

Screening for latent tuberculosis infection using IGRA in destitute refugees and asylum seekers

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Content

- Background: Health inclusion clinic, Tuberculosis, Latent TB
- Aims
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Health Inclusion Clinic

Guy's and St Thomas'

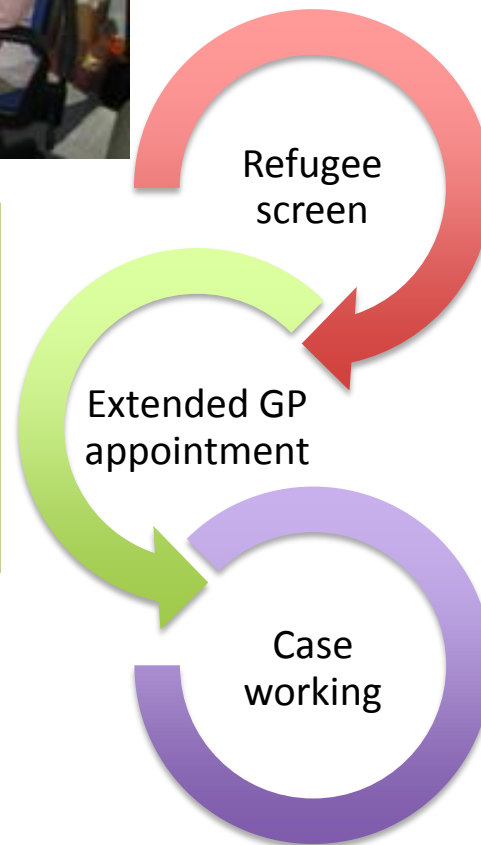
NHS Foundation Trust 



Health Inclusion Clinic



- 30 minute appointment
- Telephone or face to face interpreter
- Medico-legal reports and other letters provided free of charge

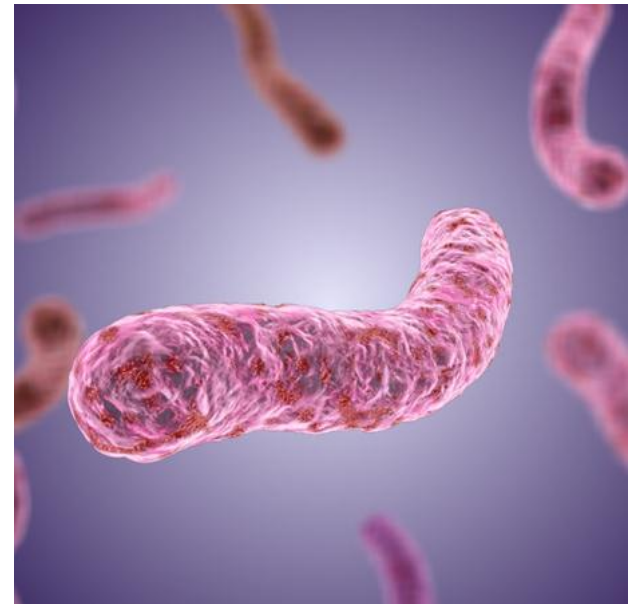


- Blood borne viruses, STI
- Latent TB (IGRA)
- Diabetes
- Parasites (eosinophilia)
- Anaemia
- Vitamin D
- Catch-up immunisations

- Interpreting and translating
- Liaison with secondary care
- Liaison with solicitors etc.
- Escorting to appointments

Tuberculosis

- *Mycobacterium tuberculosis*
- Most commonly affects lungs
- Can infect any part of body
- Droplet spread
- One of the top 10 causes of death worldwide¹

