



Public Health  
England

Protecting and improving the nation's health

# **Latent TB infection testing and treatment programme**

## **Technical guidance and specification**

## About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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# Contents

About Public Health England	2
1. Background	4
1.1 Programme monitoring	4
1.2 Eligibility	4
1.3 Testing	5
1.4 Treatment	5
2. Aim of document	6
3. Data flow process	7
3.1 Testing data	7
3.2 Community/secondary care/treatment data collection	8
3.3 LTBI data excel template	8
3.4 Laboratory data	8
4. Data extract specification	9
4.1 Description	9
4.2 Time period	9
4.3 Frequency	9
4.4 Format	10
4.5 Submission	10
5. Data coding specification	11
5.1 LTBI data items (reduced from 61 to 35 fields from 1 April 2019)	11
5.2 LTBI data coding (Fields are mandatory for each type of data specified)	14
5.3 LTBI data extract excel file example (1 row of data)	16
6. Information governance	17
Appendix A: List of countries eligible for the LTBI programme	18
Appendix B: List of data variables	19
Appendix C: List of READ and SNOMED codes	20

# 1. Background

The national Latent TB Infection (LTBI) testing and treatment programme is 1 of 10 key activities in the NHS England/PHE Collaborative TB Strategy for England, 2015-20 that aims to reduce TB in England. It is likely that the majority of active TB cases in England are the result of 'reactivation' of LTBI, an asymptomatic phase of TB which can last for years. Over 70% of all notified TB cases in England are in non-UK born persons. The systematic identification and treatment of LTBI in migrants aged 16 to 35 years who recently arrived in England (ie in past 5 years) from countries with a high incidence of TB. is expected to substantially reduce the incidence of TB in England.

Testing is carried out in primary, community and secondary care depending on the model of implementation. In the primary care testing model, eligible patients are identified retrospectively or as they register with their GPs. GPs are expected to offer a blood-based, Interferon-Gamma Release Assay (IGRA) test and to refer those with positive results to community or secondary care based TB services for further assessment and treatment (Newham CCG is an exception – it refers patients with positive results to designated local pharmacies for treatment). In the community or secondary care based model, both testing and treatment of patients with a positive result are carried out in the same setting.

## 1.1 Programme monitoring

All services involved in the LTBI programme should submit activity returns to PHE and the data and information generated will be used to monitor the programme against the set audit outcomes below:

- LTBI testing and treatment programme coverage
- LTBI testing acceptance
- IGRA test performance and LTBI positivity
- LTBI treatment uptake
- LTBI treatment completion
- adverse events from LTBI treatment

## 1.2 Eligibility

All individuals who:

- were born or spent >6 months in a high incidence country ( $\geq 150$  per 100,000 or Sub-Saharan Africa (Appendix A) and
- entered the UK within the last 5 years and:

- are aged 16 to 35 years and
- have no history of TB (either treated or untreated) and
- have never been tested for LTBI in the UK

### 1.3 Testing

LTBI testing should be performed through a single IGRA blood test carried out in primary care, community or secondary care depending on local arrangements. For further information on LTBI testing please refer to the practical guide for commissioners and practitioners:

[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/442192/030615\\_LTBI\\_testing\\_and\\_treatment\\_for\\_migrants\\_1.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/442192/030615_LTBI_testing_and_treatment_for_migrants_1.pdf)

### 1.4 Treatment

LTBI test-positive persons will be assessed clinically, and if there are no contraindications, should be offered either 3 months of rifampicin and isoniazid combination therapy or 6 months of isoniazid monotherapy. Routinely, LTBI treatment is provided in community or secondary care based TB services. Local arrangements will determine to what extent LTBI positive test outcome work-up is carried out in primary care or community or secondary care respectively. For further information on treatment please refer to the practical guide for commissioners and practitioners:

[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/442192/030615\\_LTBI\\_testing\\_and\\_treatment\\_for\\_migrants\\_1.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/442192/030615_LTBI_testing_and_treatment_for_migrants_1.pdf)

## 2. Aim of document

To provide guidance and outline the specification for recording, extraction and submission of LTBI data from participating services. This document should be used in conjunction with the [LTBI templates user guide](#).

## 3. Data flow process

This document provides an overview of the programme data collection flows. Data for the national LTBI testing and treatment programme will be collected from GPs, community and secondary care based TB services and laboratories. All data is sent to PHE for monitoring and evaluation purposes.

### 3.1 Testing data

#### 3.1.1 GP practice data collection

GP practices are responsible for collecting and entering information on LTBI testing into their existing GP systems. LTBI testing data collection templates are available for EMIS Web, SystemOne and VISION users. GP practices that do not use these GP systems should enter patient data into the LTBI programme excel template. The LTBI templates can be accessed by contacting the national TB screening team or local CCG.

Important actions:

- ensure the appropriate LTBI programme template is installed on the GP system
- the LTBI programme testing template should be updated/completed at each LTBI testing consultation
- complete all relevant fields

#### 3.1.2 Data extraction

GP practice data will be extracted by individual GP practices or centrally by their usual commissioning data support centres (ie Commissioning Support Units (CSU) or clinical effectiveness groups (CEG)) using LTBI data extraction queries. Data extraction queries have been developed for EMIS Web, SystemOne and VISION. The data extraction includes data items included in the LTBI testing and treatment data set (see Appendix B for a full list of data variables). LTBI data extraction must be recorded and extracted in accordance with the list of READ and SNOMED codes provided by PHE for consistency (see Appendix C for list of READ and SNOMED codes).

Important action:

Please run the data extraction tool on your GP system on a monthly basis to extract LTBI data

### 3.2 Community/secondary care/treatment data collection

Most GP practices will refer patients with a positive IGRA test to local community or secondary care based TB services for further clinical assessment and treatment initiation with the exception of Newham CCG where positive LTBI tests are referred to a designated local pharmacy. TB services that record patient data using a database or an electronic patient management system, such as SystmOne, can use the same process as the GP practices (refer to section 3.1) to record LTBI data and, in turn, use the extraction tool to extract the data from their system for submission to PHE.

