active TB.

The Health Protection Team within the Public Health Directorate are responsible for ensuring cases are logged on to HPZone and the management pathway followed; for notifying the Respiratory Lead for TB in secondary care; notifying the Dumfries & Galloway NHS Occupational Health Department of all cases who

have received care from NHS staff and for carrying out contact tracing. Contact tracing will be carried out in accordance with current guidance.

3.2.1 General Principles of Contact Tracing

1. The diagnosing physician should inform the following people ideally within 24 hours of notification via telephone
 - a. Health Protection Team 01387 272724
 - b. Health protection on call if out of office hours (via D&GRI switchboard 01387 246246)
 - c. The patients GP
 - d. In addition, the respiratory team should be informed to allow appropriate follow up to be arranged through the respiratory clinic (01387 241835).
2. Household Contacts.

Defined as those who share a bedroom, kitchen, bathroom, or sitting room with the index case.
All should be offered contact tracing irrespective of the site of infection in the index case.
Screening should comprise:

 - *Standard testing for latent TB for those aged 65 or younger should be undertaken (see link at 3.2 above) and consideration of BCG or treatment for latent TB infection once active TB has been ruled out.*
Retest contacts 6 weeks after the end of their exposure if the first screening test is done within a few weeks of initial exposure and is negative for latent or active TB.
 - *an interferon gamma test 6 weeks after the Mantoux and consideration of BCG or treatment for latent TB infection once active TB has been ruled out, for those who:*
 - *are previously unvaccinated and*
 - *are household contacts of a person with sputum-smear positive TB and*
 - *are Mantoux negative*
 - Chest X-ray (if there are no contraindications) for those older than 65, possibly leading to further investigation for active TB.
3. Sputum smear positive cases of active TB.
 - Close contacts should also be assessed after consideration of the infectivity of the index case, proximity of contact, the contacts susceptibility to infection and the duration of close contact e.g. girlfriends/ boyfriends and other visitors to the home who have a cumulative 8 hours or more exposure over the period in which the individual is known to have been infectious.
 - Occasionally workplace colleagues may be deemed to have had the same degree of exposure and should be screened.
4. Casual contacts (e.g. most workplace colleagues) should not normally be screened.
 - If the index case is found to be highly infectious (e.g. as evidenced by transmission of active TB to more than 10% of close contacts) then consideration of screening of casual contacts should be considered.
 - Casual contacts that are at increased risk of infection should also be considered for screening.
 - Assess any visitors of a child with suspected active TB in hospital for symptoms of infectious TB, and keep them separate from other people until they have been excluded as a source of infection.
5. Information and advice should be given to all contacts of a case of smear positive TB.

3.2.2 Special Circumstances

3.2.2.1 Cases in Schools

- The CPHM will lead on the risk assessment for the incident.
- Following diagnosis of TB in a school pupil or member of staff, the CPHM should provide advice on prevention and control procedures to staff, parents and the press.
- If a *pupil* is diagnosed with sputum smear positive TB, carry out a risk assessment of the need to test the rest of his or her class (if there is a single class group), or the rest of the year group who share classes, as part of the contact tracing.
- If a *teacher* is diagnosed with sputum smear positive TB, the pupils in his or her classes during the preceding 3 months should be assessed as part of contact tracing.
- Consideration should be given to extending contact tracing to children and teachers involved in extracurricular activities, and non-teaching staff. This should be based on a risk

assessment as outlined in points 3 and 4 above.

- Any further cases of sputum positive TB should be treated as new index cases
- If a pupil has TB but no index case is found and he is not in a high risk group for TB, then consideration should be given to screening all relevant members of staff.

3.2.2.2 Community childcare

When an adult who works in childcare (including people who provide childcare informally) is diagnosed with sputum-smear positive TB, management is as for 3.2.2.1 above.

3.2.2.3 Cases in hospital patients.

- a. If an inpatient is identified with TB a meeting between the infection control department and public health on call staff will be arranged to allow a risk assessment to be performed. This will include
 - the degree of infectivity of the index case
 - the length of time before the infectious patient was isolated
 - whether other patients are unusually susceptible to infection
 - the proximity of contact

Only carry out contact tracing and testing for patients for whom the risk is regarded as significant.

- b. Regard patients as at risk of infection if they spent more than 8 hours in the same bay as an in-patient with sputum-smear positive TB who had a cough.
- c. Document the risk in the contacts clinical notes, for the attention of the contact's Consultant.
- d. The contact should be given information and advice and their GP should be informed.
- e. Any such patients who are felt to be at risk equivalent to household contacts or are considered particularly susceptible to infection should be offered screening.
- f. If the index case is found to have MDR TB or if exposed patients are HIV positive then contact tracing should be performed in line with the recommendations of The Interdepartmental Working Group on Tuberculosis. (http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4006196)
- g. In general, staff do not require screening unless they are particularly susceptible to infection. The involved practitioners should perform an assessment bearing in mind the potential risks to patients and other staff members.
- h. In cases of doubt when planning contact tracing after diagnosing sputum-smear-positive TB in an inpatient seek further advice from HPS or people experienced in the field.

3.2.2.4 Cases on aircraft

- a. Following diagnosis of TB in an aircraft traveller, contact tracing of fellow passengers should not routinely be undertaken.
- b. The notifying clinician should inform the relevant CPHM if:
 - less than 3 months has elapsed since the flight and the flight was longer than 8 hours, **and**
 - the index case is sputum smear positive, **and either**
 - the index case has MDR TB, **or**
 - the index case coughed frequently during the flight.
- c. The CPHM, in liaison with HPS, will risk assess and may provide the airline with 'Inform and advise' information to send to passengers seated in the same part of the aircraft as the index case.
- d. If the TB index case is an aircraft crew member, contact tracing of passengers should not routinely take place. Contact tracing of other members of staff is appropriate, in accordance with the usual principles for screening workplace colleagues.

3.2.2.5 Index case

The index case and all patients subsequently found to have latent or active TB must be under the care of a physician with training in, and experience of, the specialised care of people with TB.

3.3 Tests

3.3.1 Interferon- gamma testing

This test is still under evaluation to more clearly identify its place in TB diagnosis and contact tracing.

How do IGRA tests work?

The test involves a single blood test that exploits the body's immune response to determine whether a person has been infected with *M. tuberculosis*. T-cells, that have been in previous contact with the bacterium, release the cytokine, interferon gamma (a chemical messenger) when they are stimulated with synthetic peptides which are specific to a small number of mycobacteria, including human *M. tuberculosis*, but not the BCG vaccine strain of *M. bovis*. The amount of interferon gamma or the number of *M. tuberculosis* sensitive T-cells in the blood is then estimated by the tests. T-cells that have not been in contact with the bacterium, will not release the cytokine.

The following web page provides further information on the current status of this test;

http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1204186168242

Please see link below for local protocol for the administration of IGRA testing

<http://dqlabs.citrix.dghealth.scot.nhs.uk/display.asp?id=773&disp=Mic>

3.3.2 Sputum samples

The presence of bacilli in a sputum sample is indicative of a higher level of infectivity. If a patient is found to be sputum positive then the subsequent care of contacts may differ. For these reasons it is essential to take sufficient appropriate sputum samples from the index case prior to their treatment commencing if possible. This is ideally done by obtaining at least three spontaneously produced sputum samples including one early morning. These samples should be sent for TB microscopy and culture for suspected respiratory TB.

Please see link below for local protocol for TB Investigation on Sputum

<http://dqlabs.citrix.dghealth.scot.nhs.uk/display.asp?id=801&disp=Mic>

3.3.3 Rapid-access radiology and other investigations results-referral to Respiratory Services

There is no formal direct access with regard to suspicious chest x-rays the respiratory and radiology services work closely, with issues of significant concern being highlighted directly as well as to the referrer with advice regarding the need for respiratory input. Numbers are currently small and identified issues can usually be addressed promptly in a multidisciplinary approach.

Results of all pathology or other diagnostic results suggesting TB are to be reported by the laboratory to the respiratory team.