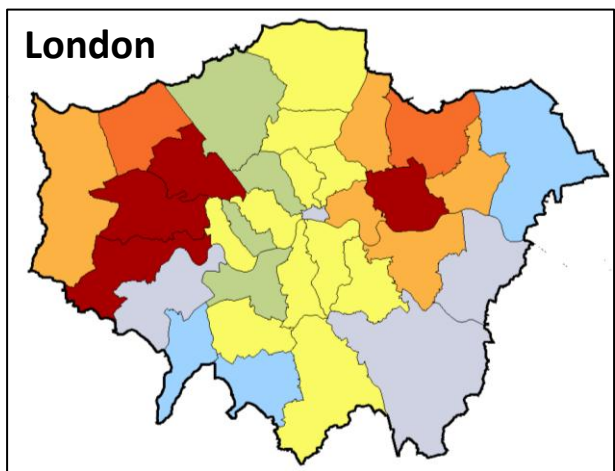


Tuberculosis rates in England

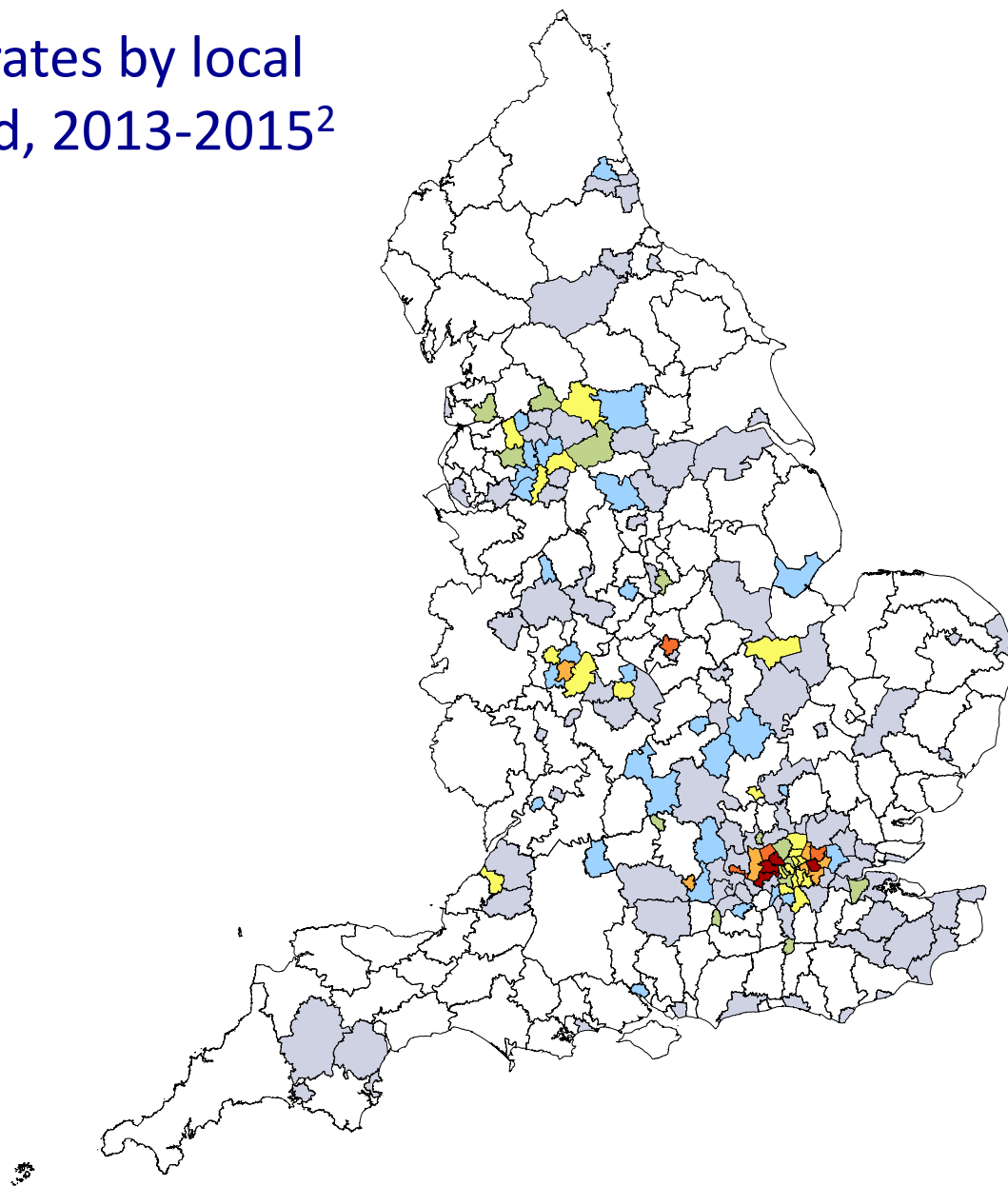
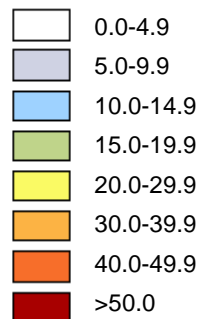


- London highest rate of TB in England
- Year-on-year decline in London (35% reduction) and England over past 4 years²

Three-year average TB rates by local authority district, England, 2013-2015²



Tuberculosis rate (per 100,000)