Important actions:

- endeavour to complete all mandatory fields in accordance with PHE data requirements set out in the LTBI data template
- update patient information cumulatively at every visit

### 3.3 LTBI data excel template

This template can be used by GP practices, community or secondary care providers without access to either the EMIS Web or SystmOne templates and community or secondary care TB services.

Important actions:

- the LTBI excel template can be requested by emailing: [tbscreening@phe.gov.uk](mailto:tbscreening@phe.gov.uk)
- input patient information and update cumulatively at every visit

### 3.4 Laboratory data

All laboratories carrying out IGRA testing as part of the LTBI testing and treatment programme are required to submit monthly data returns to PHE. A template highlighting the fields and format of this data requirement has been developed by PHE and is available upon request from the national TB screening team.

Important action:

- laboratories should submit all testing activity data to PHE in accordance with PHE data requirements set out in the LTBI laboratory data template
- the LTBI laboratory data excel template can be requested by emailing: [tbscreening@phe.gov.uk](mailto:tbscreening@phe.gov.uk)



## 4. Data extract specification

### 4.1 Description

A LTBI data extract should include all patients who are either invited/offered, tested and/or treated for LTBI. There should be 1 row of data for each patient. If a patient has an indeterminate result and is retested, the results of the second test should be reported under the retest variable.

Laboratory data shall include only patients who have had an IGRA test for LTBI as information on persons offered or invited is not available to laboratories.

All records included in the LTBI data extract should meet the criteria stated below:

Person has an IGRA invitation code OR  
Person has an IGRA test code OR  
Person has an IGRA result code OR  
Person has an IGRA test test type code OR  
Person has a LTBI diagnosis code OR  
Person has an IGRA consultation code OR  
Person has an IGRA referral code OR  
Person has a LTBI treatment code

### 4.2 Time period

The extract shall cover the period from when LTBI testing of patients started. Disaggregated data will be reported cumulatively to enable capturing of any changes in the patient's records.

Laboratory data will only include data for the preceding month.

### 4.3 Frequency

For efficient monitoring of LTBI testing and treatment programme activity, all data submissions should be made on a monthly basis. Data should be sent within 14 days of the month ending.

Important action:

CCGs should endeavour all data is submitted by all LTBI testing and treatment providers and laboratory providers to enable monitoring and continued funding of the programme.

#### 4.4 Format

The LTBI data extract comprises of 35 data items including laboratory data comprising 9 data items (mandatory items will depend on the type of data being submitted ie testing and/or treatment data or laboratory data) (See table 5.1). Data should be submitted in a comma delimited (CSV) file or excel workbook (XLSX) (see figure 5.3). Each submission should contain data for 1 reporting site if submitted by individual services but can contain data from multiple sites if it is reported by a CSU. The required coding and formatting of each data item are presented in table 5.2.

#### 4.5 Submission

Currently, all data submissions to PHE are made through CyberArk or a secure nhs.email: [phe.ltbidata@nhs.net](mailto:phe.ltbidata@nhs.net)

Important action:

Ensure access to CyberArk or access to nhs.net email.

## 5. Data coding specification

### 5.1 LTBI data items (reduced from 61 to 35 fields from 1 April 2019)

Data item <sup>1</sup>	Field Name	Field Description	Data Item Dependencies <sup>2</sup>	Source
1	GP code	Is the ORGANISATION CODE of the GP Practice that the PATIENT is registered with	-	Testing/treatment/laboratory
2	NHS number	Is a unique identifier for a PATIENT within the NHS in England and Wales	-	Testing/treatment/laboratory
3	Surname	Name which is used to describe family, clan, tribal group or marital association	-	Testing/treatment/laboratory
4	Forename	Is the forename or given name of a PERSON	-	Testing/treatment/laboratory
5	Gender	Is a PERSON's current gender	-	Testing/treatment/laboratory
6	Full postcode	Is the POSTCODE of the ADDRESS nominated by the PATIENT where the ADDRESS ASSOCIATION TYPE is 'Main Permanent Residence' or 'Other Permanent Residence'	-	Testing/treatment

Data item <sup>1</sup>	Field Name	Field Description	Data Item Dependencies <sup>2</sup>	Source
7	Date of birth	The date on which a PERSON was born or is officially deemed to have been born	-	Testing/treatment/laboratory
8	Country of birth	Is the COUNTRY where the PATIENT was born	-	Testing/treatment
9	Ethnicity	The ethnicity of a PERSON as specified by the PERSON	-	Testing/treatment
10	Date of UK entry	Date patient entered in the UK	-	Testing/treatment
11	Recent travel to high incidence country	Recent travel to high incidence country and lived there 6 months or more	8	Testing/treatment
12	Country of travel (high incidence)	Is the high incidence COUNTRY the patient travelled to and lived for 6 months or more	11	Testing/treatment
13	BCG vaccination	Record of being vaccinated for TB (using BCG)	-	Testing/treatment
14	Symptoms indicative of TB	Signs and symptoms of consistent with active TB diseases/Person has been diagnosed with active TB during consultation for LTBI	-	Testing
15	Previous active TB	If the patient has been diagnosed with TB previously	-	Testing
16	Previous latent TB	If the patient has been diagnosed with LTBI previously	-	Testing
17	Date of IGRA test first invitation	Date of IGRA test - 1st invitation	-	Testing
18	Date of IGRA test second invitation	Date of IGRA test - 2nd invitation	17	Testing
19	Date of IGRA test third invitation	Date of IGRA test - 3rd invitation	18	Testing