Emergency Department clinicians should ensure first line diagnostic tests for TB are performed on anyone presenting with suspected TB

3.4 TB in Hospital Patients

Patients with TB at any site should only be admitted to hospital if there is a clear clinical or socioeconomic need such as homelessness

All patients admitted to hospital with suspected TB must be admitted initially to a negative pressure room until a risk assessment can be performed by the infection control team.

All visitors to a child with TB should be screened as part of the contact tracing procedure and kept separate from other people until they have been excluded as the source of infection.

3.4.1 Infection Control

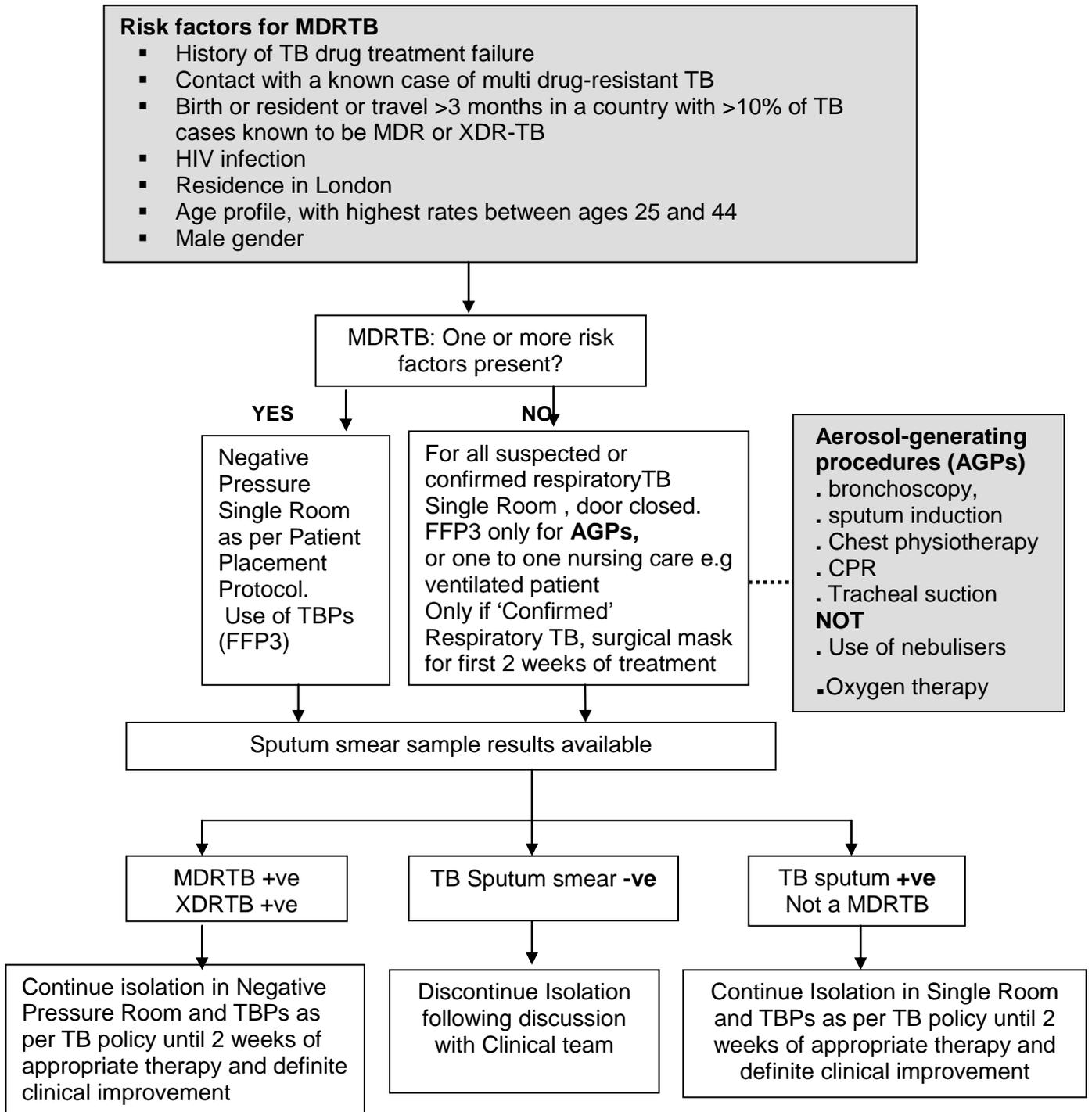
When a patient with either suspected or confirmed pulmonary TB is admitted to an NHS setting suitable placement and infection control measures should be carried out in accordance with the Standard Infection Control Precautions (SICPs) outlined in the National Infection Prevention and Control Manual (NIPCM).

http://www.nhs.uk/Departments_and_Services/Infection_Control/IC_Manual_Index

3.4.1.1 Infection Control and Transmission Based Precautions for patients with suspected or confirmed pulmonary TB

1. Individuals with suspected infectious or confirmed pulmonary or laryngeal TB in a hospital setting including accident & emergency, outpatients or inpatients should be placed in a single room. If this is not possible the patients waiting time should be kept to a minimum.
2. The duration and number of visits an individual makes to an outpatient setting while they are infectious should be minimised. Patients should be invited to attend at the start of clinics to avoid sitting in shared waiting areas. Appointments with members of the multidisciplinary team should coincide as much as possible to avoid multiple attendances.
3. On admission a risk assessment for TB or MDRTB is carried out by the Respiratory Physician or admitting Physician, hospital Infection Control Team and Nurse in Charge. Individuals deemed to be low risk should be cared for in a single room, as a minimum (NICE).
4. People deemed to be at high risk;
 - Provide care in a negative pressure room (*National Infection Prevention and Control Manual*)
 - Have specimens sent for rapid diagnostic tests, such as nucleic acid amplification tests
5. If patient has MDRTB confirmed FFP3 masks should be worn by healthcare workers and staff at all times while the patient is thought to be infectious. Transfer to another facility may be necessary to access a negative pressure room.
6. If patient is sputum smear positive healthcare workers should wear FFP3 masks for first two weeks of treatment when:
 - Performing aerosol-generating procedures
 - Intensive nursing intervention is required – e.g. patient on a ventilator and the healthcare worker is likely to have close contact (equivalent to close household contact*).
7. Do not admit people with suspected infectious or confirmed pulmonary TB to a ward containing people who are immunocompromised, such as transplant recipients, people with HIV and those on anti-tumour necrosis factor alpha or other biologics, unless they can be cared for in a negative pressure room on the same ward.
8. Explain to inpatients with suspected or confirmed pulmonary or laryngeal TB that they will need to wear a face mask whenever they leave their room until 2 weeks of anti-tuberculosis drug treatment with clinical improvement. This is to reduce the chance of exposure to immunocompromised patients.
9. Visitors should be offered advice on simple respiratory hygiene measures.
10. Death of a patient with confirmed or suspected TB: the body should be placed inside a cadaver bag and an infection control certificate should be completed before transfer to the mortuary.

3.4.1.2 Patient Placement Guidance and Transmission Based Precautions (TBPs) for Patients with or suspected of Tuberculosis



Patients considered at risk of MDR TB based on the above criteria should have urgent molecular testing for rifampicin resistance performed on smear positive material or on positive cultures when they become available

De-escalate isolation after two weeks of treatment, taking into account the risks and benefits, if:

- They are unlikely to be rifampicin resistant
- They have negative rifampicin resistance on nucleic acid amplification test or culture
- The person is showing tolerance to the prescribed treatment
- There is agreement to adhere to treatment
- There is resolution of cough
- There is definite clinical improvement on treatment; for example remaining afebrile for a week
- There are not immunocompromised people in the same accommodation (see 3.1.3)
- The persons initial smear grade was not high; for example, 2 or less
- There is not extensive pulmonary involvement, including cavitation
- There is no laryngeal TB

Carry out care in a negative pressure room for people with

- suspected MDR TB, until non resistance is confirmed
- confirmed MDR TB, until they have 3 negative smears at weekly intervals and have a negative culture.

Explore options to reduce the psychosocial impact of prolonged isolation. For example, through providing free access to internet, telephone and television and accompanied walks in open air.

Consider earlier discharge for people with confirmed MDR TB, if there are suitable facilities for home isolation and the person will adhere to the care plan.