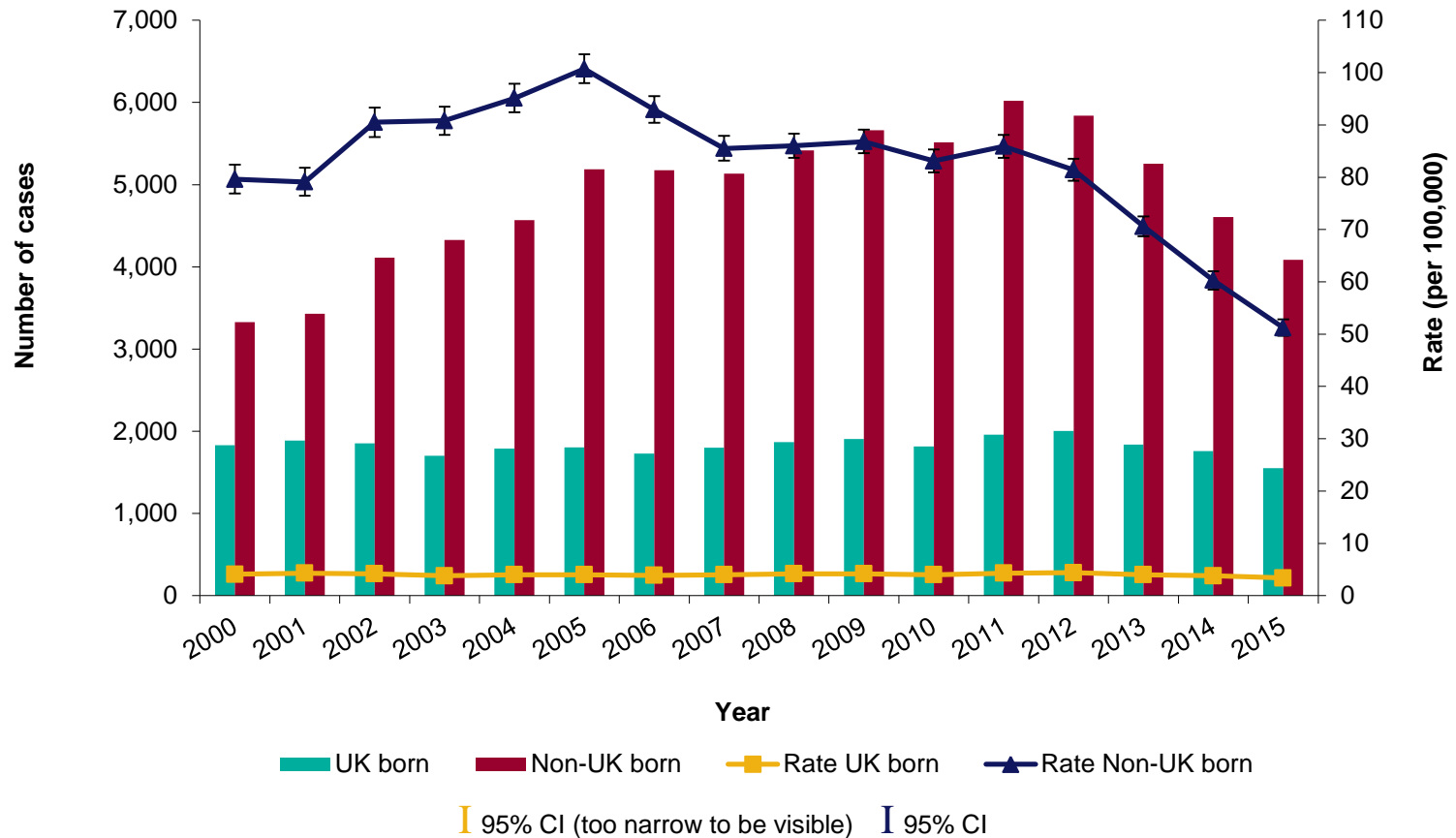


Risk Factors for Acquiring TB

- Socioeconomic deprivation
- Country of birth
- Social risk factors: Homelessness, drug and alcohol misuse, prison
- People with social risk factors more likely to have drug resistance and worse TB outcomes

Refugees and asylum seekers particularly at risk

TB case notifications and rates by place of birth, England, 2000-2015²



Latent TB Infection (LTBI)

- Asymptomatic and not infectious
- Risk of progression to active TB 5-12%³
- Treatment for LTBI:
 - 3 months combination therapy or
 - 6 months isoniazid
- Lifetime risk of developing active TB after completing treatment for latent TB reduced by 60%⁴

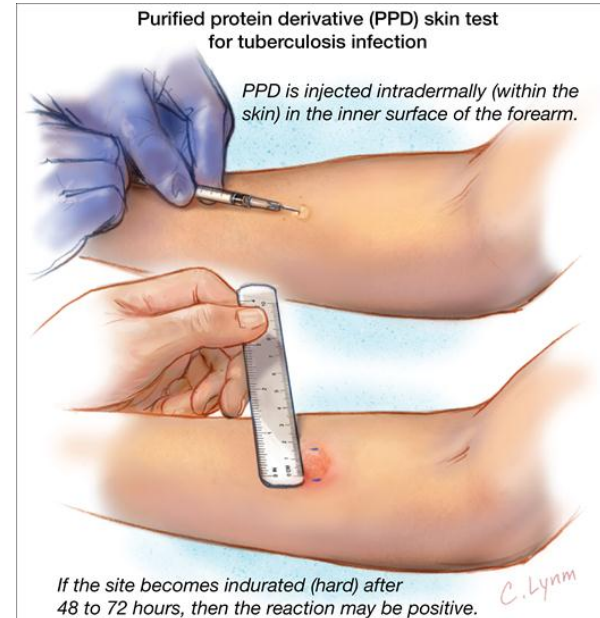
Testing for Latent TB

1. Tuberculin skin test

- low specificity and sensitivity
- observer bias
- follow up in 2-3 days

2. IGRA (Interferon Gamma Release Assay)

- single blood test
- T-SPOT, Quantiferon Gold
- NICE TB guidelines⁵



Previous studies

- 2009 Sheffield, refugee population⁶
 - 25% positive IGRA
- 2014-15 Newham, screening offered to people from very high prevalence countries⁷
 - 26% positive IGRA
- 2015 -16 Analysis of national screening pilots for first year²
 - 25% positive IGRA

Aims

In our clinic population:

- To measure the prevalence of latent TB
- To assess the practicalities of IGRA testing

