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England

Update on national LTBI programme and examples of good practice from elsewhere

Dr Dominik Zenner



- Why should we bother?
- How do we do it?
- What about the blood tests?
- And what about the money?
- Can we make it work?
- How do we know it works?
- What's the progress?

UNITE TO
→ END
TB

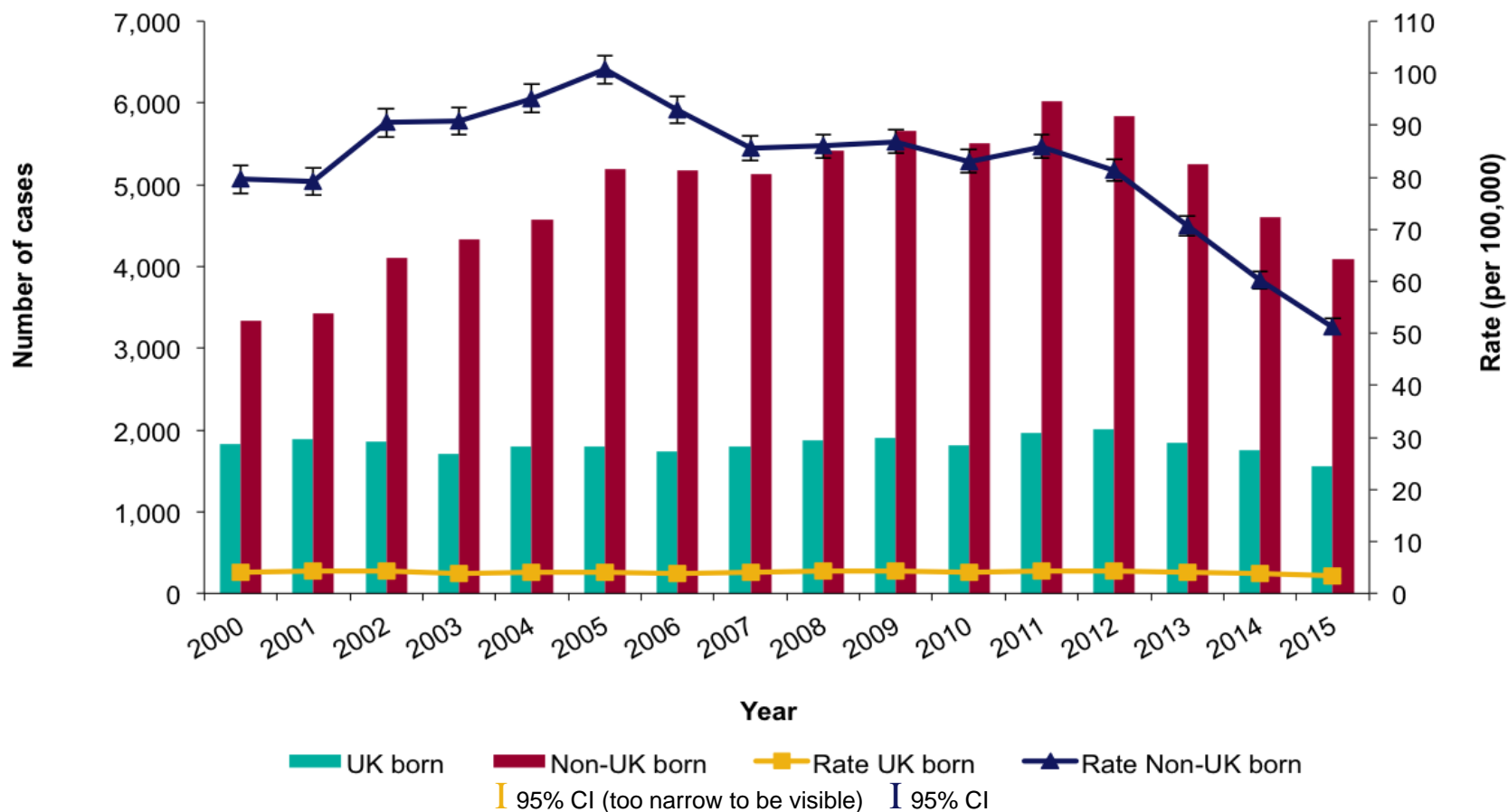


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Why should we bother?



Incidence and cases in England 2000-2015

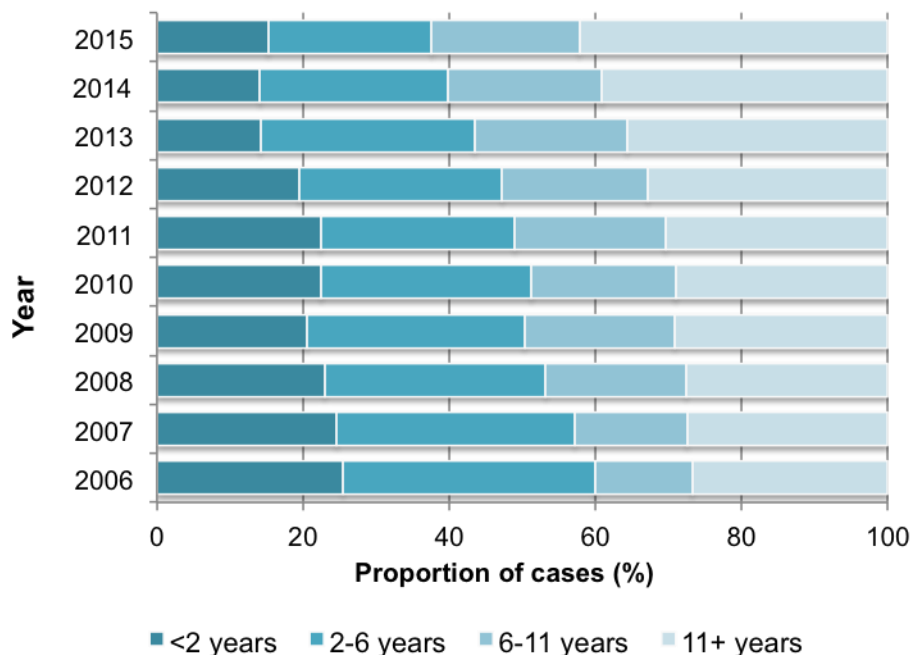




Reducing TB...

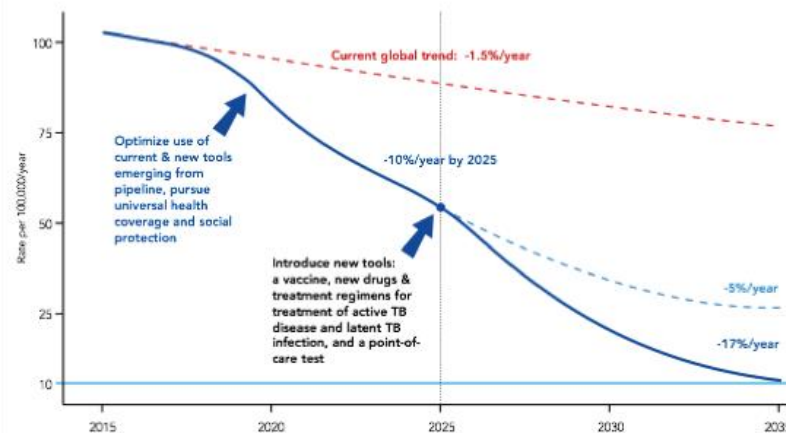
- In 2015...England TB incidence 10.5/100,000
- 73% occurred among people born outside the UK
- 86% of these occur more than two years post entry

Time between entry to the UK and TB notification for non-UK born cases by year, England 2005-2015.