Data item <sup>1</sup>	Field Name	Field Description	Data Item Dependencies <sup>2</sup>	Source
20	Date IGRA test declined	Date IGRA test declined	-	Testing
21	LTBI test result	Result of the LTBI test	20	Testing/laboratory
22	LTBI test date	Date LTBI test was done	21	Testing/laboratory
23	LTBI retest result	Result of the LTBI re-test	21	Testing
24	LTBI retest date	Date LTBI test was re-done	23	Testing
25	Date of positive counselling	Date of positive counselling	20	Testing
26	Referral to treatment	Date patient referred to secondary care	20	Testing
27	Chest X-ray result	Chest X-ray details	-	Treatment
28	Chest X-ray result date	Date chest X-ray was done	-	Treatment
29	Assessed for active TB	Patient now being assessed for active TB	-	Treatment
30	LTBI treatment prescribed	Indicates the anti-TB treatment the patient is receiving	29	Treatment
31	LTBI treatment start date	Date treatment started	30	Treatment
32	LTBI treatment declined	Indicates if TB treatment refused by patient	30	Treatment
33	LTBI treatment completion date	Indicates date TB treatment was completed	31	Treatment
34	Reason LTBI treatment stopped	Indicates reason treatment stopped	33	Treatment
35	Adverse reaction to LTBI medication	Indicates adverse reaction to medication	33	Treatment

**Data definitions**

<sup>1</sup> Refers to the horizontal position of the field within excel document

<sup>2</sup> The answer to the current data item may be dependent upon the answer to a previous data item (the dependency is specified in brackets)

- Not applicable

## 5.2 LTBI data coding (Fields are mandatory for each type of data specified)

Data item <sup>1</sup>	Field Name	Data Type / Length <sup>3</sup>	Data Item Coding	Data Example <sup>4</sup>	Mandatory for testing data	Mandatory for treatment data	Mandatory for testing and treatment data	Mandatory for laboratory data
1	GP code	AN(6)	GP code	E83009	Mandatory	Mandatory	Mandatory	Mandatory
2	NHS number	AN(10)	NHS number	1234567892	Mandatory	Mandatory	Mandatory	Mandatory
3	Surname	Max AN(35)	Surname	Donald	Mandatory	Mandatory	Mandatory	Mandatory
4	Forename	Max AN(35)	Forename	Duck	Mandatory	Mandatory	Mandatory	Mandatory
5	Gender	Max AN(7)	Male/Female/Unknown	Male	Mandatory	Mandatory	Mandatory	Non mandatory
6	Full postcode	Max AN(8)	Full Postcode	N10 2JP	Mandatory	Mandatory	Mandatory	Not required
7	Date of birth	AN(10) DD/MM/CCYY	Date of Birth	01/01/1945	Mandatory	Mandatory	Mandatory	Mandatory
8	Country of birth	Max AN(25)	Read Code	XaLUe	Mandatory	Mandatory	Mandatory	Not required
9	Ethnicity	AN(2)	Read Code	9i65	Non mandatory	Non mandatory	Non mandatory	Not required
10	Date of UK entry	AN(10) DD/MM/CCYY	Date	01/01/2015	Mandatory	Mandatory	Mandatory	Not required
11	Recent travel to high incidence country	Max AN(25)	Y or N	Y	Mandatory*	Mandatory*	Mandatory*	Not required
12	Country of travel (high incidence)	Max AN(25)	Read Code	XaJR3	Mandatory*	Mandatory*	Mandatory*	Not required
13	BCG vaccination	Max AN(25)	Read Code	68Ni0	Non mandatory	Non mandatory	Non mandatory	Not required
14	Symptoms indicative of TB	Max AN(25)	Read Code	65V9.	Non mandatory	Non mandatory	Non mandatory	Not required
15	Previous active TB	Max AN(25)	Read Code	XaK3w	Non mandatory	Non mandatory	Non mandatory	Not required
16	Previous latent TB	Max AN(25)	Read Code	8BAD1	Non mandatory	Non mandatory	Non mandatory	Not required

Data item <sup>1</sup>	Field Name	Data Type / Length <sup>3</sup>	Data Item Coding	Data Example <sup>4</sup>	Mandatory for testing data	Mandatory for treatment data	Mandatory for testing and treatment data	Mandatory for laboratory data
17	Date of IGRA test first invitation	AN(10) DD/MM/CCYY	Date	01/01/2016	Mandatory	Non mandatory	Mandatory	Not required
18	Date of IGRA test second invitation	AN(10) DD/MM/CCYY	Date	01/01/2016	Non mandatory	Non mandatory	Non mandatory	Not required
19	Date of IGRA test third invitation	AN(10) DD/MM/CCYY	Date	01/01/2016	Non mandatory	Non mandatory	Non mandatory	Not required
20	Date IGRA test declined	AN(10) DD/MM/CCYY	Date	01/01/2016	Mandatory	Non mandatory	Mandatory	Not required
21	LTBI test result	Max AN(25)	Read Code	43bK	Mandatory*	Mandatory	Mandatory*	Mandatory
22	LTBI test date	AN(10) DD/MM/CCYY	Date	01/02/2016	Mandatory*	Mandatory	Mandatory*	Mandatory
23	LTBI retest result	Max AN(25)	Read Code	XaP9w	Mandatory*	Non mandatory	Mandatory*	Not required
24	LTBI retest date	AN(10) DD/MM/CCYY	Date	01/01/2016	Mandatory*	Non mandatory	Mandatory*	Not required
25	Date of positive counselling	AN(10) DD/MM/CCYY	Date	01/01/2016	Mandatory*	Non mandatory	Mandatory*	Not required
26	Referral to treatment	Max AN(25)	Date	01/01/2016	Mandatory*	Non mandatory	Mandatory*	Not required
27	Chest X-ray result	Max AN(25)	Read Code	XaX9l	Non mandatory	Non mandatory	Non mandatory	Not required
28	Chest X-ray result date	AN(10) DD/MM/CCYY	Date	01/02/2016	Non mandatory	Non mandatory	Non mandatory	Not required
29	Assessed for active TB	Max AN(25)	Read Code	ZV712	Non Mandatory	Mandatory	Mandatory	Not required
30	LTBI treatment prescribed	Max AN(25)	Read Code	ed62	Non mandatory	Mandatory*	Mandatory*	Not required
31	LTBI treatment start date	AN(10) DD/MM/CCYY	Date	01/01/2017	Non mandatory	Mandatory*	Mandatory*	Not required