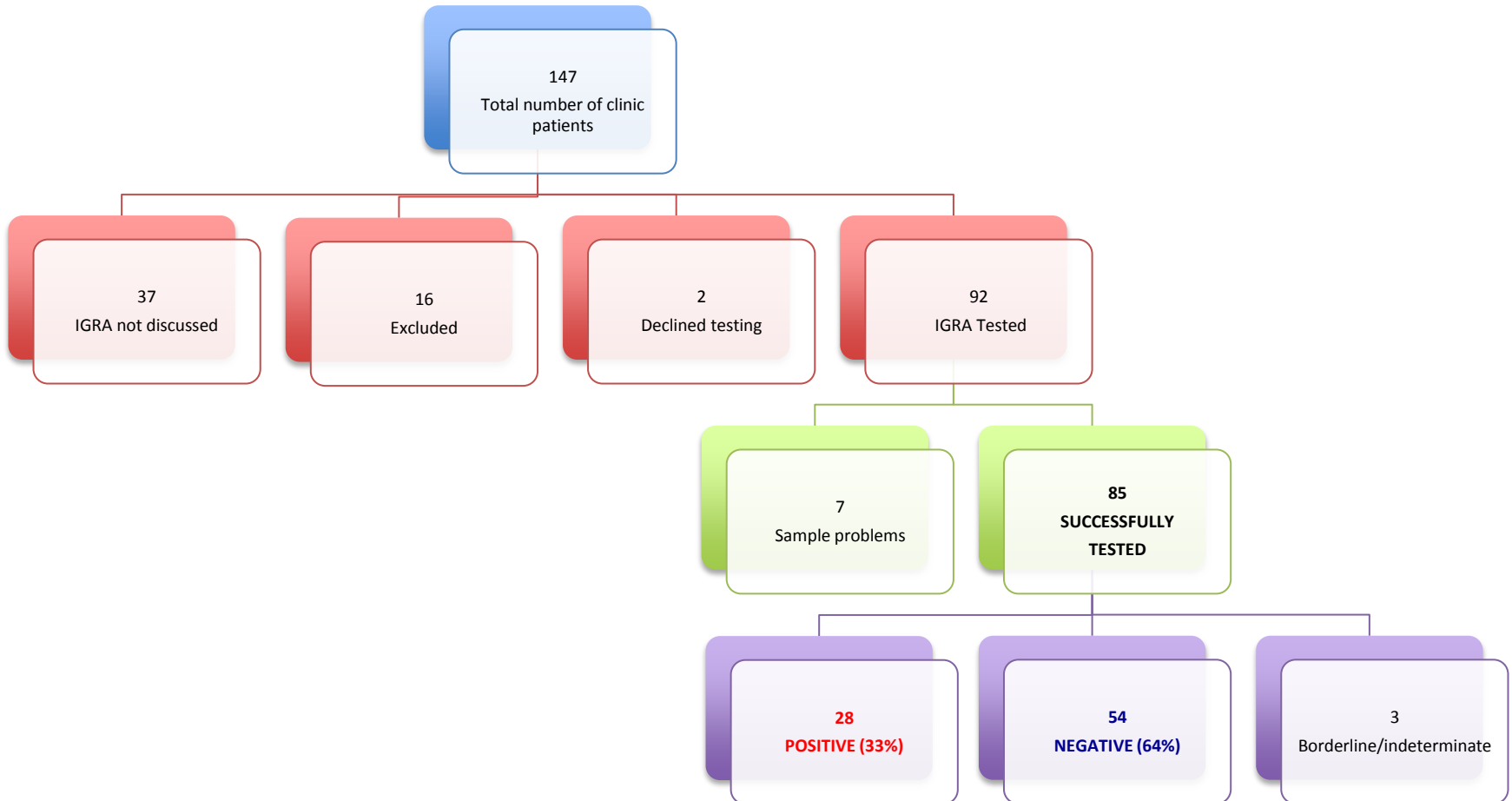
Method

- Nov 2014 – Nov 2015
- Opportunistic IGRA screening
 - >16 years old
 - Previous/current TB and HIV excluded
- T-SPOT[®]
- Counselling by nurse/doctor