WHO End TB strategy TB elimination in low incidence countries

Desired decline in global TB incidence rates to reach the 2035 targets



Source: WHO – End TB strategy



Targeting TB incidence ...

Epidemiol. Infect. (2012), **140**, 1862–1872. © Cambridge University Press 2012.
This is a work of the U.S. Government and is not subject to copyright protection in the United States
doi:10.1017/S095026881100286X

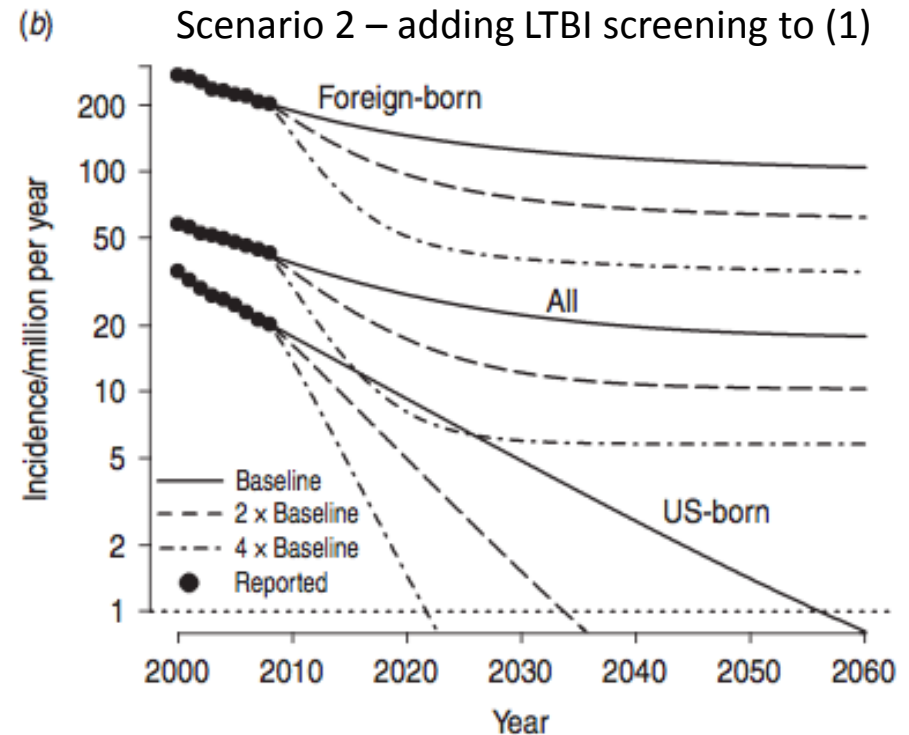
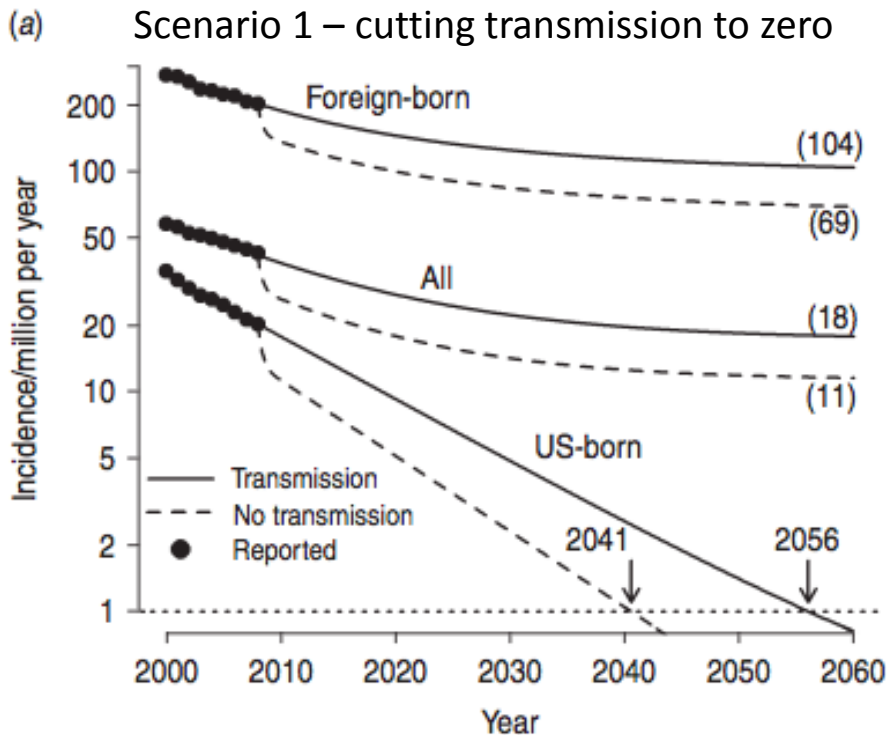
“It seems reasonable to assume that targeted testing and treatment of LTBI will be necessary ... to achieve levels close to elimination in an acceptable timeframe.”

Hill et al, 2012

Modelling tuberculosis trends in the USA

A. N. HILL*, J. E. BECERRA AND K. G. CASTRO

Division of Tuberculosis Elimination, U.S. Centers for Disease Control and Prevention Atlanta, GA, USA





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How do we do it?



The TB strategy for England

...with the aim of achieving a year-on-year decrease in incidence, a reduction in health inequalities and, ultimately, the elimination of TB as a public health problem in England

- Improving access and early diagnosis
- High quality diagnostics
- High quality treatment and care services
- Contact tracing
- Vaccination
- Tackling drug resistance
- Tackling TB in underserved populations
- New entrant screening for LTBI
- Effective Surveillance and Monitoring
- Workforce strategy