In people with active TB only carry out aerosol-generating procedures such as bronchoscopy, sputum induction in an appropriately engineered and ventilated area (ideally a negative pressure room)

Consider discharge from hospital people:

- Who do not have a continuing clinical or public health need for admission with pulmonary TB **and**
- Who are unlikely to be rifampicin resistant **or**
- Who have negative rifampicin resistance on nucleic acid amplification test or culture

If discharged the person should avoid congregate settings for the first two weeks of their treatment.

At the time of discharge of a patient with known MDR TB careful planning must be made to ensure ongoing compliance with treatment as these patients tend to be high risk for poor compliance. Discharge decisions should be taken by the multidisciplinary team and the health protection team.

In rare circumstances, for cases where directly observed therapy (DOTS) is required, failure to comply with this form of supervised treatment will result in the patient being detained under the Public Health etc. (Scotland) Act 2008. This would be carried out with the advice of NHS National Services Scotland, Central Legal Office, in conjunction with a Competent Person according to the Act.

* Close/household contact = 8 hours cumulative exposure at less than one metre.

3.5 Incident and outbreak response

An incident or outbreak response should be managed in accordance with the Public Health Incident Plan. Management will be led by the CPHM.

The multidisciplinary team will through attendance at Incident Management Team (IMT) meetings coordinate incident or outbreak contact investigations at places where the person with active TB spends significant amounts of time.

Any incident in a congregate setting should be referred by the health protection team to health protection Scotland within 5 working days of suspicion of potential incident.

The IMT will mobilise existing staff to

- Undertake risk assessment and provide advice

- Support or undertake contact investigations
- Provide information and communication support to the multidisciplinary team, the local Director of Public Health, the setting in which the incident occurred and the people affected including
 - Written advice
 - Question and answer sessions
 - Telephone advice
 - Media engagement
- Gather and collate data, and report on outcomes to measure the effectiveness of the investigation
- Report back to the IMT at appropriate times; when outcomes of initial investigation of close contacts are available; when a decision is made to broaden the investigation to the next stage using the concentric circle method for risk assessment.

When incidents have been identified, the IMT in discussion with HPS should consider providing support for strain-typing and other analysis to ascertain where transmission is occurring.

3.6 TB and Travel

BCG is recommended for those under 16 years who are going to live or work with local people for more than three months in a country where the annual incidence of TB is 40/100 000 or greater.

3.7 Mantoux test

Administration of the Mantoux test can only be performed by suitably trained personnel, within NHS Dumfries & Galloway the staff trained are occupational health staff and health protection team nurses.

This is used as a screening test for TB infection or disease and as an aid to diagnosis.

Presentation / Administration

- Tuberculin purified protein derivative (PPD) is a sterile preparation made from a culture of seven selected strains of *M. tuberculosis*.
- The dose is 0.1ml of the 2TU/0.1ml strength. (There is also a more potent 10TU/0.1ml strength which should *not* be used for screening)
- The Mantoux must only be administered intradermally.
- Live vaccines can suppress the tuberculin response and therefore tuberculin testing should not be performed within four weeks of having received a live vaccine such as MMR.

For the technique of administration and reading see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/148511/Green-Book-Chapter-32-dh_128356.pdf

3.7.1 Interpretation

Induration < 5mm

- Negative.
- Previously unvaccinated individuals may be given BCG provided there are no contraindications

Induration ≥5mm (regardless of BCG history)

- Positive.
- Should not be given BCG.
- Assess for active TB.

The reaction to the Mantoux test may be suppressed as in the following cases;

Glandular fever

Viral infections in general (e.g. URTI)

Live viral vaccine administration in the previous 4 weeks

Steroid or other immunosuppressive therapy

Immunosuppressive illness (e.g. HIV)

If a patient has a negative test but is suffering from an intercurrent viral illness then they should be retested on the other arm 2-3 weeks after recovery.

If a contact of a case of TB has a negative Mantoux it is important to retest six weeks after the last period of possible exposure as the first test may have been done before tuberculin sensitivity has developed.

PPD is a prescription only medicine so must be prescribed. If contact tracing involves a number of individuals a Patient Specific Directive (PSD) which includes the names of all individuals requiring testing should be used. See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/148511/Green-Book-Chapter-32-dh_128356.pdf for further information.

3.8 BCG Vaccination

BCG Vaccination must only be given by staff trained in the technique of administration within NHS Dumfries & Galloway the staff trained are occupational health staff and health protection team nurses.

The BCG immunisation programme is now a risk-based programme. The key part is a neonatal programme targeted at protecting those children most at risk of exposure to TB, particularly from the more serious childhood forms of the disease.

BCG vaccination has been shown to provide protection for 10-15 years. Data on protection after that time are limited but it is felt that protection may wane.

The vaccine is estimated to be effective in 70-80% of recipients although it is likely to be less effective than this in preventing respiratory TB.

There is little data on the effectiveness of the vaccine in those over the age of 16 and virtually no data on its effectiveness in those over the age of 35.

When BCG is being recommended, the benefits and risks of vaccination should be discussed with the person (or, if a child, with the parents/carer), so that they can make an informed decision. This discussion should be tailored to the person, be in an appropriate language, and take into account cultural sensitivities and stigma.

3.8.1 Presentation/ Administration

- The BCG vaccine consists of a live attenuated form of *M. bovis*.
- BCG Vaccine Statens Serum Institute (SSI) is the only licensed vaccine in the UK.
- The BCG vaccine does not contain thiomersal.
- The BCG vaccine must only be administered strictly intradermally by trained members of staff, normally into the lateral aspect of the left upper arm at the level of the insertion of the deltoid muscle.
- No further vaccines should be given in the same arm for a period of three months.
- It can be given at the same time as other live vaccines. If not possible then a four week interval is recommended before giving another live vaccine (excluding Rotarix).
- The dose of BCG SSI is;
 - 0.05ml for infants under 12 months
 - 0.1ml for children aged 12 months or older and adults

3.8.2 Contacts of a person with active TB

BCG vaccination should be offered to Mantoux (or interferon gamma release assay) -negative contacts of people with pulmonary and laryngeal TB if they are previously unvaccinated (without adequate documentation or a characteristic scar) and are;

- aged 35 years or younger or
- aged 36 and older and a healthcare or laboratory worker as outlined above.

3.8.3 Other Groups

Offer BCG vaccination to previously unvaccinated, Mantoux (or interferon gamma release assay) negative people aged 35 years or younger in the following groups at increased risk of exposure to TB in accordance with the Green Book;

- Veterinary staff and others such as abattoir workers who handle animal species known to be susceptible to TB, e.g. simians
- Prison staff working directly with prisoners
- Staff of care homes for older people

- Staff of homeless hostels or facilities accommodating refugees or asylum seekers
- People going to live or work with local people for more than 3 months in a high-incidence country.

3.8.4 Contraindications

The vaccine should not be given to:

- Those who have already had a previous BCG vaccination. Although protection may wane with time there is no evidence that repeat vaccination offers significant additional protection.
- Those with a previous history of TB
- Induration of 6mm or more on a Mantoux test.
- Confirmed anaphylactic reaction to any of the components of the vaccine
- Neonates (< 4 weeks) in a household where an active TB case is suspected or confirmed.
- People who are immunocompromised by virtue of disease or treatment (e.g. patients receiving corticosteroid or other immunosuppressive treatment, including general radiation. Inhaled steroids are not a contraindication.
- , those suffering from a with malignant condition such as leukaemia or lymphoma, Hodgkin's disease or other tumour of the reticuloendothelial system

BCG is contraindicated in symptomatic HIV positive individuals. In countries where the risk of TB is low, it is recommended that BCG is also withheld from all those known to be or suspected to be HIV positive, regardless of clinical status. Where vaccination is indicated, for example infants born to HIV-positive mothers, this can be administered after two appropriately timed negative postnatal PCR tests for HIV infection.

(Patients identified for BCG vaccination who are considered to be at high risk of HIV should be offered HIV testing before BCG vaccination).

People seeking vaccination for themselves or their children should be assessed for specific risk factors for TB. Those without risk factors should not be offered BCG vaccination but should be advised of the current policy and given written information.