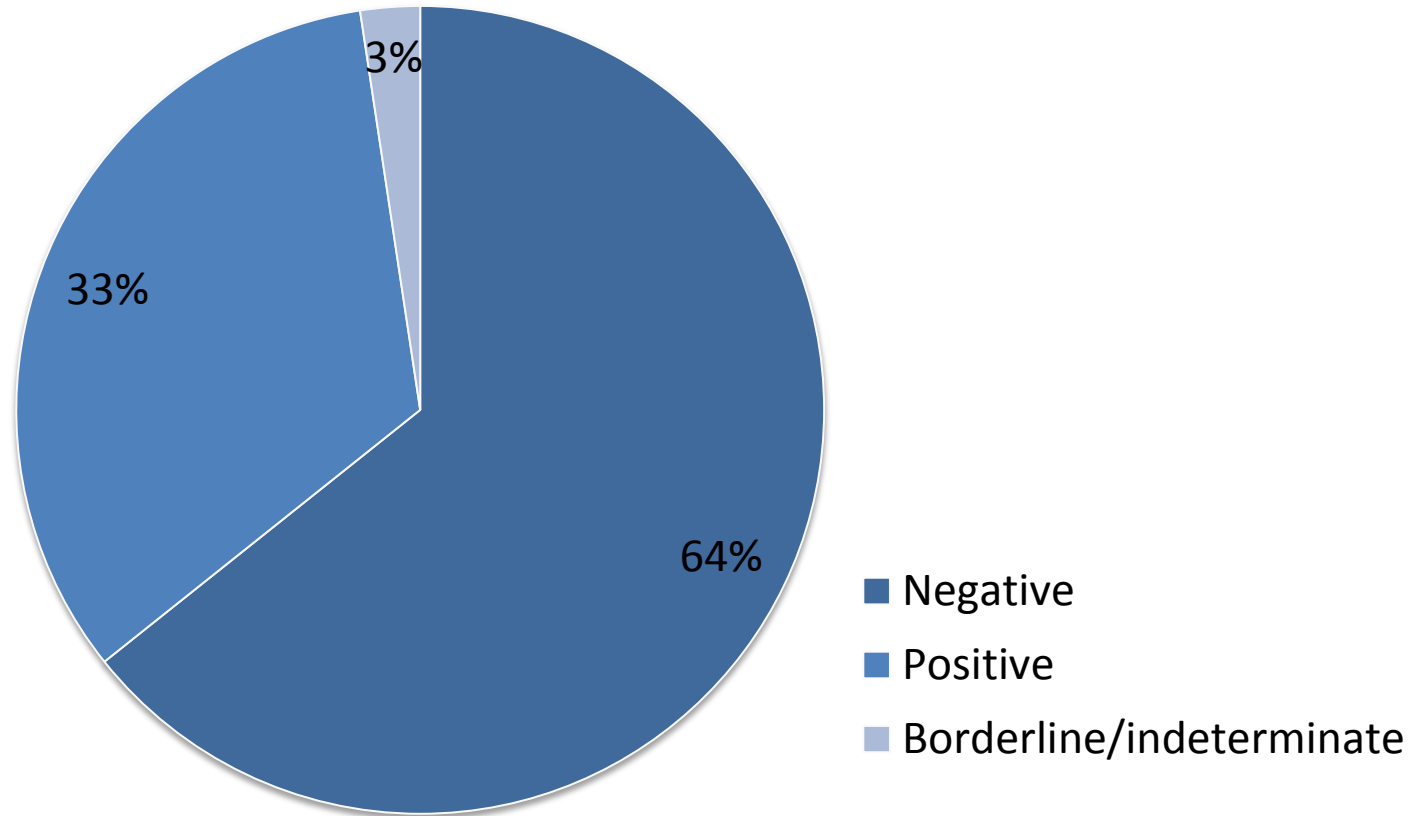
Method

- Positive IGRA referred to TB clinic
- Decision on whether to offer chemoprophylaxis based on individual patient
 - Co-morbidities
 - 2011 NICE Guidelines <35 years old⁵
 - 2016 NICE Guidelines <65 years old⁸