Protecting and improving
the nation's health



Collaborative Tuberculosis Strategy for England

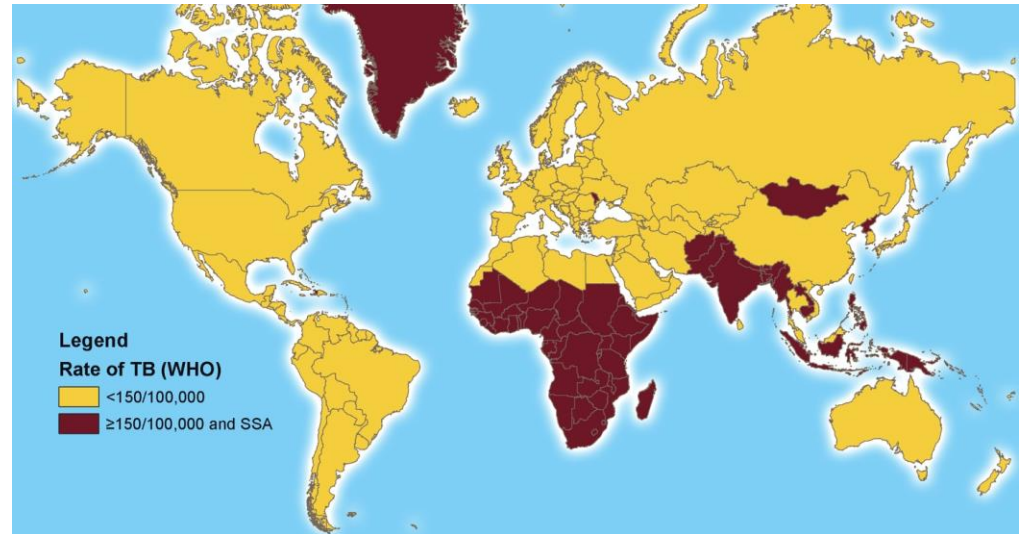
2015 to 2020





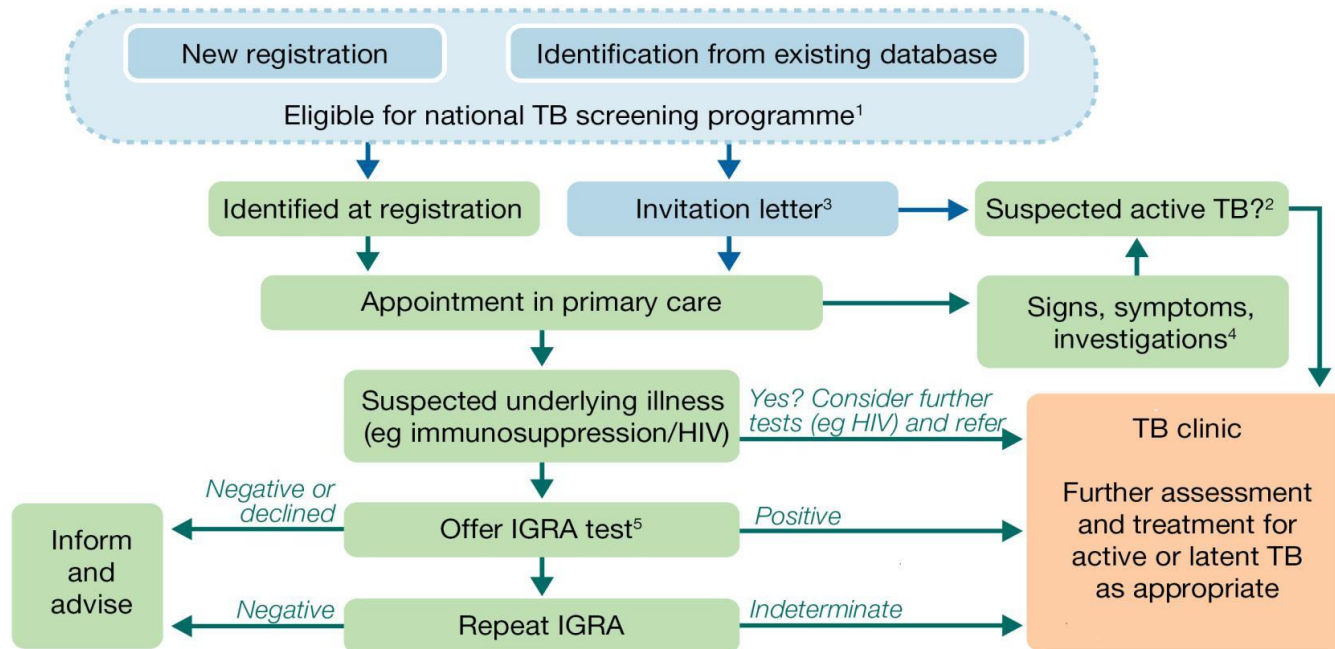
The national LTBI testing programme

- Primary care based testing
- Secondary care based treatment
- National protocols and pathways
- Fully-funded
- Monitoring and evaluation



- Eligibility criteria
 - a) Born or spent >6 m in high TB incidence country ($\geq 150/100,000$ or SSA)
 - b) Entered the UK within the last 5 years (including entry via other countries)
 - c) Aged between 16-35 years.
 - d) No history of TB or LTBI
 - e) Not previously screened for LTBI in UK

Latent Tuberculosis Infection (LTBI) testing and treatment algorithm



1 Full eligibility criteria a) Born or spent >6 months in high TB incidence country (150 cases per 100,000 or more/Sub-Saharan Africa); b) Entered the UK within the last 5 years (including where entry was via other countries (e.g. within EU/EEA); c) Aged 16-35 years; d) No history of TB either treated or untreated; e) Never screened for TB in UK. Also review indication for LTBI screening using NICE guidance (e.g. if outside age group).

2 TB contacts should be referred to the local TB service. TB suggestive symptoms include a) Cough > 3 weeks; b) Haemoptysis (cough with blood); c) Night sweats; d) Unexplained weight loss; e) Unexplained fever; f) Lymph node swelling (especially cervical).

3 The invitation letter advises patients to seek clinical care if they have symptoms of TB

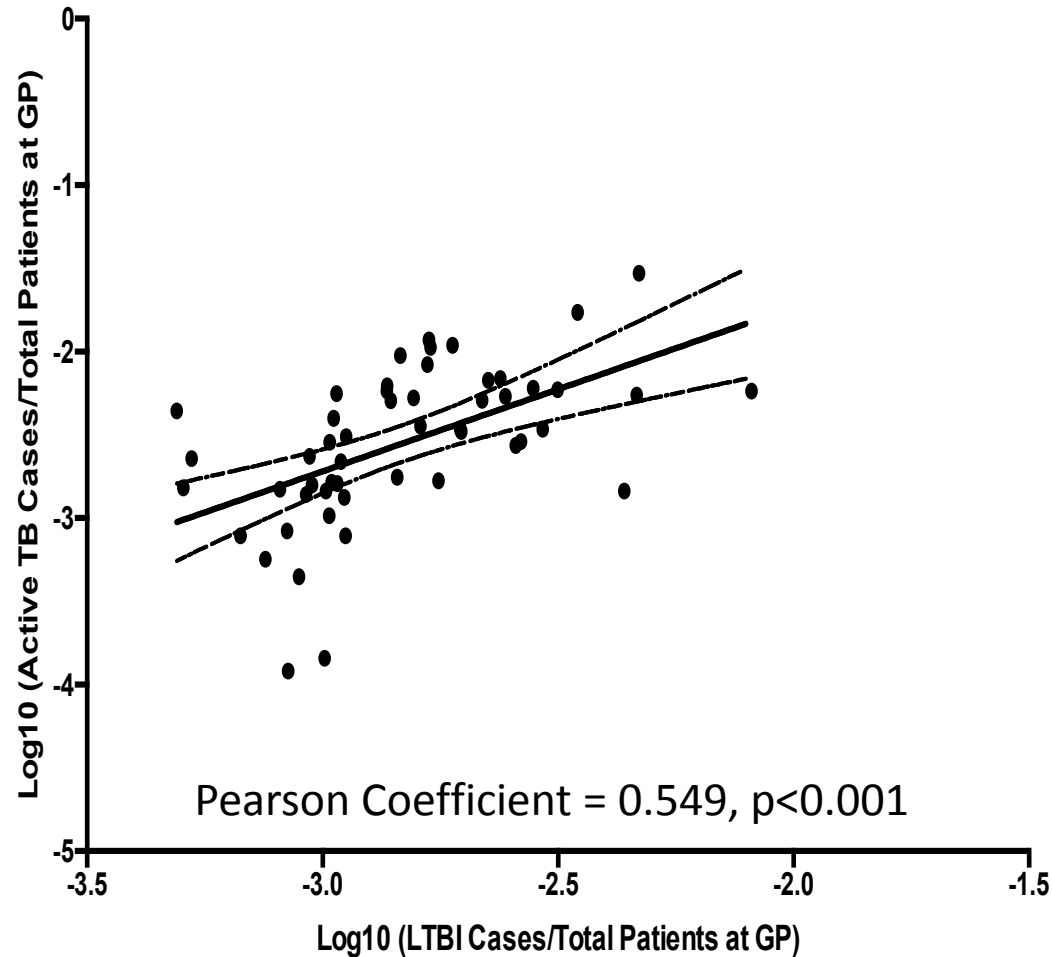
4 The recommended investigations prior to referral will depend on local arrangements, but might include CXR and sputum collection as appropriate NB- colours of the boxes denote location and responsibilities: blue- systematic identification mechanism; Green- Primary Care; Orange- Secondary Care

