migrant population from the Indian Subcontinent. A more detailed analysis of migration patterns and its impact on UK cases of TB is warranted.

S40 A CROSS SECTIONAL INVESTIGATION TO DETERMINE THE BACKGROUND PREVALENCE OF LATENT TUBERCULOSIS INFECTION IN UNSELECTED MEDICAL INPATIENTS IN A LOW PREVALENCE REGION OF UK REVEALS HIGH RATES OF IGRA POSITIVITY

doi:10.1136/thoraxjnl-2011-201054b.40

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Introduction The background rate of latent tuberculosis infection (LTBI) in low prevalence regions of the UK is unknown. Interferon γ release assays (IGRAs) are sensitive and specific methods for detecting LTBI, and have accurately characterised the epidemiology of LTBI among high risk populations such as recent TB contacts or immigrants. However there are no current data on the incidence of IGRA positivity among the general adult population in the UK. Such data would be valuable for interpreting the significance of a positive IGRA result, and guiding cost-benefit analyses of new diagnostics.

Methods A TB outbreak occurred within a rural DGH. 481 individuals were identified as potential contacts and were tested by IGRA (TSpot.*TB*). Uniquely, for comparison, we recruited an additional large cohort of age matched controls from the same general wards but with no exposure to the outbreak.

Results 456 staff and patients were tested including 148 unexposed age-matched patient controls. Rates of positivity were 22% (95%CI, 14 to 29), 11% (6.1 to 16), 8.8% (4.2 to 13) and 9.5% (3.0 to 22) among exposed patients, exposed staff, unexposed patients and unexposed staff respectively. 8 cases of active TB (identical VNTR profile) and an estimated 35 cases of recently acquired LTBI can be attributed to exposure to the index case, out of 481 contacts. Characteristics of the unexposed controls are in Abstract S40 table 1. IGRA positivity was associated in multivariate analyses with history of previous TB treatment (OR 11, p=0.04) and use of corticosteroids (OR 5.9, p=0.02), but not with age. The age specific prevalences of IGRA positivity were 0 (N/A) for ages <40, 15.3% (12.2 to 29.4) for ages 40–59, 7.0% (0.92 to 13%) for age 60–79, and 10% (5.9 to 19) for ages =80.

Conclusions We observed a surprisingly high background rate of IGRA positivity among an unselected population typical of respiratory and general medical inpatients in a rural DGH. All controls were white-Caucasians, who comprise 92% of the UK population, and may represent a current minimum UK background rate. As rates were highest in the 5th and 6th decade, in the context of ageing populations and increasing iatrogenic immunosuppression, reactivation of LTBI may be a persistent hazard for several decades to come.

Abstract S40 Table 1

	Unexposed, age-matched control patients			
	TSpot positive n=13 n (%)	TSpot negative n=135 n (%)	OR	Univariate p
Age (years), median (range)	64 (45–87)	70 (25–93)		0.81
Male, n (%)	5 (38)	70 (52)		0.36
Ethnicity, n (%)				
White Caucasian	13 (100)	135 (100)		
Country of birth				
UK born	9 (69)	125 (93)	**0.18**	**0.006**
Other	4 (31)*	9 (6.7)		
Years since immigration, median (range)	43 (21–62)	52 (8–61)		
Ever visited a high prevalence country, n (%)	4 (31)	46 (37)		0.84
Years since last visit, median (range)	8.5 (0–40)	5.5 (0–60)		
Ever resident in a high prevalence area >6/52, n (%)	2 (15)	27 (20)		0.64
Occupation: healthcare, prison, lab n (%)†	4 (31)	18 (13)		0.09
BCG (history or scar), n (%)				
Yes	7 (54)	66 (49)		0.73
No	4 (31)	44 (33)		
Unknown	2 (15)	25 (19)		
Medical history, n (%)				
Comorbidity known to be associated with TB‡	0 (0)	21 (16)		0.22
Immunosuppresive medications§	4 (31)	12 (9.2)	**4.6**	**0.015**
Ever known to be exposed to TB	4 (31)	26 (19)		0.32
Ever had treatment for tuberculosis	2 (15)	2 (1.5)	**12**	**0.003**

*Germany (2), South Africa (1), Hong Kong (1).
†Percentages are those of those with valid data (eg occupation).
‡Diabetes mellitus (17), chronic renal failure (3), haematological malignancy (2), gastric surgery (1).
§Systemic steroids (12), methotrexate (4), hydroxychloroquine (2), anti-TNF-α (2), sulfasalzine (1).

S41 SCREENING FOR LATENT TB IN HIV: ARE NICE & BHIVA GUIDANCE EFFECTIVE?

doi:10.1136/thoraxjnl-2011-201054b.41

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HIV infection is the strongest single risk factor for the development of active TB in latently infected individuals. NICE and BHIVA 2011 guidelines both recommend screening for latent TB in HIV positive subjects in the UK. NICE bases this on blood CD4 count; and recommends testing all patients with CD4<500 cells/μl (if CD4<200, this is with an Interferon Gamma Release Assay (IGRA) and tuberculin skin test (TST), and if CD4 200–500, then IGRA ± TST is proposed). BHIVA test-stratify on CD4 count, country of origin and use of antiretroviral therapy (ART). They recommend IGRA in the following populations: all subjects from Sub Saharan Africa, irrespective of CD4 if on ART <2 years; medium TB incidence countries if on ART <2 years and CD4 <500; and low TB incidence countries if on ART <6 months and CD4 <350. To our knowledge, neither strategy has been formally tested in a UK HIV population. Here, using data on all subjects over a 10-year period (2000–2010) within our large HIV service (n=3306), we determine the impact of applying both strategies to detect cases of latent TB infection who subsequently developed active TB during this time period (n=72). Subjects who developed active TB <3 months from HIV diagnosis were excluded from analysis, as it was felt that the

Abstract S41 Table 1

	NICE	BHIVA
Eligible for screening	2778	1478
Number eligible, who developed TB (PPV)	66 (2.4%)	42 (2.8%)
Not eligible for screening	528	1828
Number not eligible, who developed TB	6 (1.1%)	30 (1.6%)
NPV	98.9%	98.4%
Sensitivity	92%	58%
Specificity	16%	56%

Note: PPV = positive predictive value, NPV = negative predictive value