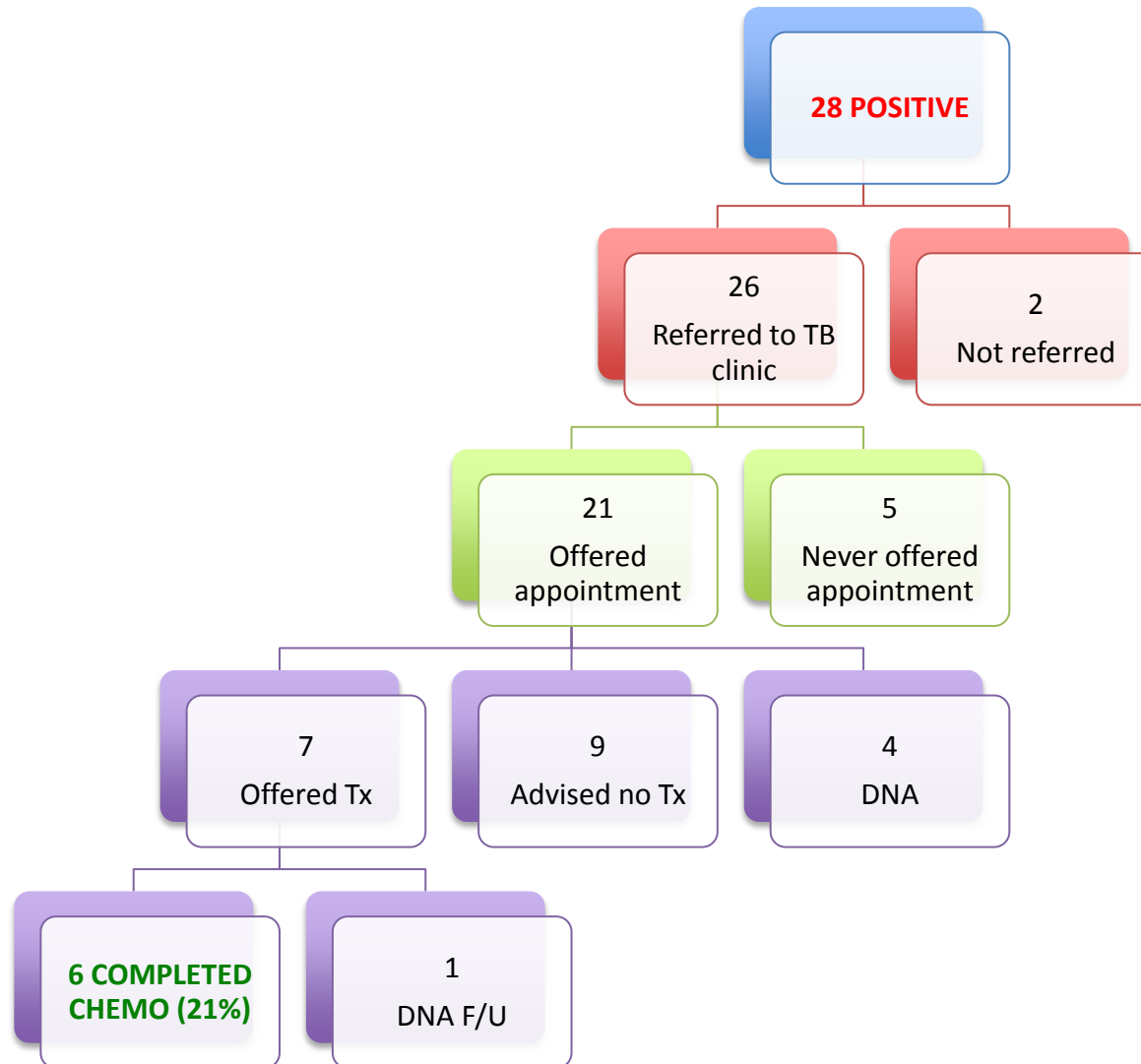
Results



IGRA results



IGRA Positive



Analysis: demographics

	Positive IGRA (28)	Negative IGRA (54)
Male	19 (68%)	34 (63%)
Female	9 (32%)	20 (37%)
Age (range)	22-59	21-63
Age (median)	40	35.5
Age < 35	14 (50%)	27 (50%)
Age 35-64	14 (50%)	27 (50%)

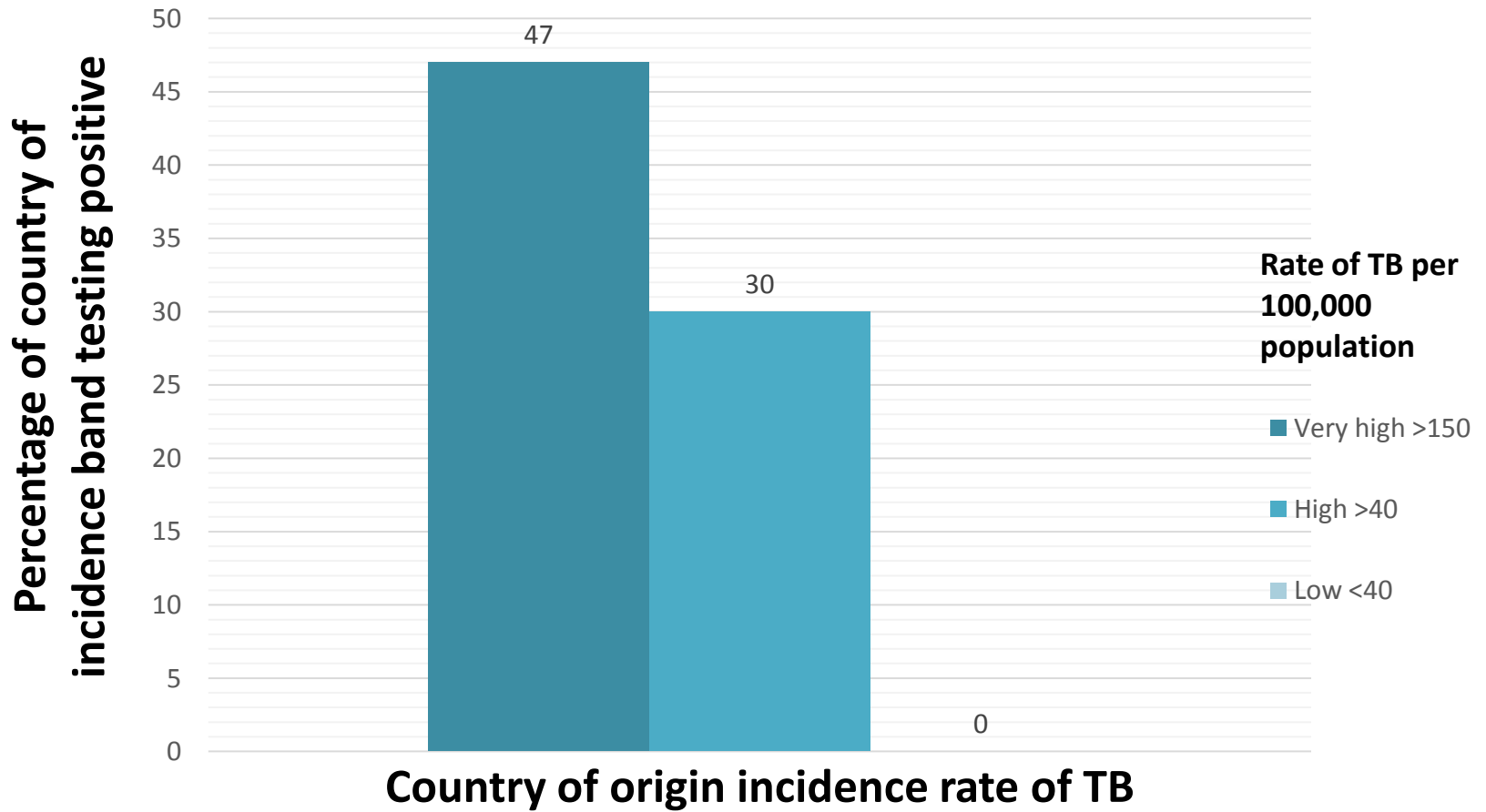
Analysis: risk factors

Risk factor	Positive IGRA (28)	Negative IGRA (54)
Chronic disease	13 (46%)	18 (33%)
Alcohol or drug misuse	4 (14%)	4 (7%)
Country of origin rate of TB:		
very high (>150/100,000)	17 (61%)*	19 (35%)
high (40 to 150/100,000)	11 (39%)	25 (46%)
low (<40/100,000)	0 (0%)	10 (19%)