5 Also offer HIV test according to BHIVA/HPA recommendations and consider hepatitis B/C testing where appropriate.



Why focus on high risk areas?

LTBI Cases and Active TB cases per GP Practice



Excluding

- LTBI identified by Contact Tracing
- Active Cases Identified from LTBI Screening



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What about the blood tests?



- Two IGRAs: QFT and T-spot
- National tender exercise: now list of lab providers who are part of a framework contract
- Implications for pricing and quality
- CCGs decided (and in most areas agreed) on lab arrangements
- Nationally determined KPIs
- Lab providers are keen to ensure slick testing and resulting
- Local guidance and tools from providers
- Results through electronic system (e.g. ICE)

Lab arrangements





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... and what about the money?



Budgets

- NHSE funding for LTBI testing and treatment is £10m annually
- Five year plan with likely funding for future years – 2017/18 approved
- All 58 high burden CCG areas had funding agreed
- About 20% for primary and 80% for secondary care
- All aspects of the programme funded - including tests, GP incentives and LTBI treatment costs, as well as project management aspects
- It is essential that moneys are regarded as ring-fenced and activity and spent monitored



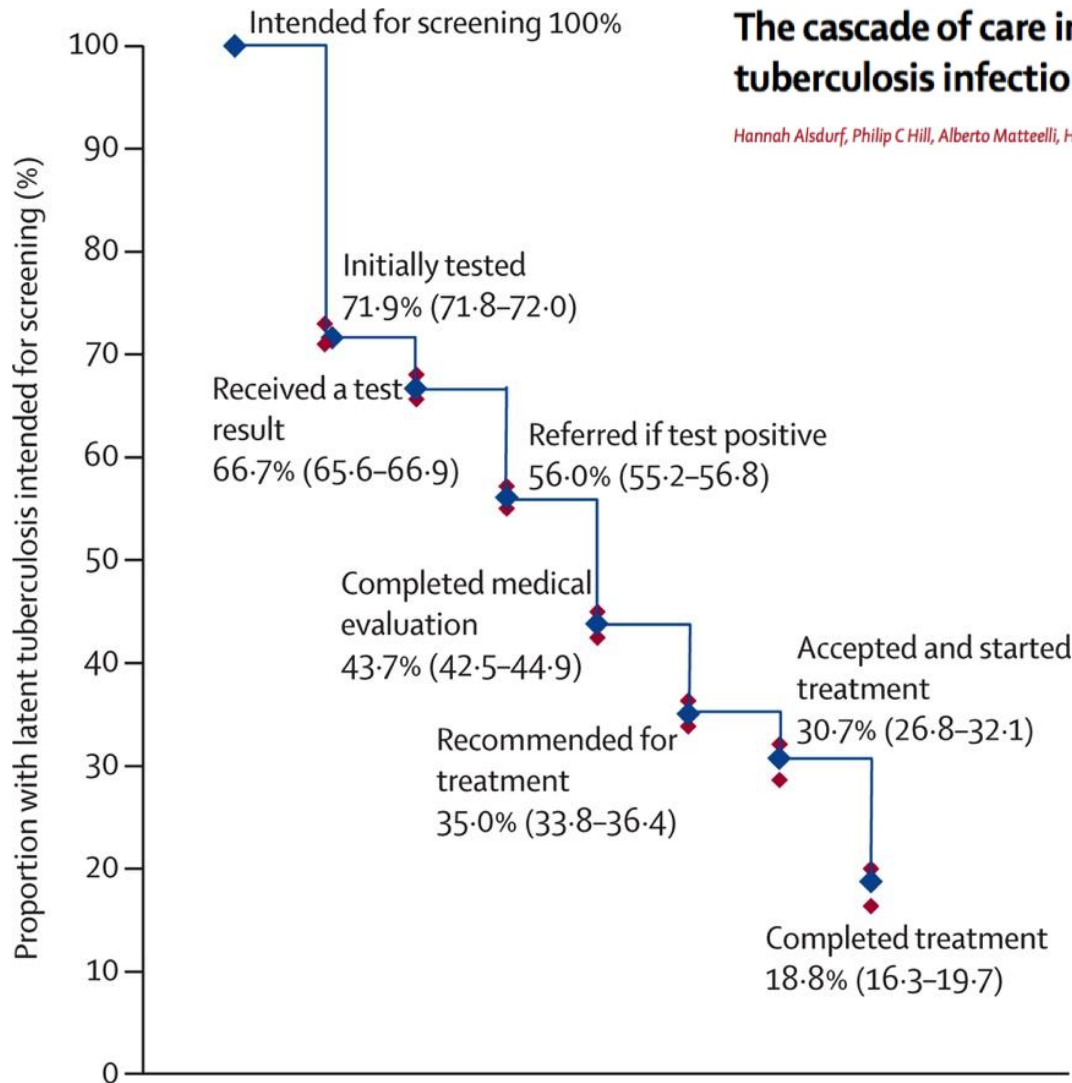


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Can we make it work?



Do we loose people...?