Data item <sup>1</sup>	Field Name	Data Type / Length <sup>3</sup>	Data Item Coding	Data Example <sup>4</sup>	Mandatory for testing data	Mandatory for treatment data	Mandatory for testing and treatment data	Mandatory for laboratory data
32	LTBI treatment declined	Max AN(25)	Read Code	Y	Non mandatory	Non mandatory	Non mandatory	Not required
33	LTBI treatment completion date	AN(10) DD/MM/CCYY	Date	01/01/2016	Non mandatory	Non mandatory	Non mandatory	Not required
34	Reason LTBI treatment stopped	Max AN(25)	Read Code	1	Non mandatory	Non mandatory	Non mandatory	Not required
35	Adverse reaction to LTBI medication	Max AN(25)	Read Code	TJ063	Non mandatory	Non mandatory	Non mandatory	Not required

**Data definitions**

<sup>1</sup> Refers to the horizontal position of the field within the excel file

<sup>3</sup> AN = Alpha-numeric, N = Numeric, D=Date. Number in brackets denotes the string length. Code entries which are shorter than the string length should not include leading/trailing zeroes or spaces.

<sup>4</sup> Example field content included in figure 5.3

- Not applicable

Mandatory\* indicates that the field is mandatory if the dependent variable (as indicated in table 5.2) meets a validation condition eg LTBI test result would not be required if Date IGRA test declined was completed.

### 5.3 LTBI data extract excel file example (1 row of data)

GP code,NHS number,Surname,Forename,Gender,Full Postcode,Date of Birth,Country of birth, Ethnicity,Date of UK entry,Recent travel to high incidence country ,Country of travel (high incidence),BCG Vaccination,Symptoms indicative of TB,Previous active TB, Previous latent TB, Date of IGRA test first invitation,Date of IGRA test second invitation,Date of IGRA test third invitation,Date IGRA test declined,LTBI test result,LTBI test date,LTBI retest result,LTBI retest date,Date of positive counselling,Referral to treatment,Chest X-ray result,chest X-ray result date, Assessed for active TB ,Treatment prescribed,Treatment start date,Treatment declined,Treatment completion date,Reason treatment stopped,Adverse reaction to medication,E83009,1234567892,Donald,Duck,Male,N102JP,01/01/1945,XaLUe,9i65,01/01/2015,Y,XaJR3,68Ni0,N,XaK3w,8BAD1,01/01/2016,01/01/2016,01/01/2016,01/01/2016,43bK,01/02/2016,XaP9w,01/01/2016,01/01/2016,XaJeS,XaX9l,01/02/2016,Y,ed62.,01/01/2017,Y,01/01/2016,1,TJ063



## 6. Information governance

The national LTBI testing and treatment programme (SCCI2108) was presented to the Standardisation Committee for Care Information (SCCI) on 27 January 2016. The committee has accepted the item as a mandatory collection under Regulation 3 of the Health Service (Control of Patient Information) Regulation 2002 (as made under section 60 of the Health and Social Care Act 2001 and amended by section 251 of the NHS Act 2006). This collection was reviewed and renewed for a further year in March 2019 and can be found on the SCCI dashboard at: <https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/assurance-certificates>

This legislation provides for the common law duty of confidentiality to be set aside to allow confidential patient information collection without patient consent to be processed for purposes related to “communicable disease and other risks to public health”. The SCCI approval means that GPs and their practices will not be in breach of the common law duty of confidentiality when they share the requested LTBI data with PHE. They will still be responsible for complying with all other relevant data.

Patients can always opt out of the sharing their data by sending a letter to the address noted on the a patient information leaflet: [www.gov.uk/government/publications/latent-tb-infection-ltbi-testing-and-treatment](http://www.gov.uk/government/publications/latent-tb-infection-ltbi-testing-and-treatment)

## Appendix A: List of countries eligible for the LTBI programme

(Estimated TB incidence rate  $\geq 150$  per 100,000 population in 2013 or Sub-Saharan Africa)

Country	Incidence	Country	Incidence
Afghanistan	189	Madagascar	233
Angola	320	Malawi	156
Bangladesh	224	Mali	60
Benin	70	Marshall Islands	354
Bhutan	169	Mauritania	115
Botswana	414	Mauritius	21
Burkina Faso	54	Micronesia	188
Burundi	128	Mongolia	181
Cote d'Ivoire	170	Mozambique	552
Cabo Verde	143	Myanmar	373
Cambodia	400	Namibia	651
Cameroon	235	Nepal	156
Central African Republic	359	Niger	102
Chad	151	Nigeria	338
Comoros	34	Pakistan	275
Congo	382	Papua New Guinea	347
DRP Korea	429	Philippines	292
DR Congo	326	Republic of Moldova	159
Djibouti	619	Rwanda	69
Equatorial Guinea	144	Sao Tome and Principe	91
Eritrea	92	Senegal	136
Ethiopia	224	Seychelles	30
Gabon	423	Sierra Leone	313
Gambia	173	Somalia	285
Ghana	66	South Africa	860
Greenland	194	South Sudan	146
Guinea	177	Swaziland	1382
Guinea-Bissau	387	Thailand	172
Haiti	206	Timor-Leste	498
India	171	Togo	73
Indonesia	183	Tuvalu	228
Kenya	268	Uganda	166
Kiribati	497	Tanzania	164
Laos PDR	197	Zambia	410
Liberia	308	Zimbabwe	552
Lesotho	916		