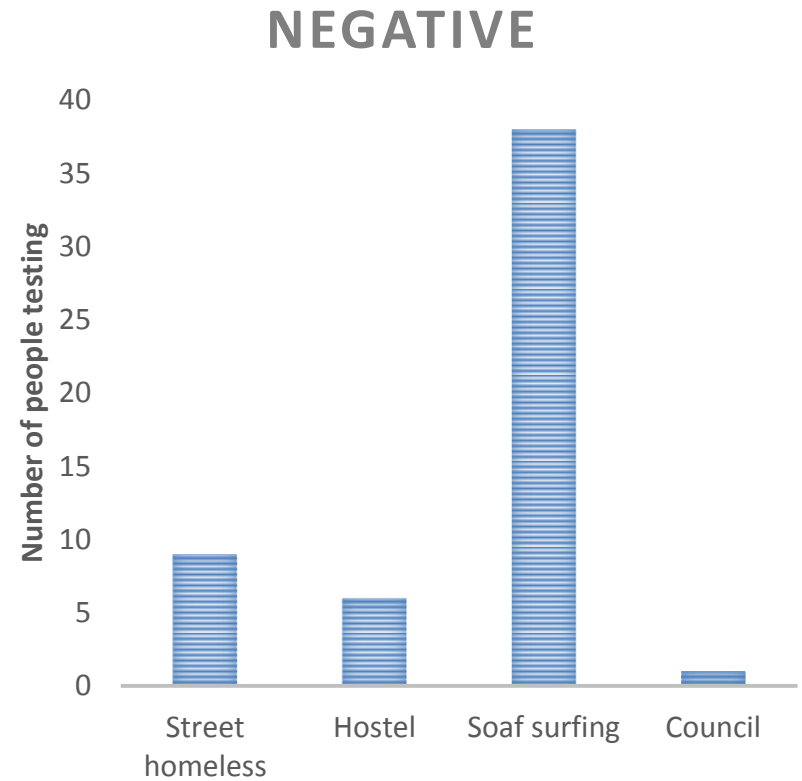
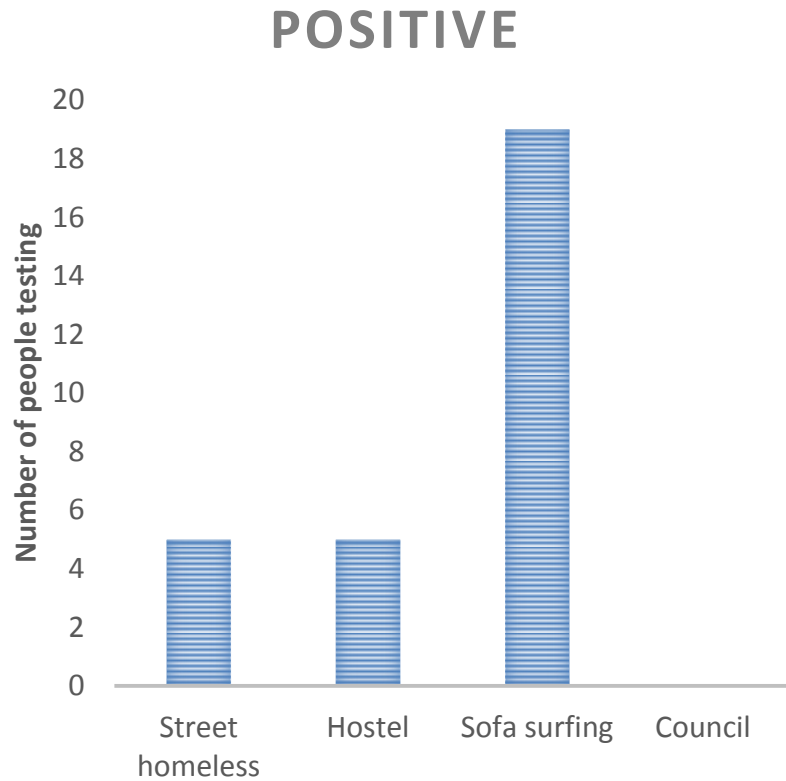
* $\chi^2 = 4.85$

$p < 0.05$

Country of Origin



Accommodation



Numbers needed to screen

- 3.28 individuals need to be screened to find 1 case of latent TB
- 50.5 - 101 individuals need to be screened and treated in order to prevent 1 case of active TB

Problems faced

- Lost to follow up, appointment letters not received, DNAs
- Laboratory problems
 - T-SPOT samples need to be received by lab <36 hours
- Side effects of chemoprophylaxis?
- Stigma of diagnosis
- Patient anxiety

Moving forward

- Good communication with TB clinic
- Referral process now via email
- Sample collection system
- Consider Quantiferon Gold?
- Patient education and counselling