3.8.5 Adverse reactions

Whilst local reactions are not uncommon, individuals with severe local reactions (ulceration > 1cm, caseous lesions, abscesses or drainage at the injection site) or with regional suppurative lymphadenitis with draining sinus should be referred to the chest physician/ respiratory paediatrician for investigation and management.

3.9 Treatment of Active and Latent TB

3.9.1 Active TB

Adult patients identified with active TB will be referred to the Respiratory Team and children to a Consultant Paediatrician at DGRI via SCI gateway.

Respiratory TB is defined as active TB that is affecting any of the following:

- Lungs
- Pleural cavity
- Mediastinal lymph nodes
- Larynx

3.9.2 Management of Respiratory TB

Time from diagnosis /Initiation of therapy	Assessment and Investigation	Treatment
Notification	Height & Weight CXR and 3 sputum samples (if not already done) U&Es, LFTs, FBC, CRP Visual acuity/colour vision (ophthalmology) Medication- interactions HIV test	Combination therapy Rifater (rifampicin, isoniazid & pyrazinamide) Dosage 3 tablets/day if < 40kg 4 tablets/day if 40-49kg 5 tablets/day if 50-64kg 6 tablets/day if > 65kg Plus Ethambutol 15mg/kg (post ophthalmology review) Pyridoxine 10mg/day if malnourished, alcoholic etc
2 weeks	Repeat LFTs	Check medication and adherence
2 months	Weight CXR CRP Check reference lab results for identification & sensitivities Sputum (if smear positive initially)	Change to continuation phase of therapy Rifinah (rifampicin & isoniazid) 150/100 x 3 if <50kg 300/150 x 2 if ≥50kg
4 months	Weight Review 2/12 sputum results if positive review compliance, sensitivities, CXR, CRP and repeat sputum	
6 months	Weight	
	Repeat CXR – no review required	If 6 month regimen stop treatment
	If sputum positive at 4/12 repeat sputum CRP, CXR- if clinically cured review 3/12	If poor clinical response consider retreatment/DOT
	Repeat CRP, CXR & sputum if positive at 4/12	If 9/12 regimen check therapy
9 months	Weight & CXR	If 9/12 regimen stop treatment
	If sputum positive at 6/12 check sensitivities etc and if clinically cured review after 3/12	If poor clinical response consider retreatment/DOT

The standard 6 month drug treatment for active TB as outlined above (blue shading) is used for all sites except the central nervous system (meningeal) and for patients of all ages including those who are HIV positive. For meningeal infection, the isoniazid and rifampicin is continued for 12 months.

Hepatotoxicity

- Modest elevations of ALT and AST are not uncommon in the pretreatment LFTs of TB patients
- Regular monitoring of LFTs is not required for those with no evidence of pre-existing liver disease and normal pre-treatment liver function. LFTs should be repeated and treatment stopped if fever, malaise, vomiting jaundice or unexplained deterioration.
- In patients with known chronic liver disease check LFTs weekly for 2 weeks and then 2 weekly for first 2 months
- If AST/ALT ≥ 2 x normal repeat weekly for 2 weeks, then 2 weekly until normal
- If AST/ALT elevated < 2 x normal repeat at 2 weeks. If falling only repeat if symptoms. If ≥ 2 x normal manage as above.

- If AST/ALT ≥ 5 x normal, or bilirubin rises stop rifampicin, isoniazid and pyrazinamide and discuss with Respiratory Team.

Certain groups of patients are known to be at high risk of defaulting from treatment regimes and in these cases there is a place for recommending Directly Observed Treatment (DOT). Such groups would include (although not exclusively) street or shelter dwelling homeless people and prisoners with active TB and those with a history of defaulting from treatment plans. A risk assessment should be undertaken for all patients commencing therapy for TB.

The Lead Respiratory Nurse for TB has an important role in ensuring compliance, individuals with TB are provided with their contact details in case of any issues. The Nurse facilitates education and involvement of the person with TB in achieving adherence.

Patients having completed a course of treatment for TB do not require long term follow up but will be advised to report symptoms consistent with relapse and will be provided with details of how to contact the Respiratory team rapidly.

3.9.3 Latent TB

Patients identified as having latent TB following a screening procedure should receive treatment under the care of the appropriate specialist as above.

Neonates all need assessment and treatment under the care of the specialist paediatrician.

All healthcare workers with latent TB should be considered for treatment regardless of age. Similarly all HIV positive patients should be considered for treatment of latent TB regardless of age. For all others, treatment is reserved for those up to the age of 35 due to the risks of increasing hepatotoxicity above this age.

Patients who refuse treatment for latent TB should be given 'inform and advise' information and have a follow up CXR at 3 and 12 months.

Patients with latent TB who are a contact with a smear positive MDR TB case are not routinely treated. This is due to a lack of evidence of the efficacy of treatment and the number of side effects of treatment. Each case will be assessed by the specialist before any decision is reached. If not treated they should have annual review for active TB for five years.

Certain groups with latent TB are at greater risk of conversion to active TB due to factors such as immunosuppression and intercurrent illness (e.g. HIV positive, IV drug users, transplant patients, patients with malignancy, renal failure, and diabetes, the very young and very old).

4 Policy Dissemination, Implementation and Monitoring

4.1 Dissemination and Implementation

This policy, once approved through the process defined below, will be placed on the intranet and on the Health Protection website. All key personnel involved in the diagnosis, management, nursing, contact tracing and surveillance of tuberculosis to whom this policy applies will be informed of the reviewed policy by e-mail. Document control procedures will apply and the intranet copy of the document will always be considered the definitive copy.

4.2 Monitoring, Audit, Review and Approval

The Infection Control Committee is responsible for monitoring of implementation and compliance with this policy. The policy will be reviewed as a minimum every two years. An audit will be conducted to ascertain implementation and compliance of different aspects of the service. The reviewer of the policy will take responsibility for conducting this audit. Any changes as a result of audit and review will be consulted on for a period of four weeks. Following audit, review and consultation the Infection Control Committee will approve any new versions of the policy prior to dissemination and implementation.

5 Risk Management

This policy has been risk assessed. The overarching risk is that an undiagnosed case of tuberculosis causes an outbreak among vulnerable individuals causing morbidity and even mortality. The likelihood of this is rare but consequences are major giving a risk rating of medium. A preventable outbreak may occur due lack of information from individuals who will not communicate for personal reasons. Control measures can be implemented under the Public Health etc. (Scotland) Act 2008.

6 Equality and Diversity

NHS Dumfries and Galloway are committed to equality and diversity in respect of the six equality groups defined by age, disability, gender, race, religion/belief and sexual orientation. A rapid impact assessment has been carried out on this policy. The issues identified were:

- Certain individuals are more at risk of tuberculosis than others i.e. those from high risk groups
- Provision of Negative Pressure rooms or Single rooms in D&G hospitals.
- Access to medical attention across the region.
- Provision of accessible information in alternative formats.
- Support required for those on treatment with difficult life circumstances.