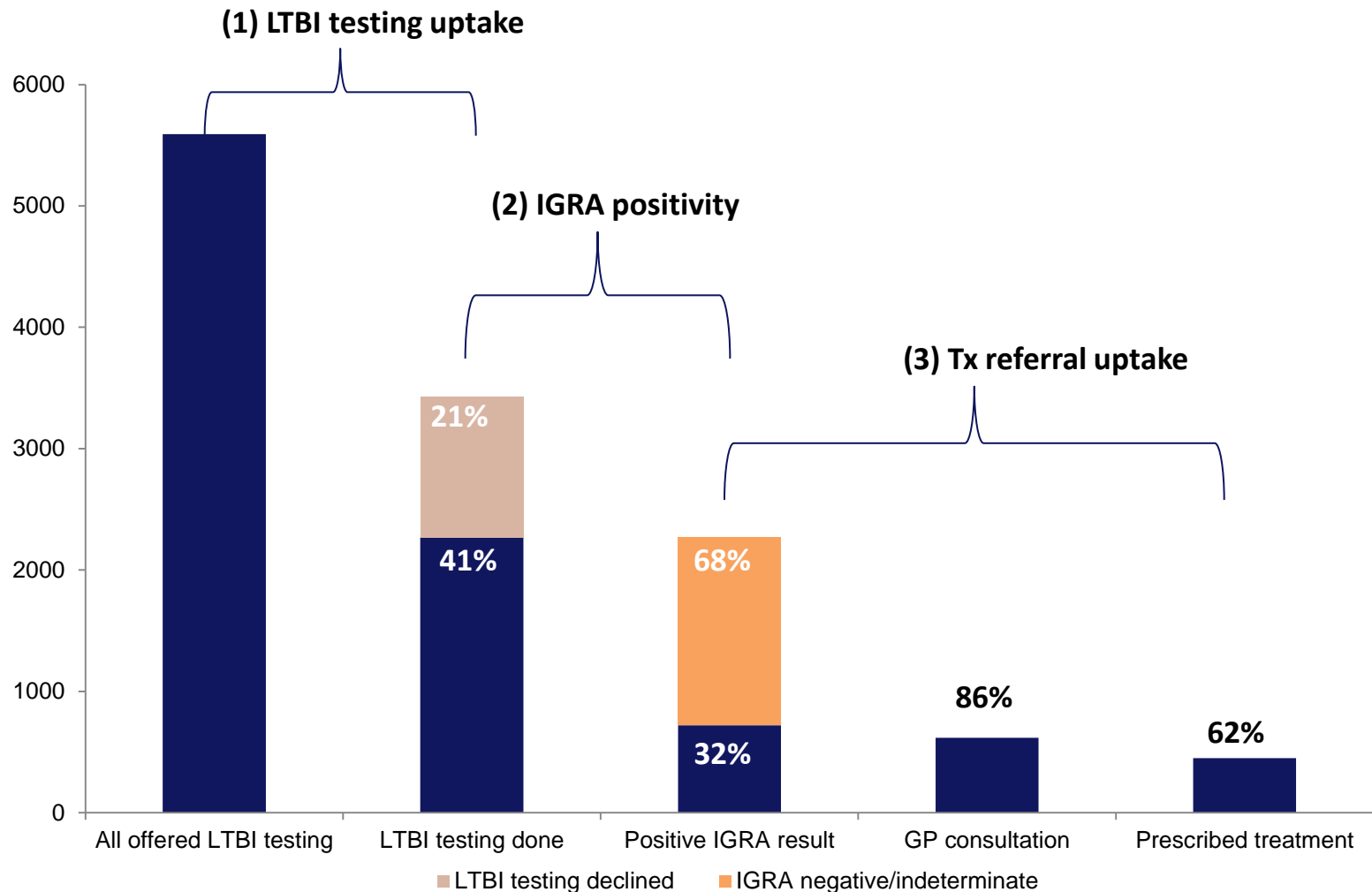


The cascade of care in diagnosis and treatment of latent tuberculosis infection: a systematic review and meta-analysis

Hannah Alsdurf, Philip C Hill, Alberto Matteelli, Haileyesus Getahun, Dick Menzies



Yes we do!

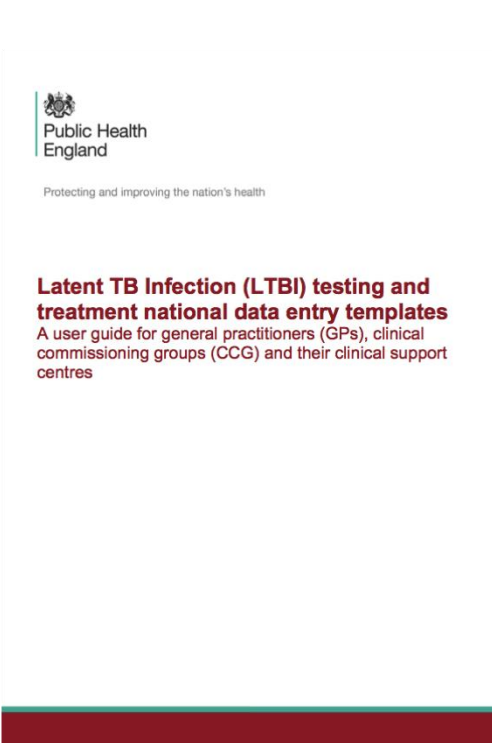




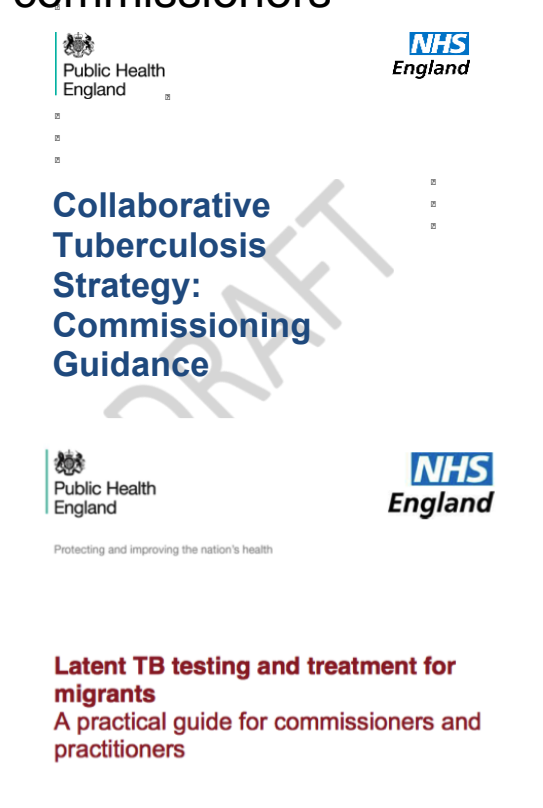
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Guidance...

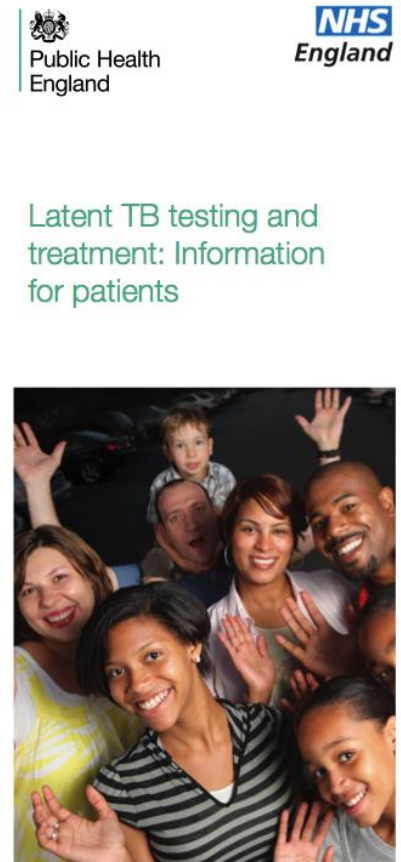
For data returns



For for doctors and commissioners



For patients



<https://www.gov.uk/guidance/tuberculosis-screening>

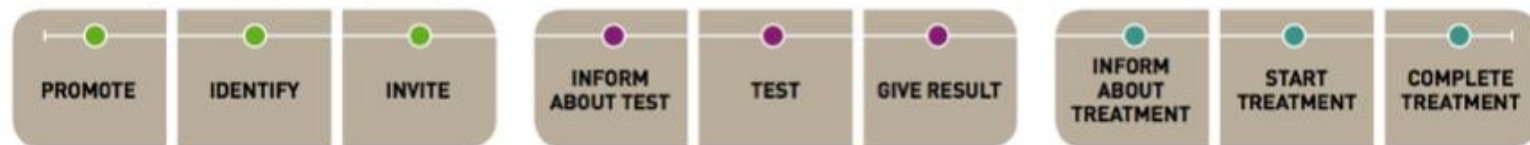
<https://www.england.nhs.uk/resources/resources-for-ccgs/out-frwrk/dom-1/tb-strategy/faqs/>



Uptake and completion



Figure 1: Steps along the patient pathway





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How do we know it works?