## Appendix B: List of data variables

Data item	Field name in Extract
1	GP code
2	NHS number
3	Surname
4	Forename
5	Gender
6	Full postcode
7	Date of birth
8	Country of birth
9	Ethnicity
10	Date of UK entry
11	Recent travel to high incidence country
12	Country of travel (high incidence)
13	BCG vaccination
14	Symptoms indicative of TB
15	Previous active TB
16	Previous latent TB
17	Date of IGRA test first invitation
18	Date of IGRA test second invitation
19	Date of IGRA test third invitation
20	Date IGRA test declined
21	LTBI test result
22	LTBI test date
23	LTBI retest result
24	LTBI retest date
25	Date of positive counselling
26	Referral to treatment
27	Chest X-ray result
28	Chest X-ray result date
29	Assessed for active TB
30	LTBI treatment prescribed
31	LTBI treatment start date
32	LTBI treatment declined
33	LTBI treatment completion date
34	Reason LTBI treatment stopped
35	Adverse reaction to LTBI medication

## Appendix C: List of READ and SNOMED codes

Country name as written in English (*Denotes country of high incidence)	EMISWeb	S1 (Ctv3)	SNOMED CT
AFGHANISTAN*	13e0.	XaG2b	315365009
ÅLAND ISLANDS	13dx.	XabT6	920581000000102
ALBANIA	13d0.	XaG2c	315366005
ALGERIA	13g0.	XaG2d	315367001
AMERICAN SAMOA	13kB.	XabRz	919681000000102
ANDORRA	13d1.	XaG2e	315368006
ANGOLA*	13g1.	XaG2f	315369003
ANGUILLA	13t2.	XaQHT	503061000000107
ANTARCTICA	13kN.	XabSo	920331000000109
ANTIGUA AND BARBUDA	13j0.	XaG2g	315370002
ARGENTINA	13f0.	XaG2h	315372005
ARMENIA	13e1.	XaG2i	315373000
ARUBA	13jE.	XaXU5	768761000000104
AUSTRALIA	13h0.	XaG2j	315374006
AUSTRIA	13d2.	XaG2k	315375007
AZERBAIJAN	13d3.	XaG2l	315376008
BAHAMAS, THE	13j1.	XaG2m	315377004
BAHRAIN	13e2.	XaG2n	315378009
BANGLADESH*	13e3.	XaG2o	315379001
BARBADOS	13j2.	XaG2p	315380003
BELARUS	13dp.	XabRx	919641000000105
BELGIUM	13d4.	XaG2q	315381004
BELIZE	13f1.	XaG2r	315382006
BENIN*	13g2.	XaG2t	315384007
BERMUDA	13t1.	XaOvO	343021000000109
BHUTAN*	13e4.	XaG2u	315385008
BOLIVIA	13f2.	XaG2v	315386009
BONAIRE, SINT EUSTATIUS AND SABA	13jK.	XabSI	919711000000103
BOSNIA AND HERZEGOVINA	13d6.	XaG2w	315387000
BOTSWANA*	13g3.	XaG2x	315388005
BOUVET ISLAND			
BRAZIL	13f3.	XaG2y	315389002
BRITISH INDIAN OCEAN TERRITORY		XabSJ	919731000000106
BRITISH VIRGIN ISLANDS	13t3.	XabR3	919051000000101
BRUNEI	13e5.	XaG30	315391005
BULGARIA	13d7.	XaG31	315392003
BURKINA FASO*	13g4.	XaG32	315393008

Country name as written in English (*Denotes country of high incidence)	EMISWeb	S1 (Ctv3)	SNOMED CT
BURMA*	13e6.	XaG33	315394002
BURUNDI*	13g5.	XaG34	315395001
CAMBODIA*	13g6.	XaG35	315396000
CAMEROON*	13g7.	XaG36	315397009
CANADA	13f5.	XaG37	315398004
CAPE VERDE*	13g8.	XaG38	315399007
CAYMAN ISLANDS	13t9.	XabSK	919751000000104
CENTRAL AFRICAN REPUBLIC*	13g9.	XaG39	315400000
CHAD*	13gA.	XaG3A	315401001
CHILE	13f6.	XaG3C	315403003
CHINA	13e8.	XaG3D	315404009
CHRISTMAS ISLAND	13eq.	XabSO	919831000000100
COCOS (KEELING) ISLANDS	13er.	XabSP	919851000000107
COLUMBIA	13f7.	XaG3E	315405005
COMOROS ISLANDS*	13gB.	XaG3F	315406006
CONGO*	13gC.	XaG3G	315407002
COOK ISLANDS	13kE.	XabSQ	919871000000103
COSTA RICA	13f8.	XaG3H	315408007
CROATIA	13d8.	XaG3I	315409004
CUBA	13j3.	XaG3J	315410009
CURAÇAO	13jL.	Xaba7	923701000000106
CYPRUS	13d9.	XaG3K	315411008
CZECH REPUBLIC	13dA.	XaG3L	315412001
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA*	13e9.	XaG3M	315413006
DEMOCRATIC REPUBLIC OF CONGO*	13gq.	XaWzx	705023006
DENMARK	13dB.	XaG3N	315414000
DJIBOUTI*	13gD.	XaG3O	315415004
DOMINICA	13jD.	XaQHU	503091000000101
DOMINICAN REPUBLIC	13j4.	XaG3P	315416003
EAST TIMOR*	13eA.	XaG3Q	315417007
ECUADOR	13f9.	XaG3R	315418002
EGYPT	13gE.	XaG3S	315419005
EL SALVADOR	13fA.	XaG3T	315420004
ENGLAND	13dC.	XaG3U	315421000
EQUATORIAL GUINEA*	13gF.	XaG3V	315422007
ERITREA*	13gp.	XaLUe	205091000000107
ESTONIA	13dD.	XaG3W	315423002
ETHIOPIA*	13gG.	XaG3X	315424008
FALKLAND ISLANDS	13t7.	XabRH	919321000000108
FAROE ISLANDS	13du.	XabT3	920521000000103
FEDERATED STATES OF MICRONESIA*	13kG.	XabSW	919991000000105
FIJI	13k0.	XaG3Y	315425009
FINLAND	13dE.	XaG3Z	315426005