7 Document Control Sheet

7.1 Document Status

Title	Policy on Tuberculosis: Guidance for its prevention and control in Dumfries and Galloway.
Author	Mary Waugh, Dr D. Breen, Dr S. Little , Dr C. Jamieson, Dr M. Connor, Helen Coles, Heather Aitchison, Sara Bartram
Approver	Infection Control Committee
Document reference	
Version number	3.0 Draft 1

7.2 Document Amendment History

Version	Section(s)	Reason for update
		Policy due for review and guidance from NHS National Services Scotland 2009.
V3 D1		Reviewed in line with current guidance and TB Action Plan for Scotland

7.3 Distribution

Name	Responsibility	Version number
TB MDT Infection Control Team, Microbiology, Occupational Health and Safety, , Consultant Physicians, General Practitioners, Prison Health Service, Maternity Department	Infection Control Committee	

7.4 Associated documents

Tuberculosis: Clinical diagnosis and management of tuberculosis, and measures for its prevention and control in Scotland. Health Protection network Scottish guidance Adapted from NICE guidelines for Scottish use. March 2009

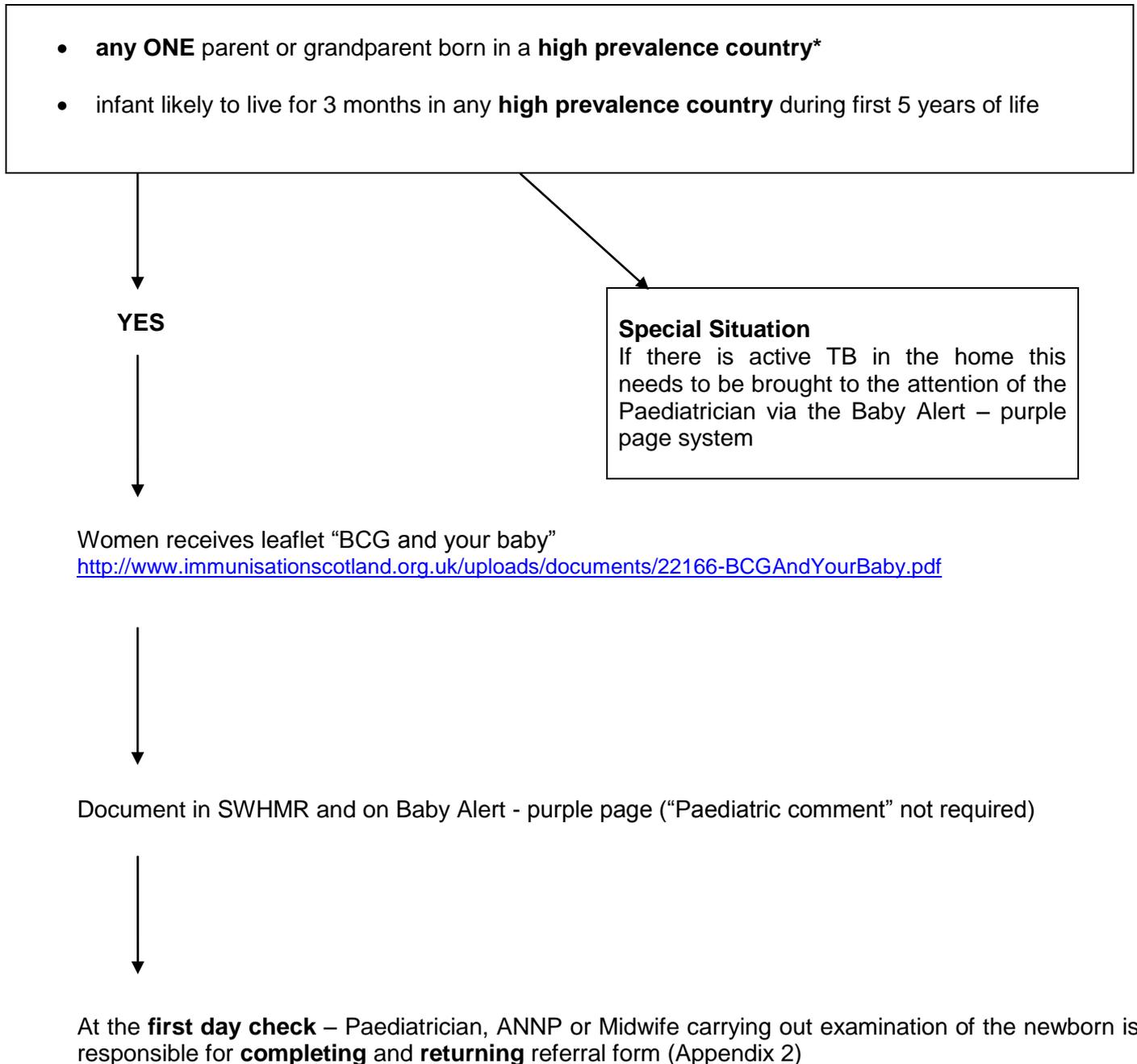
8 Action Plan for Implementation

Action	Lead Officer	Timeframe
Place on intranet		
Dissemination to Infection Control Team, Occupational Health and Safety, TB MDT, Consultant Physicians, General Practitioners, Prison Health Service, Maternity Department	TB MDT	September 2014
Use policy	All staff	

9 Appendices

9.1 Appendix 1: BCG Vaccination for neonates flowchart

Antenatal identification at “Booking” visit of :



*<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Tuberculosis/TBWorldwideSurveillanceData/>



BCG Neonate Referral form

Name.....

Address.....

Address.....

Postcode.....

Daytime Telephone no.....

D.O.B /CHI.....

G.P. Practice.....

Referred By..... Job Title.....Date.....

Recommendation for vaccine as per Immunisation against infectious diseases (Green Book)

Those infants born in local authority with a notification rate of > 40/100,000

With one or more parent or grandparent born in a high prevalence country*.

Going to live for more than three months in a country where the annual incidence of TB is 40/100,000 or greater.

If there has been a case of TB in the household in the last five years

Please complete and send to Health Protection Team, Directorate of Public Health and Strategic Planning, Ryan South, Crichton Hall, Bankend Road, Dumfries DG1 4 TG

Contact: Health Protection Team, for further information 01387 272724, Internal extension 32724.

Version 3. Review date 2016

* <http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Tuberculosis/TBWorldwideSurveillanceData/>

9.1.2 Appendix 1.2: BCG Referral Form



BCG Referral form

Name..... D.O.B.....

Address.....

Postcode.....

Daytime Telephone no.....

G.P.....

Referred By..... Job Title..... Date.....

Reason for BCG please circle

1. Neonates, children and adults at increased risk.....YES/NO
Those born in local authority with a notification rate of > 40/100,000
With one or more parent or grandparent born in a high prevalence country
2. New entrants from a high prevalence countryYES/NO
3. Contacts of people with active TBYES/NO
aged up to 65 years
4. Healthcare workers – **Refer to Occupational Health Service**
5. People in groups at increased risk of exposure - **Refer to Occupational Health Service**
 - veterinary and staff such as abattoir workers who handle animal species known to be susceptible to TB, e.g.simians
 - prison staff working directly with prisoners
 - staff of care homes for the elderly
 - staff of hostels for homeless people and facilities accommodating refugees and asylum seekers*unvaccinated, tuberculin negative individuals aged under 35 years in these occupations are recommended to receive BCG.*
6. Travellers previously unvaccinated, under 16 years old who are going to live or work for more than 3 months in a high prevalence country.....YES/NO

Referrals will be sent appointments at first available clinic. A mantoux test will be performed on children over 6 years at first appointment and read 48 hours later and then BCG will be given if required.

Please complete and send to Health Protection Team, Directorate of Public Health and Strategic Planning. Ryan South, Crichton Hall, Bankend Road, Dumfries DG1 4 TG

Contact: Immunisation Nurse, for further information 01387 272724, Internal extension 32724

9.2 Appendix 2 Screening for a new entrant from a high incidence country

Aide memoire for BCG and Tuberculosis New Patient Registration to General Practice

Purpose

To refer new entrants from high incidence countries to identify undiagnosed TB
Offer BCG to those unvaccinated who are eligible for the vaccine
To raise awareness of TB

It is important that all 3 questions are asked

1. New entrants to the UK

Were you born in a Country with a TB incidence over 40/100,000?

The list of countries can be accessed here http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733758290

If no, no further action required, consider offer of information leaflet in appropriate language
www.immunisationscotland.org.uk/documents/3933.aspx

If yes see question 1b

1b Did you have a clear chest X-ray before you left your home country or on arrival in the UK?