Why do we need data anyway?



Two components

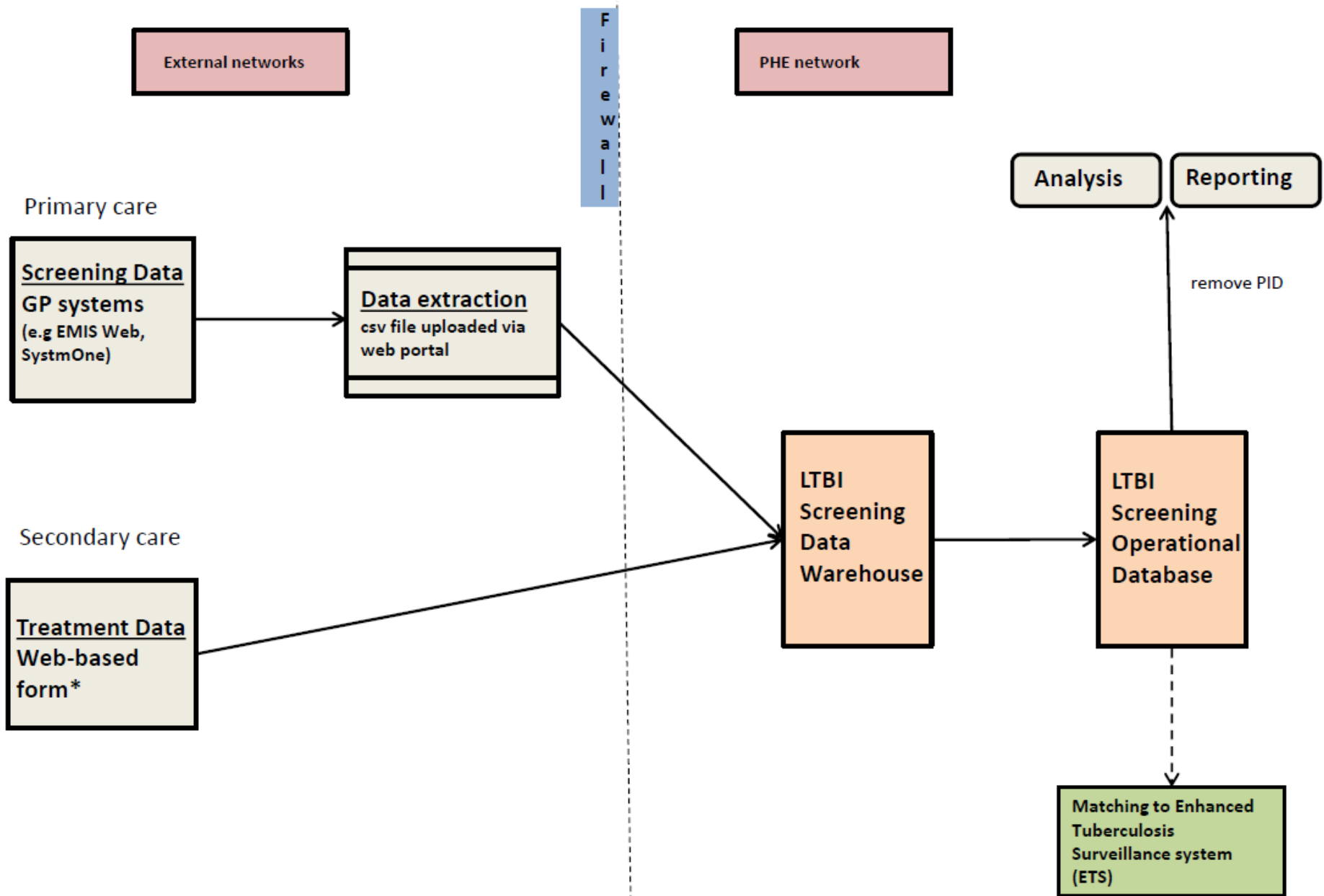
1) Monitoring = Driving with eyes open

- Process indicators to ensure the programme runs and delivers well

2) Evaluation = Spending with eyes open

- Outcome assessment of effectiveness and cost effectiveness





*screening done by practices on other systems than EMIS Web and SystemOne, along with localities that are screening in the community will also use the web-based form



GP templates for data entry

Template Runner

Pages: Latent TB Template **Signifies Locality Payment/Quality Indicators

Screening Offer: CEG Clinical Effectiveness Group

Assessment & Treatment: Barts and The London School of Medicine and Dentistry

Screening Offer

Newham EPCS payment/quality indicator:

- Country of birth
- Ethnicity
- Date of entry to UK
- IGRA test invitation (or declined)

and for patients with a positive IGRA test result, also:

- Positive IGRA test result (Please use Assessment & Treatment page of this template to record)
- Positive IGRA counselling consultation done

**Country of birth (high risk for TB): 19-Jun-2014 Born in Afgha...

**Ethnicity: 23-Sep-2014 British or mix...

**Date of entry to UK: 18-Dec-2014

Tuberculosis contact: 05-May-2014

**IGRA test invitation or decline: 14-May-2014

No previous entry

Template Runner

Pages: IGRA Test Result

Screening Offer: No previous entry

Assessment & Treatment: 18-Dec-2014

***IGRA test result: 18-Dec-2014

No previous entry

Once a diagnosis of Latent TB has been made, we would recommend that the diagnostic code '65Y9' (Latent TB) is entered into the medical record.

If patient is sure they have completed a full course of treatment for LTBI or TB, tick the following box, don't offer treatment but still screen for active TB infection.

TB chemotherapy: 18-Dec-2014

No previous entry

Pre-Treatment Assessment (to assess if 'high risk' or 'low risk')

This assessment consists of:

- checking symptoms
- considering medication
- entering test results received
- referring for a CXR, FBC and ESR blood tests

**Positive IGRA counselling consultation done: No previous entry

Check Symptoms

If any one of the following symptoms has been present for more than 3 wks OR more than one symptom is present: patient may be 'high risk' for Tb. Please discuss with secondary care.

Cough present?: No previous entry

Fever present?: No previous entry

Draining Night sweats: No previous entry

Abnormal weight loss: No previous entry

Lymphadenopathy present?: No previous entry

Include chest examination.

Latent TB screening

Demographics & administration | Pre-test symptom screen & requests | Result / counselling / referral | Treatment

Birth country and any other countries of residence for longer than six months in the last five years.