Country name as written in English (*Denotes country of high incidence)	EMISWeb	S1 (Ctv3)	SNOMED CT
FRANCE	13dF.	XaG3a	315427001
FRENCH GUIANA	13v4.	XabRG	919301000000104
FRENCH POLYNESIA	13v3.	XabRF	919281000000100
FRENCH SOUTHERN TERRITORIES	13v5.	XabSL	919771000000108
GABON*	13gH.	XaG3b	315428006
GAMBIA*	13gl.	XaG3c	315429003
GEORGIA	13eB.	XaG3d	315430008
GERMANY	13dG.	XaG3e	315431007
GHANA*	13gj.	XaG3f	315432000
GIBRALTAR			
GREECE	13dH.	XaG3g	315433005
GREENLAND	13dv.	XabT4	920541000000105
GRENADA	13fB.	XaG3h	315434004
GUADELOUPE	13v7.	XabSR	919891000000104
GUAM	13kF.	XabSS	919911000000101
GUATEMALA	13fC.	XaG3i	919911000000101
GUINEA BISSAU*	13gK.	XaG3j	315436002
GUINEA REPUBLIC*	13gL.	XaG3k	315437006
GUYANA	13fD.	XaG3l	315438001
HAITI*	13j5.	XaG3m	315439009
HEARD ISLAND AND MCDONALD ISLANDS			
HONDURAS	13fE.	XaG3n	315440006
HONG KONG (SPECIAL ADMINISTRATIVE REGION OF CHIINA	13eC.	XaG3o	315441005
HUNGARY	13dl.	XaG3p	315442003
ICELAND	13dJ.	XaG3q	315443008
INDIA*	13eD.	XaG3r	315444002
INDONESIA*	13eE.	XaG3s	315445001
IRAN	13eF.	XaG3t	315446000
IRAQ	13eG.	XaG3u	315447009
IRELAND	13dK.	XaG3v	315448004
ISLE OF MAN	13dt.	XabSV	919971000000106
ISRAEL	13eH.	XaG3w	315449007
ITALY	13dL.	XaG3x	315450007
IVORY COAST*	13gM.	XaG3y	315451006
JAMAICA	13j6.	XaG3z	315452004
JAPAN	13el.	XaG40	315453009
JORDAN	13eJ.	XaG41	315454003
KAZAKHSTAN	13eK.	XaG42	315455002
KENYA*	13gN.	XaG43	315456001
KIRIBATI*	13k1.	XaG44	315457005
KOREA (NORTH)*	13eU.	XaG4c	315492002
KOREA (SOUTH)	13ee.	XaG59	315525006

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KOSOVO	13dM.	XaG45	315458000
KUWAIT	13eL.	XaG46	315459008
KYRGYZSTAN	13eM.	XaG47	315460003
LAOS*	13eN.	XaG48	315461004
LATVIA	13dN.	XaG49	315462006
LEBANON	13eO.	XaG4A	315463001
LESOTHO*	13gO.	XaG4B	315464007
LIBERIA*	13gP.	XaG4C	315465008
LIBYA	13gQ.	XaG4D	315466009
LIECHTENSTEIN	13dO.	XaG4E	315467000
LITHUANIA	13dP.	XaG4F	315468005
LUXEMBOURG	13dQ.	XaG4G	315469002
MACAO (SPECIAL ADMINISTRATIVE REGION OF CHIINA)	13es.	XabTF	920761000000100
MACEDONIA	13dm.	XaOhB	341651000000107
MADAGASCAR*	13gR.	XaG4H	315470001
MALAWI*	13gS.	XaG4I	315471002
MALAYSIA	13eP.	XaG4J	315473004
MALDIVES	13eQ.	XaG4K	315474005
MALI*	13eR.	XaG4L	315475006
MALTA	13dR.	XaG4M	315476007
MARSHALL ISLANDS*	13kH.	XabSX	920011000000104
MARTINIQUE	13v0.	XaP6j	345801000000108
MAURITANIA*	13gT.	XaG4N	315477003
MAURITIUS*	13gU.	XaG4O	315478008
MAYOTTE	13v6.	XabSM	919791000000107
MEXICO	13fF.	XaG4P	315479000
MICRONESIA	13kG.	XabSW	919991000000105
MONACO	13dT.	XaG4R	315481003
MONGOLIA*	13eS.	XaG4S	315482005
MONTENEGRO	13do.	XaZqR	858651000000103
MONTSERRAT	13t0.	XaOvN	342991000000104
MOROCCO	13gV.	XaG4T	315483000
MOZAMBIQUE*	13gW.	XaG4U	315484006
NAMIBIA*	13gX.	XaG4V	315485007
NAURU	13k2.	XaG4W	315486008
NEPAL*	13eT.	XaG4X	315487004
NETHERLANDS	13dh.	XaG5Q	315542000
NEW CALEDONIA	13v9.	XabTH	920801000000105
NEW ZEALAND	13h1.	XaG4Y	315488009
NICARAGUA	13fG.	XaG4Z	315489001
NIGER*	13gY.	XaG4a	315490005
NIGERIA*	13gZ.	XaG4b	315491009
NIUE	13kJ.	XabSY	920031000000107