If yes consider offer of information leaflet in appropriate language (see link above)
If no refer to health protection team 01387 272724 or email dumf-uhb.hpt@nhs.net

2. New entrants and UK residents

Were you, any parent or grandparent born in a country with incidence over 40/100,000 or have you lived for a prolonged period (> than 3 months) in a country with an annual TB incidence of 40/100,000 or greater (see link above for list of countries)

If no No further action required, consider offer of information leaflet in appropriate language
www.immunisationscotland.org.uk/documents/3933.aspx

If yes see question 2b

2b Have you had a BCG

If yes consider offer of information leaflet in appropriate language (see link above)
If no **and** under 16 years of age **or** aged 16-35 years from sub-Saharan Africa or a country with a TB incidence of 500 per 100,000 or more refer to health protection team 01387 272724 or email dumf-uhb.hpt@nhs.net for Mantoux test and BCG clinic appointment

3. Do you have more than one of the following

- A persistent cough that is getting worse i.e. over weeks and months.
- Loss of weight
- Fever and heavy sweats at night
- A general and unusual sense of tiredness and being unwell
- Loss of appetite
- Coughing up blood

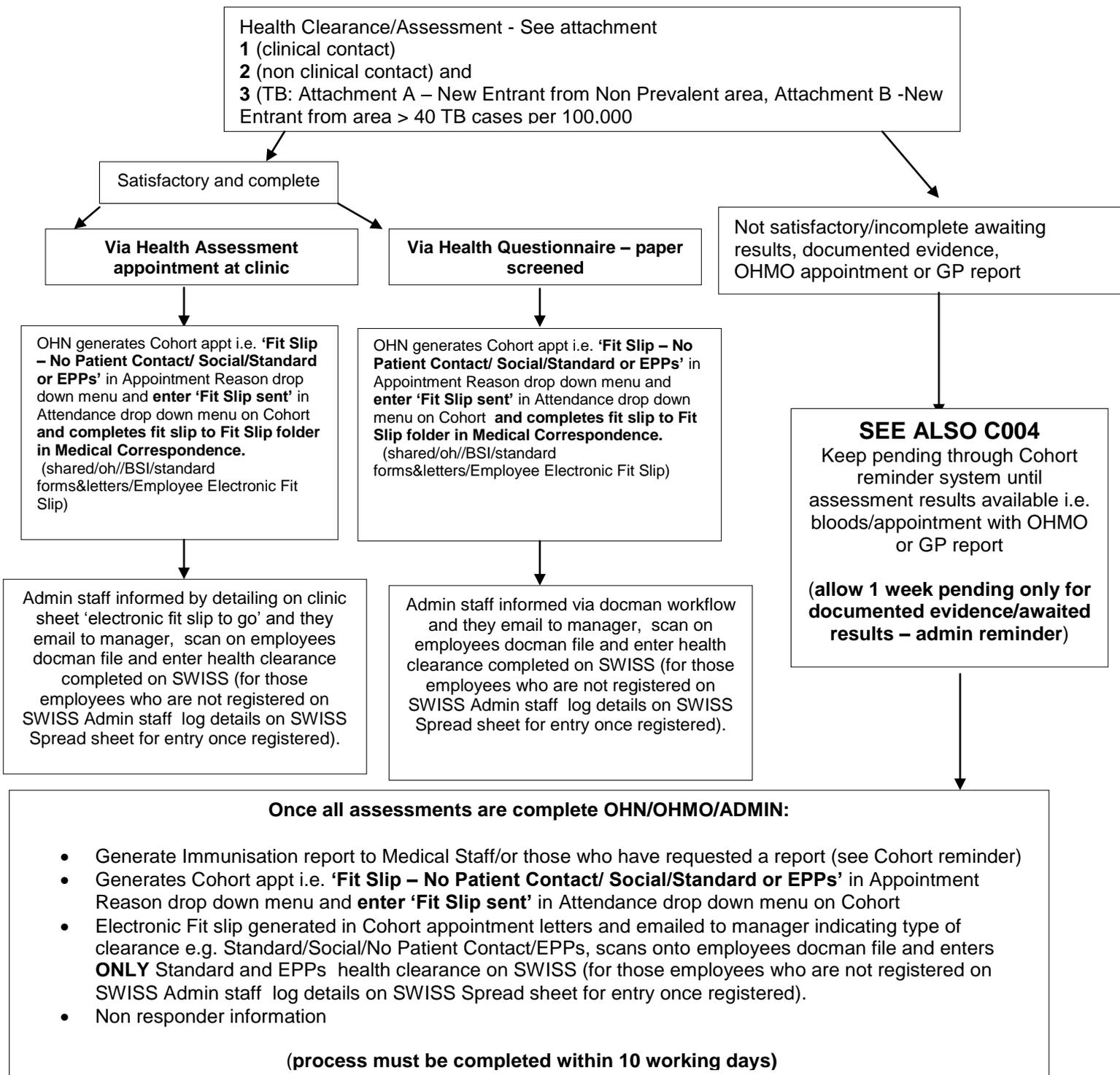
If **yes** refer to GP for assessment for possible referral to Respiratory Physician

Please note: Advise patient that TB treatment in the UK is free of charge and be aware that there is sometimes a stigma attached to the disease.

<http://pathways.nice.org.uk/pathways/tuberculosis#path=view%3A/pathways/tuberculosis/tuberculosis-in-high-risk-groups.xml&content=view-node%3Anodes-new-entrants-from-high-incidence-countries>

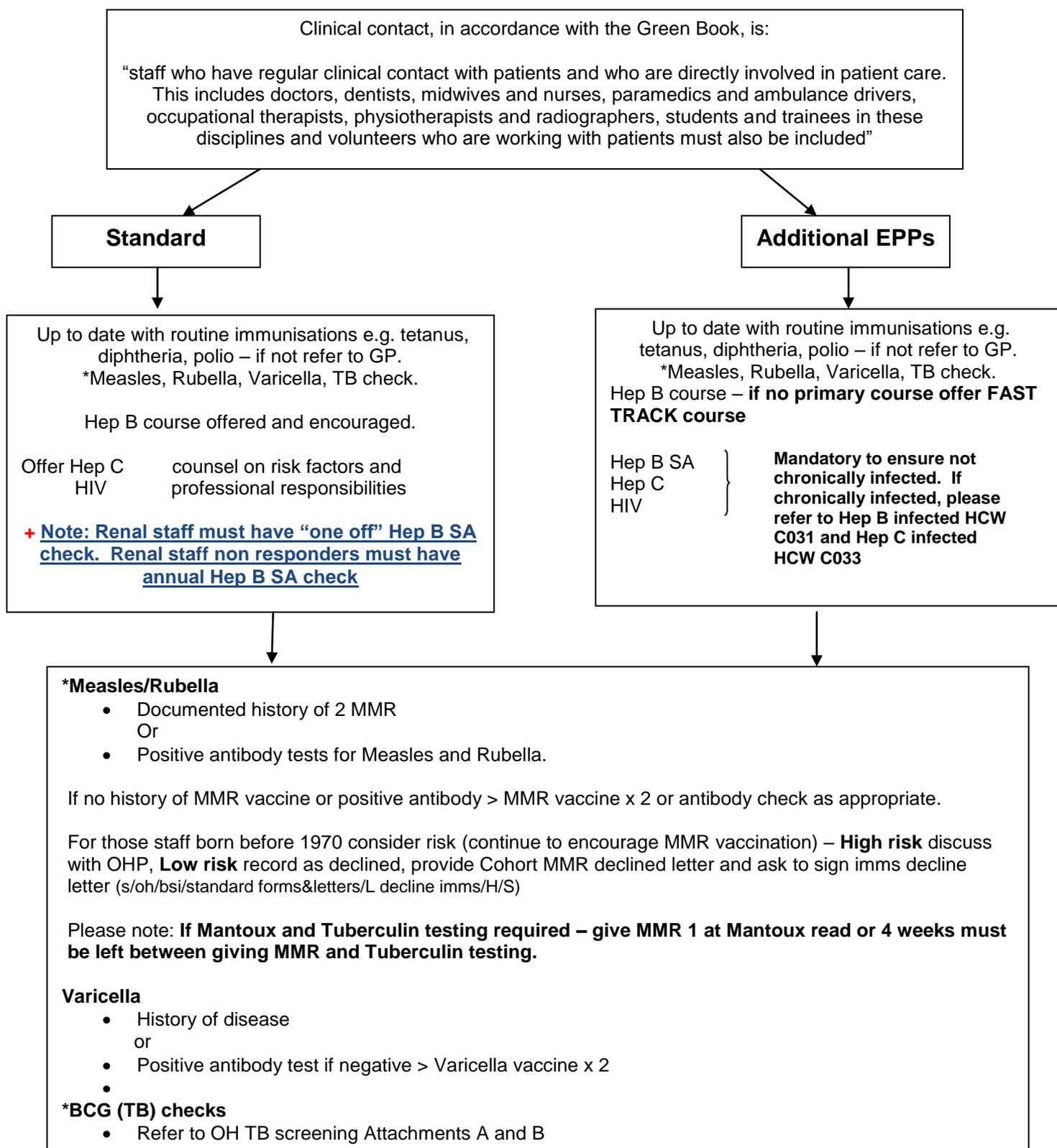
9.3 Appendix 3 Appointment for NHS HCW Fitness/Health Clearance

Refer to Health Clearance for TB, Hep B, Hep C and HIV Guidance (Scottish Government 2008) and the Green Book – Immunisation Against Infectious Disease (DoH 2006) on line version and Tuberculosis: NICE Guidelines 2016 ng33.