23 Sep 2015... Born in Burundi (XaQ34)	Country of birth	R X
23 Sep 2015... Afghanistan (Ua075)	2nd country	R X
23 Sep 2015... Tanzania (Ua067)	3rd country	R X
23 Sep 2015... India (Ua078)	4th country	R X
23 Sep 2015... England (Ua089)	5th country	R X

12 Feb 2015... Date of entry to United Kingdom (XaZst) Date of entry to UK

24 Jan 2013... British or mixed British - ethnic cat... Ethnicity R X

Tuberculosis risk - factors, exposure, vaccination.

Drug / alcohol misuse

21 Sep 2006... Alcohol intake (136.)

22 May 2008... Misuses drugs (Ua0mt)

Intravenous drug user (if ever)

Alcohol abuse

Latent TB screening

Demographics & administration | Pre-test symptom screen & requests | Result / counselling / referral | Treatment

Active TB symptom screen. Capture this at point of test request. Ask GP if any symptom >3 weeks or more than one present.

Cough present? Night sweats (draining)

Fever present? Abnormal weight loss

Blood borne viruses relevant to Latent TB risk and consequence if test positive.

HIV

23 Sep 2015... HIV screening test (Xalon) HIV Screening

Hepatitis B

23 Sep 2015... Hepatitis B screening declined (XaLND) Hep B Screening

Hepatitis C

24 Sep 2015... Hepatitis C screening (XaJh4) Hep C Screening

New Electronic Pathology/Radiology Request

Public health - HIV testing for new registrants.

IGRA latent TB testing.

Follow local CCG / public health process for Latent TB testing

Tuberculosis test by ELISA interferon-gamma release assay

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Event Details Information Print Suspend Ok Cancel

Cough present?

Date	Selection
24 Feb 2014	Cough (XE0qn)
24 Feb 2014	Cough (XE0qn)
24 Feb 2014	Cough (XE0qn)
23 Sep 2015	
24 Sep 2015	

Show recordings from other templates

Show empty recordings

Web-entry: <https://surveys.phe.org.uk/TakeSurvey.aspx?SurveyID=latentTBscreening>

User guide: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/501736/LTBI_GP_templates_user_guide.pdf



LTBI T&T monitoring

Process indicators to ensure the programme runs and delivers well

LTBI testing and treatment programme coverage

The number of local authorities that have a systematic new entrant LTBI testing and treatment initiative in place

LTBI testing acceptance

Proportion of eligible new entrants covered by LTBI testing programmes who accept LTBI testing

IGRA test performance and LTBI positivity

The proportion of positive, negative and indeterminate tests

LTBI treatment uptake

The proportion of patients who take up treatment amongst those who have been offered it.

LTBI treatment completion

Proportion of individuals who complete LTBI treatment amongst those who start treatment

Adverse events from LTBI treatment

The proportion of patients who experience significant drug events amongst those who initiated treatment.



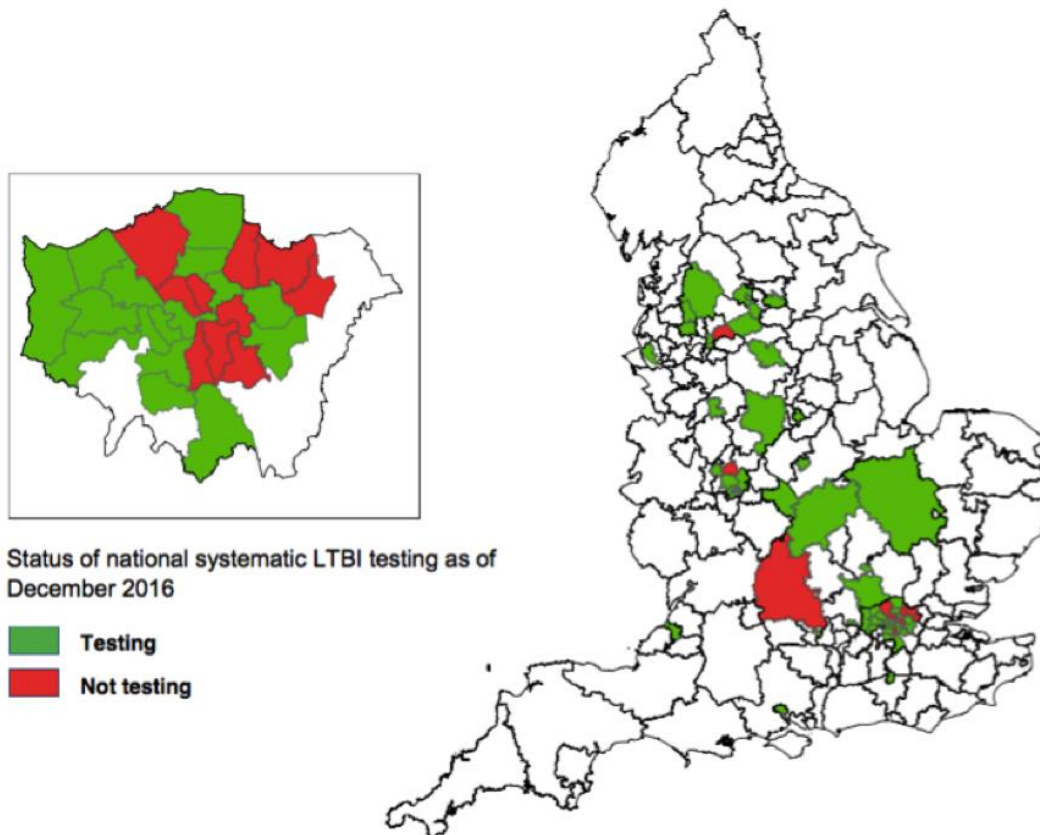
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What's the progress



- 58 of 59 eligible areas submitted bid
- CCGs with TB rate $<20/100,000$ and/or $>0.5\%$ of total national case load

Figure 1: Status of systematic LTBI testing in new migrants by Clinical Commissioning Group (CCG), England, 2015-2016 (box shows enlarged map of London area)