Summary of Findings

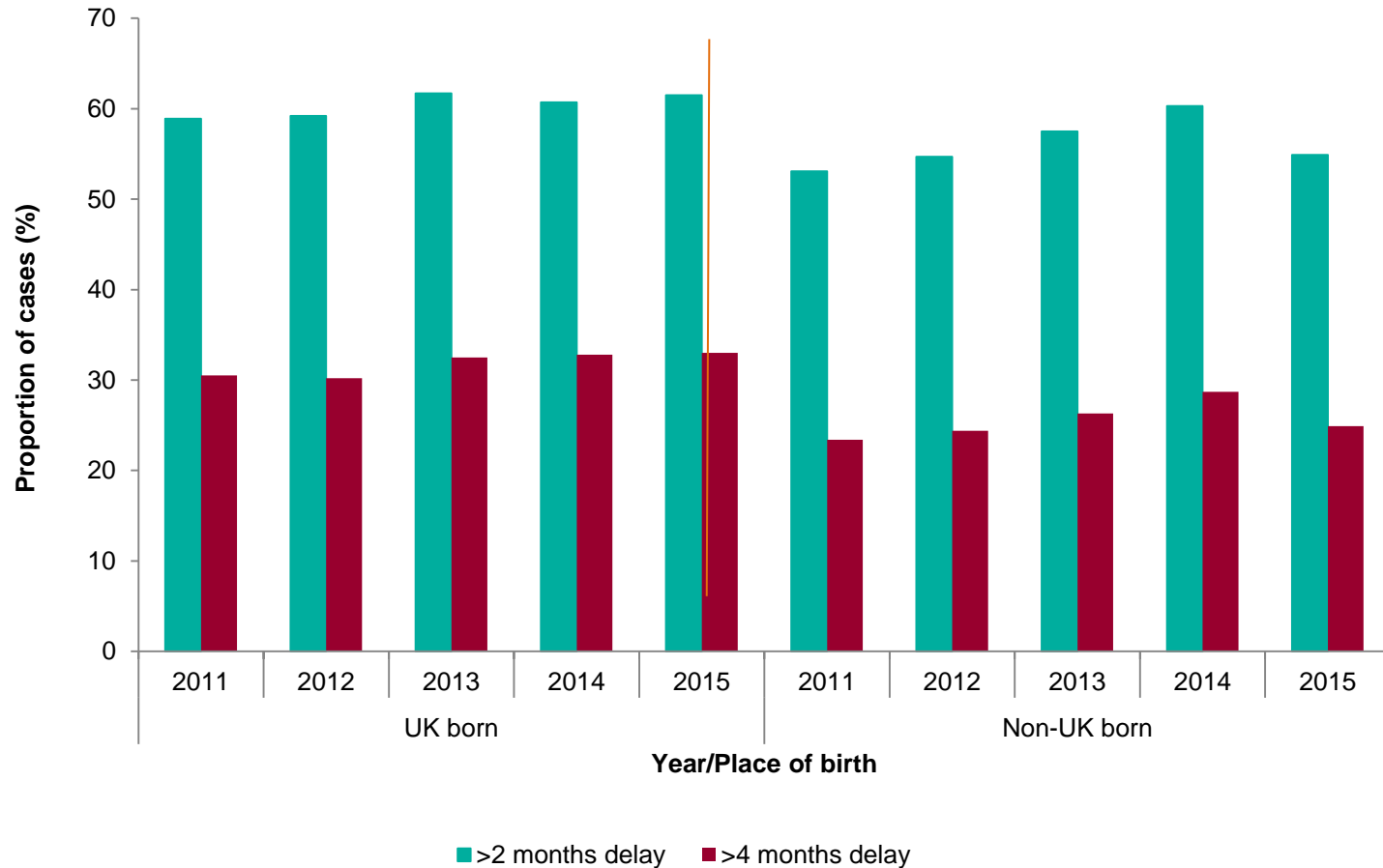
- IGRA highly acceptable to patients – only 2 declined testing
- 33% positive IGRA
- 50.5 - 101 individuals need to be screened and treated in order to prevent 1 case of active TB

IGRA: Potential benefits?

- Cost effective?
- Public health benefit



Proportion of pulmonary TB cases with a delay from symptom onset to treatment start by place of birth, England, 2011-2015¹





Public Health
England



developed in collaboration with and
with partner funding from **NHS England**

Access, testing and treatment

A toolkit for new entrant latent tuberculosis programmes



- GPs registered, new entrants <5 years in UK, very high incidence country of origin, 16-35 years old

Conclusions

- Highly acceptable test
- High latent TB rate in destitute refugee and asylum seeker population
- Importance of communication, counselling and follow up

Any questions?



References

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- Margaret Ogedengbe – Community TB Nurse

Risk factors for reactivation of TB⁸

- HIV-positive
- younger than 5 years
- excessive alcohol intake
- injecting drug users
- solid organ transplantation
- haematological malignancy
- having chemotherapy
- have had a jejunioileal bypass
- diabetes
- chronic kidney disease or receive haemodialysis
- have had a gastrectomy
- are having treatment with anti-tumour necrosis factor-alpha or other biologic agents
- silicosis

Proportion testing positive according to duration of living in UK