Country name as written in English (*Denotes country of high incidence)	EMISWeb	S1 (Ctv3)	SNOMED CT
NORFOLK ISLAND	13kK.	XabSZ	920051000000100
NORTHERN IRELAND	13dU.	XaG4d	315493007
NORTHERN MARIANA ISLANDS	13kL.	XabSa	920071000000109
NORWAY	13dV.	XaG4e	315494001
OCCUPIED PALESTINIAN TERRITORIES	13eX.	XaG4h	315497008
OMAN	13eV.	XaG4f	315495000
PAKISTAN*	13eW.	XaG4g	315496004
PALAU	13kM.	XabSb	920091000000108
PANAMA	13fH.	XaG4i	315498003
PAPUA NEW GUINEA*	13k3.	XaG4j	315499006
PARAGUAY	13fI.	XaG4k	315500002
PERU	13fJ.	XaG4l	315501003
PHILIPPINES*	13eY.	XaG4m	315502005
PITCAIRN, HENDERSON, DUCIE AND OENO ISLANDS	13tA.	XabSN	919811000000108
POLAND	13dW.	XaG4n	315503000
PORTUGAL	13dX.	XaG4o	315504006
PUERTO RICO	13j7.	XaG4p	315505007
QATAR	13eZ.	XaG4q	315506008
REPUBLIC OF MOLDOVA*	13dq.	XabRy	919661000000106
RÉUNION	13v8.	XabT7	920601000000106
ROMANIA	9T4..	XaG4t	315509001
RUSSIA	13eb.	XaG4u	315510006
RWANDA*	13ga.	XaG4v	315511005
SAINT MARTIN (FRENCH PART)	13jJ.	XabRB	919201000000105
SAMOA	13kA.	XabQh	918951000000105
SAN MARINO	13da.	XaG4w	315512003
SAO TOME AND PRINCIPE*	13gb.	XaG4x	315513008
SAUDI ARABIA	13ec.	XaG4y	315514002
SCOTLAND	13db.	XaG4z	315515001
SENEGAL*	13gc.	XaG50	315516000
SERBIA	13dn.	XaRCA	735204006
SEYCHELLES*	13k4.	XaG51	315517009
SIERRA LEONE*	13gd.	XaG52	315518004
SINGAPORE	13ed.	XaG53	315519007
SINT MAARTEN (DUTCH PART)	13jH.	XabRA	919181000000106
SLOVAKIA	13dc.	XaG54	315520001
SLOVENIA	13dd.	XaG55	315521002
SOLOMON ISLANDS	13k5.	XaG56	315522009
SOMALIA*	13ge.	XaG57	315523004
SOUTH AFRICA*	13gf.	XaG58	315524005
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	13t6.	XabRE	919261000000109
SOUTH SUDAN*	13gg.	XaG5F	
SPAIN	13de.	XaG5A	315526007



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SRI LANKA	13ef.	XaG5B	315527003
ST HELENA, ASCENSION AND TRISTAN DA CUNHA	13t5.	XabRD	919241000000108
ST LUCIA	13j9.	XaG5D	315529000
ST PIERRE AND MIQUELON	13v1.	XabRC	919221000000101
ST VINCENT AND THE GRENADINES	13jG.	XabR4	919071000000105
SUDAN	13gg.	XaG5F	315531009
SURINAM	13fK.	XaG5G	315532002
SVALBARD AND JAN MAYEN	13dw.	XabT5	920561000000106
SWAZILAND*	13gh.	XaG5H	315533007
SWEDEN	13df.	XaG5I	315534001
SWITZERLAND	13dg.	XaG5J	315535000
SYRIA	13eg.	XaG5K	315536004
TAIWAN	13eh.	XaG5L	315537008
TAJKISTAN	13ei.	XaG5M	315538003
TANZANIA*	13gi.	XaG5N	315539006
THAILAND*	13ej.	XaG5O	315540008
THE GAMBIA*	13gj.	XaG5P	315429003
TOGO*	13jB.	XaG5R	315543005
TOKELAU	13kD.	XabR7	919121000000105
TONGA	13k6.	XaG5S	315544004
TRINIDAD AND TOBAGO	13jC.	XaG5T	315545003
TUNISIA	13gk.	XaG5U	315546002
TURKEY	13ek.	XaG5V	315547006
TURKMENISTAN	13el.	XaG5W	315548001
TURKS AND CAICOS ISLANDS	13t4.	XabR9	919161000000102
TUVALU*	13k7.	XaG5X	315549009
UGANDA*	13gl.	XaG5Z	315551008
UKRAINE	13di.	XaG5a	315552001
UNITED ARAB EMIRATES	13em.	XaG5b	315553006
UNITED STATES	13fL.	XaG5Y	315550009
UNITED STATES MINOR OUTLYING ISLANDS	13kC.	XabR6	919101000000101
UNITED STATES VIRGIN ISLANDS	13jF.	XabR3	918991000000102
URUGUAY	13fM.	XaG5c	315554000
UZBEKISTAN	13en.	XaG5d	315555004
VANUATU	13k8.	XaG5e	315556003
VATICAN CITY	13dj.	XaG5f	315557007
VENEZUELA	13fN.	XaG5g	315558002
VIETNAM*	13eo.	XaG5h	315559005
WALES	13dk.	XaG5i	315560000
WALLIS AND FUTUNA	13v2.	XabQz	918971000000101
WESTERN SAHARA	13gr.	XabTG	920781000000109
YEMEN	13ep.	XaI8P	315590007
ZAMBIA*	13gn.	XaG5n	315564009

Country name as written in English (*Denotes country of high incidence)	EMISWeb	S1 (Ctv3)	SNOMED CT
ZIMBABWE*	13go.	XaG5o	315565005

Entry to UK	EMISWeb	S1 (Ctv3)	SNOMED CT
Date of entry to UK	1L5..	1L5..	860021000000109

Ethnicity	EMISWeb	S1 (Ctv3)	SNOMED CT
<b>White</b>			
White British	9i00.	XaQEa	92391000000108
Irish	9i1..%	XaJQw%	92401000000106
Any other White background	9i2..%	XaJQx%	92411000000108
<b>Mixed</b>			
White and Black Caribbean	9i3..	XaJQy	92421000000102
White and Black African	9i4..	XaJQz	92431000000100
White and Asian	9i5..	XaJR0	92441000000109
Any other mixed background	9i6..%	XaJR1%	92451000000107
<b>Asian or Asian British</b>			
Indian	9i7..	XaJR2	110751000000108
Pakistani	9i8..	XaJR3	92461000000105
Bangladeshi	9i9..	XaJR4	92471000000103
Any other Asian background	9iA..%	XaJR5%	92481000000101
<b>Black or Black British</b>			
Caribbean	9iB..	XaJR6	107691000000105
African	9iC..	XaJR7	92491000000104
Any other Black background	9iD..%	XaJR8%	92501000000105
<b>Other Ethnic Groups</b>			
Chinese	9iE..	XaJR9	92511000000107
Any other ethnic group	9iF..%	XaJRA%	92521000000101
<b>Unknown ethnicity</b>			
Unknown	9i6E.	XaLN0	202171000000101
Not stated	9iG..	XaJRB	92531000000104