Title: Appointment for NHS HCW Fitness/Health Clearance
 No: C017+A027
 Process Owner: B Jardine
 Approved by: H Aitchison
 Rev: 13
 DoI: 21.07.15

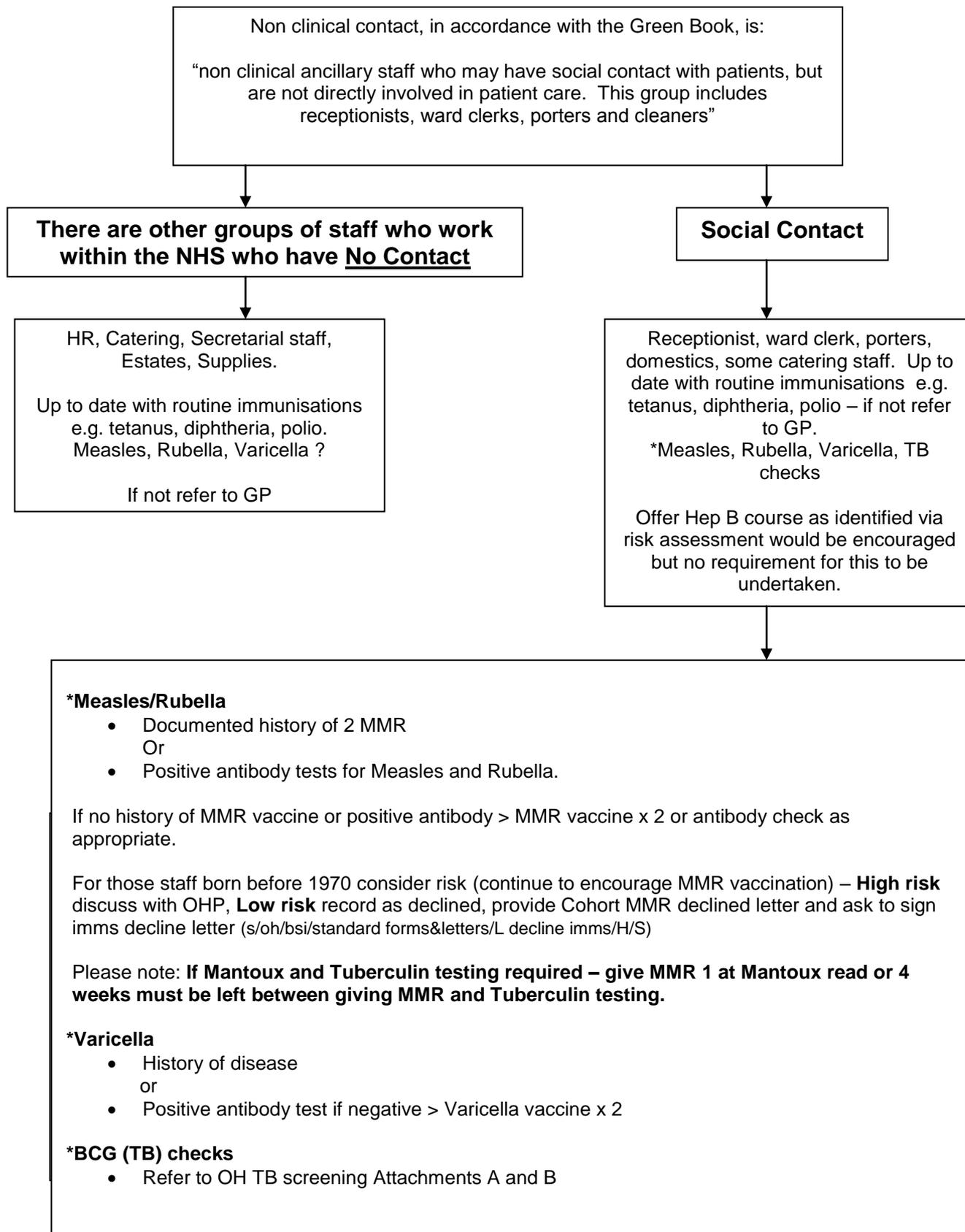
Health Clearance for New Health Care Workers – Clinical Contact



+ As per Renal Association guidance

Separate guidance is available for Laboratory staff and those staff who may work with raw sewage, i.e. plumbers, Estates staff.

Health Clearance for New Health Care Workers – Non Clinical Contact

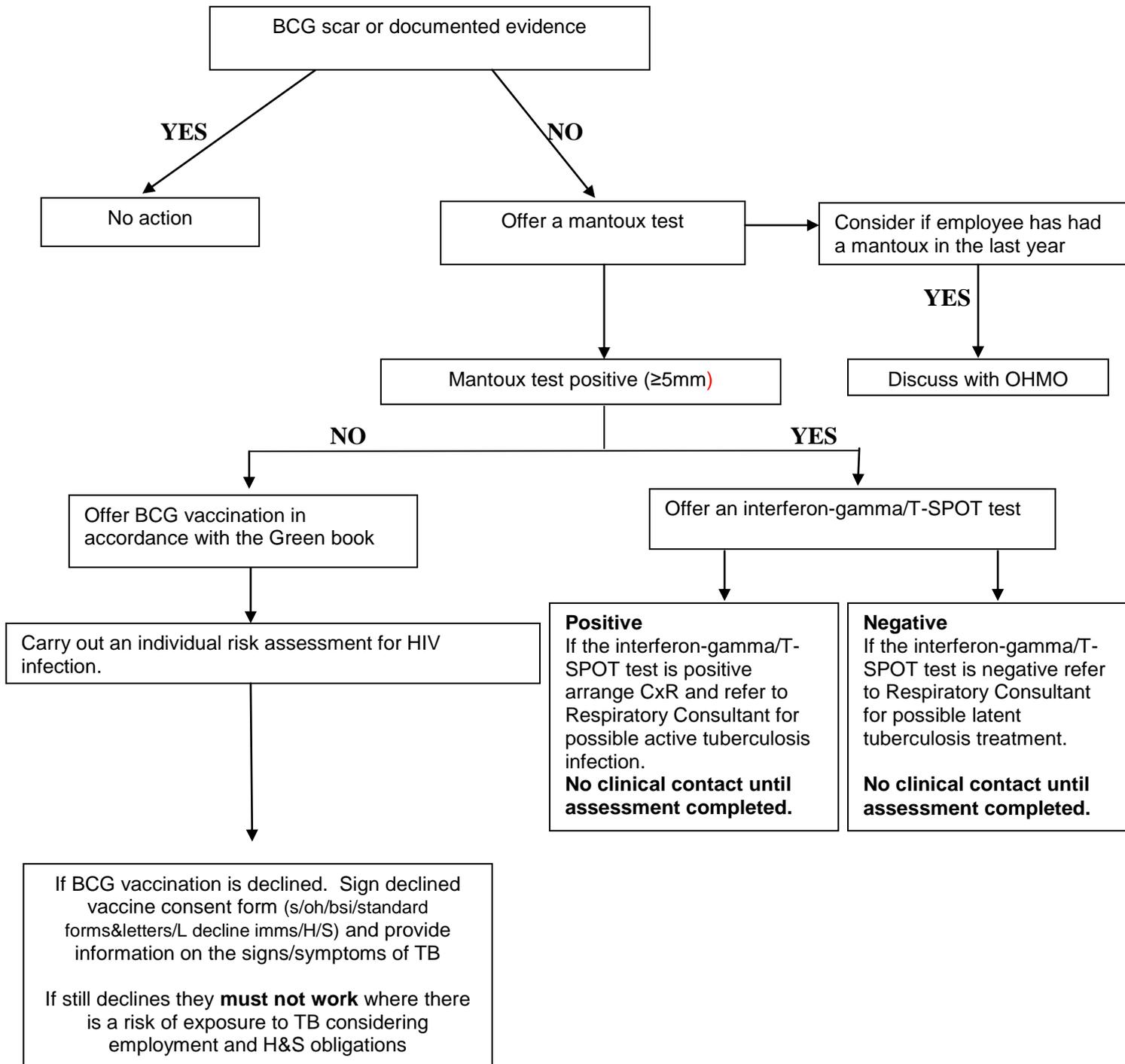


Separate guidance is available for Laboratory staff and those staff who may work with raw sewage i.e. plumbers, Estates staff