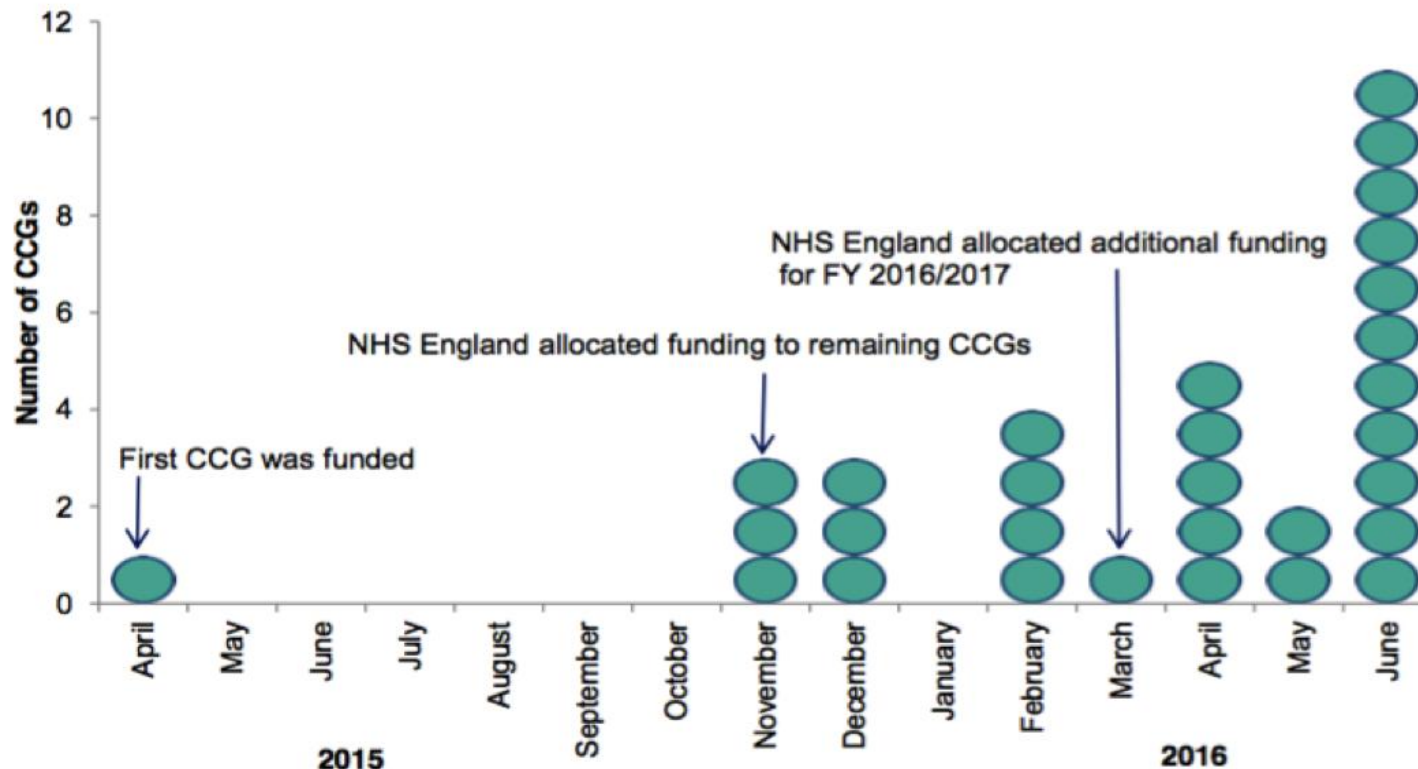




Progress 2

- 48 CCGs (82% of 58 priority CCGs) have started testing*
- 28 of these 48 CCGs have submitted data to PHE*

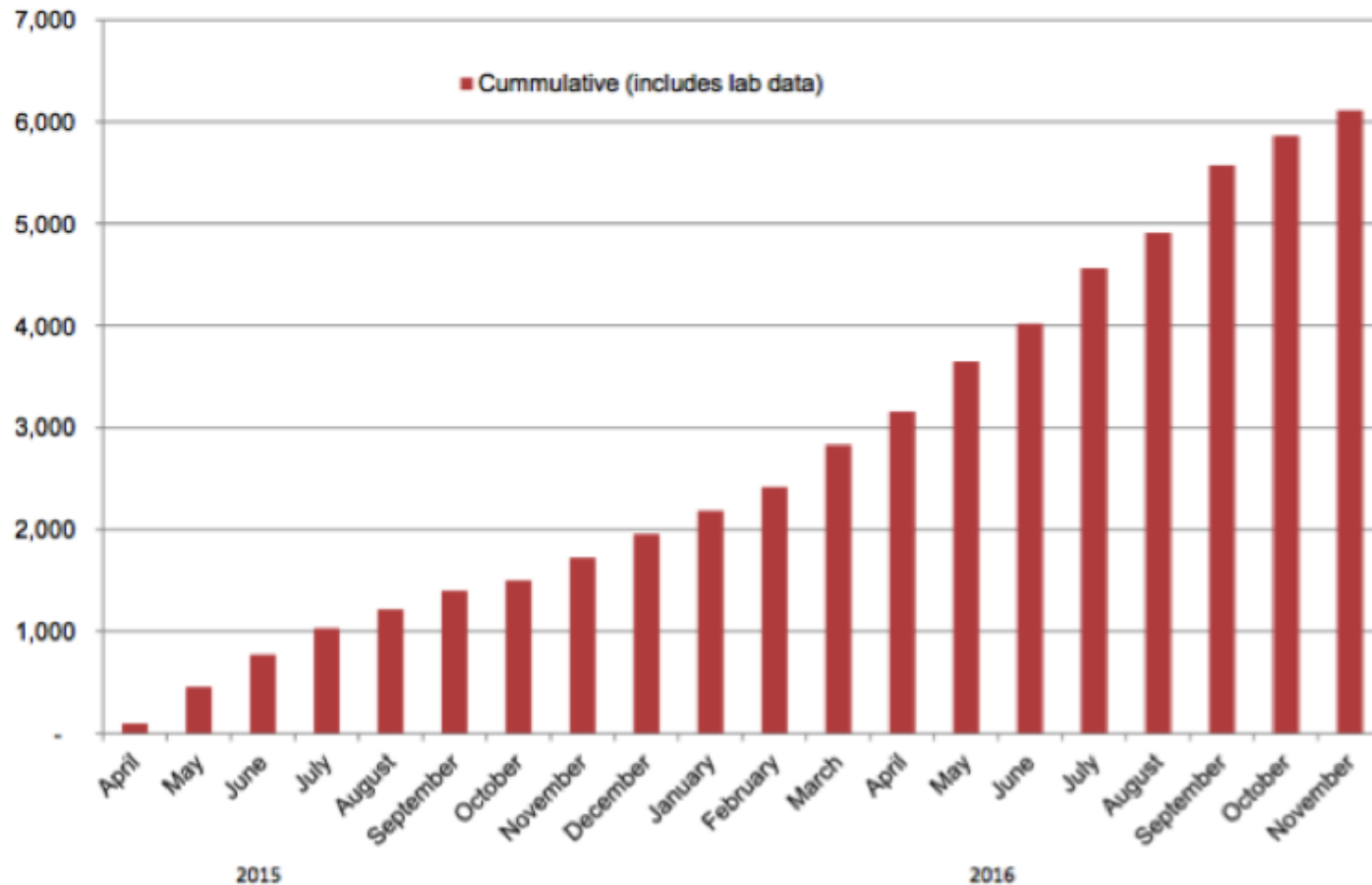
Figure 10.1: Timeline (by LTBI testing start of CCG) of the national LTBI testing and treatment programme roll-out April 2015 - June 2016



*Data accurate as of December 2016



Figure 2: Number of LTBI tests* reported to PHE, England 2015-2016



*Data current as of November 2016



Best practice examples

Regular meeting and clear project management

Newham, Greenwich, Birmingham, Inner NW London, Yorkshire & Humber...

Careful monitoring and operationalising findings

Newham, Birmingham...

Learning from and utilising existing services

Lancashire migrant service, Yorkshire university service, Birmingham ESOL

Multidisciplinary leadership and integration

Birmingham, Newham, etc. etc...

Contribution to research and national policy

Newham, Yorkshire and Humber, Birmingham

Going for awards

Birmingham, Greenwich, Wolverhampton, Newham



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Thank you



<https://www.gov.uk/government/publications/collaborative-tuberculosis-strategy-for-england>

<https://www.gov.uk/tuberculosis-screening>