BCG vaccination	EMISWeb	S1 (Ctv3)	SNOMED CT
Unknown/No BCG vaccination	68Ni0	XaR72	520351000000108
BCG Scar	2FG6.	XaKaC	416745009
BCG vaccination	653..	653..	42284007
Booster BCG vaccination		XaLK7	201421000000100
<b>Signs and symptoms of active TB indicating active TB diagnosis</b>	<b>EMISWeb</b>	<b>S1 (Ctv3)</b>	<b>SNOMED CT</b>
TB - tuberculosis notification	65V9.	65V9.	170525009

Previous active TB	EMISWeb	S1 (Ctv3)	SNOMED CT
H/O: tuberculosis	1411.	1411.	161414005
H/O: tuberculosis drug therapy	14P9.	XaQk2	473151000

Previous active TB	EMISWeb	S1 (Ctv3)	SNOMED CT
Notification of tuberculosis	65V9.	65V9.	170525009
Tuberculosis status	65Y..%	XaK3w%	415760001
Tuberculosis index case	65Y0.	XaK3x	415759006
Tuberculosis	A1...%	A1...%	56717001
Late effects of tuberculosis	AE0..%	AE0..%	187251001
[X]Tuberculosis	Ayu1.%	A1...%	56717001
[X]Sequelae of CNS TB	AyuJ0	AE01.	187253003
[X]Sequelae/genitourinary TB	AyuJ1	AE02.	187254009
[X]Sequelae/TB/bones + joints	AyuJ2	AE03.	187255005
[X]Sequelae/TB/other organs	AyuJ3	AE04.	187251001
[X]Sequelae/resp+unspecifd TB	AyuJ4	AyuJ4%	187252008
Meningitis - tuberculous	F004.	F004.%	58437007
Encephalitis-tuberculous	F0333	F0333	91483004
Intracranial abscess-tuberculous	F0406	F0406%	192745001
Intraspinal abscess-tuberculous	F0413	F0413	416903004
Keratitis due to tuberculous	F4A55	F4A55	193787009
Acute pericarditis- tuberculous	G5003	G5003	194908003
Acute myocarditis - tuberculous	G5206	G5206	194949003
Pneumoconiosis associated/TB	H450.	H450.	196017002
Peritonitis - tuberculous	J5502	A140.	44572005
Cardituberculous cirrhosis	J615E	J615E	
[X]TB disordr/intestn+mesentry	Jyu93	Jyu93	
Cystitis + tuberculosis	K1548	K1548	32268008
Prostatitis + tuberculosis	K2143	K2143	20372007
Female tuberculosis pelvic inflammatory disease	K43..	K43..	198241002
Pregnancy + tuberculosis	L173.%	L173.%	267317007
Previous latent TB	EMISWeb	S1 (Ctv3)	SNOMED CT
Latent tuberculosis	65Y9.	XSCGJ	11999007
LTBI Test results	EMISWeb	S1 (Ctv3)	SNOMED CT
IGRA Positive	43bL.	XaP9w	440662009
IGRA Negative	43bK.	XaP9u	440661002
IGRA Indeterminate	43bJ.	XaP9r	439996009
Mantoux Positive	3325.	XE10w	268376005
Mantoux Negative	3323.	XE10v	268375009
IGRA consultation	EMISWeb	S1 (Ctv3)	SNOMED CT
Positive IGRA counselling consultation	745Fz	XaMGc%	235471000000107
Referral to treatment	EMISWeb	S1 (Ctv3)	SNOMED CT
Referral to respiratory specialist nurse	8HHJ.	XaJeS	413087007
Referred to chest physician	8H4C.	8H4C.	183527006
Referral to respiratory rapid response team		XaIOU	390797002
Referral to respiratory medicine service		XaAcS	306114008
Chest X-ray result	EMISWeb	S1 (Ctv3)	SNOMED CT
Tuberculosis screening chest X-ray- normal	68311	XaX9m	707308007
Tuberculosis screening chest X-ray -abnormal	68310	XaX9l	707307002

Previous active TB	EMISWeb	S1 (Ctv3)	SNOMED CT
Standard chest X-ray – abnormal	5353.	5353.	168734001
Assessed for active TB	EMISWeb	S1 (Ctv3)	SNOMED CT
Examination for suspected tuberculosis	69A3.	69A3.	171400006
[V]Observation for suspected tuberculosis	ZV712	ZV712	1087701000000104

Treatment prescribed	EMISWeb	S1 (Ctv3)	SNOMED CT
3m Rifinah	ed6f.	ed6f.	10713001000001101
6m Isoniazid	ed4..%	ed4..%	81335000
4m Rifampicin	ed62.	ed62.%	324480006
Isoniazid and Rifampicin	ed6p.	ed6p.%	324501005
Reason treatment stopped	EMISWeb	S1 (Ctv3)	SNOMED CT
Lost			
Refused			443390004
Adverse event			
Active TB			
Died	22J..	XM01Y	419099009
Pregnant		621..	77386006
Unknown			261665006
Adverse reaction to medication	EMISWeb	S1 (Ctv3)	SNOMED CT
Adverse reaction to LTBI treatment	U6011	Xa5Vg%	293072005
Adverse reaction to Isoniazid	TJ182	TJ182	293078009
Adverse reaction to Rifampicin	TJ063	TJ063	293075007
Rifamycins causing adverse effects in therapeutic use	U6006	U6006	