C017
Attachment 2

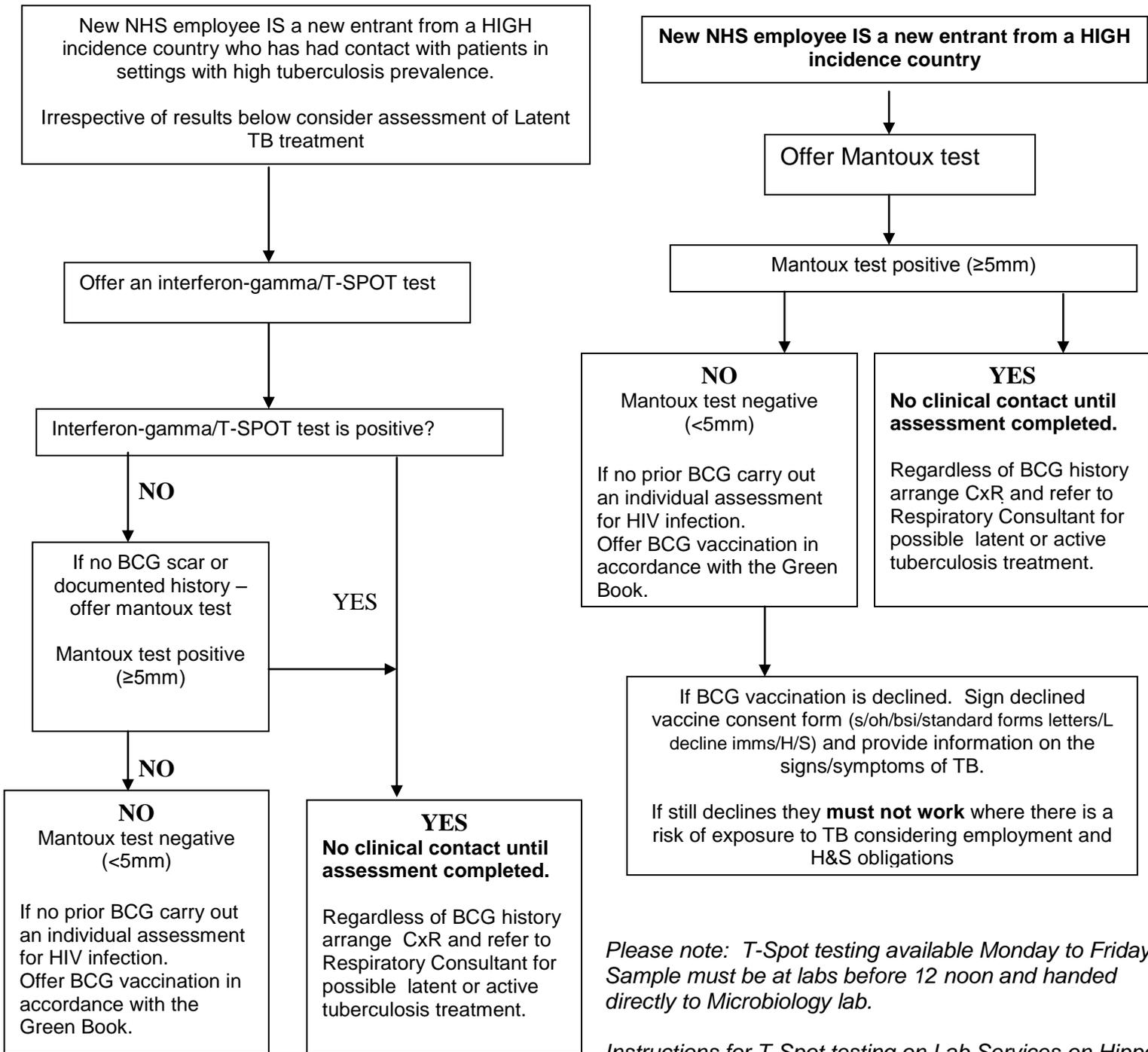
Occupational Health TB screening: new NHS employee who is not a new entrant from a high risk country and will have contact with patients or clinical specimens

If signs/symptoms of TB must not start work



Occupational Health TB screening - New Entrant (in last 5 years) from **area > 40 TB cases per 100,000 of the Population and will have contact with patients or clinical specimens**

If signs/symptoms of TB must not start work



Please note: T-Spot testing available Monday to Friday. Sample must be at labs before 12 noon and handed directly to Microbiology lab.

Instructions for T-Spot testing on Lab Services on Hippo

**C017
Attachment B**

Quick Reference on Health Clearance and Immunisation of NHS Staff

Please note: this is guidance only, each employee must have health clearance completed in accordance with the Health Clearance for TB, Hep B, Hep C and HIV Guidance (Scottish Government 2008), the Green Book – Immunisation Against Infectious Disease (DoH 2006, on line version), Tuberculosis: NICE Pathways and the appropriate OH Clinical work instruction.

Risk	Job	EPPs (IVS)	Diphth Check/ Vac.	Hep A	Hep B Vac.	Polio Vac.	MMR Check/ Vac.	Tetanus Vac.	Typhoid Vac.	TB Screen	BCG	Varicella Check/ Vac.	HIV Check	Hep C Check	Hep B SA Check
Clinical/patient and potential blood and body fluid contact	Physicians				✓		✓			✓	✓	✓			
	Surgeons	✓			✓		✓			✓	✓	✓	✓	✓	✓
	Dentists	✓			✓		✓			✓	✓	✓	✓	✓	✓
	Dental Hygienists/Therapists	✓			✓		✓			✓	✓	✓	✓	✓	✓
	Dental Nurses				✓		✓			✓	✓	✓			
	Nurses				✓		✓			✓	✓	✓			
	Midwives	✓			✓		✓			✓	✓	✓	✓	✓	✓
	AHPs (Radiography, Physio, OT, S & L, Podiatry)				✓		✓			✓	✓	✓			
	Porters				✓		✓			✓		✓			
	Domestics				✓		✓			✓		✓			
	All renal staff♦				✓		✓			✓	✓	✓			✓
	A&C in A&E – Ward Clerks				✓		✓			✓		✓			
	A&E Nurses	✓			✓		✓			✓	✓	✓	✓	✓	✓
	Theatre Nurses	✓			✓		✓			✓	✓	✓	✓	✓	✓
Paramedics	✓			✓		✓			✓	✓	✓	✓	✓	✓	
Ambulance Tech	✓			✓		✓			✓	✓	✓	✓	✓	✓	
Potential blood and body fluid contact	Microbiology/Pathology♦		✓		✓	✓*	✓	✓	✓	✓	✓	✓			
	Maintenance				✓		✓	✓		✓		✓			
	Gardening				✓			✓							
	CSSD				✓							✓			
	Sewage worker ♦			✓	✓		✓	✓				✓			
Non-clinical patient contact (no blood or body fluid)	Psychologist				✓		✓			✓		✓			
	Pharmacy						✓			✓		✓			
	Catering						✓**					✓			
	A&C with social patient contact						✓			✓		✓			

Please note: all NEW health care workers should be offered HIV and Hep C check

All staff offered flu vaccination

*** For those regularly handling faecal specimens**

♦ Separate guidance available in OH Clinical Work Instruction

• Hep B Surface Antigen one off check as per Renal Association Guideline

**** Some catering staff have patient social contact**