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Introduction The London Borough of Newham consistently has the highest incidence of tuberculosis (TB) in the UK ($\approx 120/100,000$), with case numbers continuing to rise. We sought to investigate social risk factors for TB as compared with the general population in this borough.

Methods Of 242 adult patients diagnosed with TB in 2012 at the Newham Chest Clinic 170 (70.3%) completed a structured interview assessing for social risk factors. Demographic data was obtained from hospital records. TB case data was compared with 2011 census data using Fisher's exact test or t-tests as appropriate.

Results Data directly comparable to 2011 census data is summarised in Table 1. Cases had a mean of 3.43 (95% CI 3.07–3.8) household contacts, 2.28 (1.41–3.16) non-household family contacts and 2.02 (1.71–2.33) close friends. Household and family contacts were almost exclusively of the same ethnicity as the

cases, but with 18.4% of household contacts and 49.2% of family contacts being UK born, compared with 7.7% of cases. The majority of friends were of the same ethnicity (86%) with 18.4% UK born, 89.4% of cases had no close friends from a different ethnic group. None of the cohort reported alcohol or drug abuse or had been in prison in the last 5 years, one was currently homeless. Fifteen (8.8%) reported recent visitors from abroad and 61 (38.9% of foreign born) reported returning to their country of birth for greater than three weeks, with 75.4% having returned within the last two years, a further eleven had travelled to a high incidence country in the last ten years, six of whom were UK born travelling to their parents' country of birth. **Conclusions** In this high incidence area of an otherwise low incidence country TB is significantly more common in those of South-Asian birth and ethnicity. It is more common in young adults who have lived in the UK between two and five years and work in unskilled jobs or are unemployed. This picture is likely driven by TB reactivation in new immigrants accompanied by a lack of social mixing and suggesting the influence of relative poverty in the development of TB.

Abstract P93 Table 1.

Demographic Factor	TB Cases (total 170)	Census data (total 307,984, unless stated otherwise)	Significance
Mean age (under 16's excluded)	32.9 (95% CI 31.12-34.68)	38.4 (95% CI 38.31-38.45) n=238,090	p<0.0001
Gender	· 102 (60%)	· 160,336 (52.1%)	p=0.04557
· Male	· 68 (40%)	· 147,648 (47.9%)	
· Female			
Mean household size	4.43 (95% CI 4.07-4.8)	2.99 (95% CI 2.98-3.01) n=101,519	P<0.0001
Country/Region of Birth	· 66 (38.8%)	· 26,807 (8.7%)	P<0.0001
· India	· 28 (16.5%)	· 16,462 (5.4%)	P<0.0001
· Pakistan	· 24 (14.1%)	· 20,945 (6.8%)	P=0.0006
· Bangladesh	· 16 (9.4%)	· 30,822 (10%)	ND
· Africa	· 13 (7.7%)	· 142,570 (46.3%)	P<0.0001
· UK	· 6 (3.5%)	· 32,893 (10.7%)	P=0.0011
· Europe			
Period in UK (years)	· 25 (15.9%)	· 27,353 (16.5%)	ND
(excluding UK born)	· 66 (42%)	· 30,140 (18.2%)	p<0.0001
· < 2	· 34 (21.7%)	· 36,634 (22.1%)	ND
· 2 - <5	· 32 (20.4%)	· 71,287 (43.1%)	p<0.0001
· 5 - <10			
· >10			
Ethnicity	· 141 (82.9%)	· 120,846 (39.2%)	P<0.0001
· South-Asian	· 14 (8.2%)	· 40,659 (13.2%)	P=0.0542
· Black African	· 1 (0.6%)	· 52,207 (17%)	P<0.0001
· White UK			
Social Grade	· 169	· 87,908	· N/A
· Total	· 15 (8.9%)	· 14,541 (16.5%)	· P=0.0066
· AB	· 54 (32%)	· 26,271 (29.9%)	· ND
· C1	· 13 (8%)	· 16,240 (18.5%)	P=0.0001
· C2	· 87 (51.8%)	· 30,856 (35.1%)	P<0.0001
· DE			

Demographic and social risk factors for TB cases in Newham compared to the general population of the borough from the 2011 census data. Social grade is based upon the job of the "Household Reference Person" as follows: A = Professional and higher management, B = Middle management, C1 = Junior management and administrative, C2 = Skilled manual workers, D = Unskilled manual and casual workers and E = Unemployed.

P94

RETROSPECTIVE STUDY TO ASSESS THE BACKGROUND INCIDENCE OF HEPATITIS B AND C IN PATIENTS WITH TUBERCULOSIS AND LATENT TUBERCULOSIS AT WHIPPS CROSS HOSPITAL

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Since 2010 our hospital has aimed to test all new patients diagnosed with tuberculosis (TB) or latent TB for hepatitis B and C. Guidelines from the NICE recommend all new patients with TB should be tested for HIV. However, no such guidelines exist regarding hepatitis B and C screening. We feel patients with undiagnosed hepatitis B and C should be identified prior to commencing anti-TB medication due to the potential risk of severe hepatotoxicity. Recently within London, anecdotally two patients with undiagnosed hepatitis treated for TB, subsequently required liver transplantation as a result of significant hepatotoxicity. A retrospective study was conducted to assess hepatitis B and C incidence within patients treated for TB and latent TB during 2012. Blood results were reviewed for any new hepatitis B/C results. Table 1 shows these results, highlighting that 4.7% of patients screened in both cohorts tested positive for Hepatitis B or C.

The two additional hospitals within the trust contribute a large number of additional TB and latent TB patients, totalling 1115 patients. Through extending the earlier observation of 4.7% Hepatitis B or C incidence in our hospital, there would be an estimated 51 patients affected across the trust.

Abstract P94 Table 1. Results of TB patients screened positive for hepatitis.

Type of TB	Total number of patients diagnosed with TB	Number of patients screened for hepatitis	Positive screening result	
			Hepatitis B	Hepatitis C
Active TB	153	143	2	6
Latent TB	59	49	1	0

Based on the individual costs of screening tests for Hepatitis B (£6.30) and C (£5.13), for the 1115 current TB patients, our trust wide hepatitis screening costs were estimated at £12,744. The approximate cost of a liver transplant operation at Kings College Hospital in 2012 was £125,000, not including the additional after care costs and accounting for possible complications. We feel the cost of hepatitis screening is outweighed by the benefits of identifying patients with positive serology in a timely fashion; permitting closer monitoring of their liver function and initiating an early gastroenterology referral.

It is vital we attempt to reduce the morbidity and possible mortality of hepatotoxicity in hepatitis positive TB patients; the financial, emotional and psychological implications for a patient undergoing a liver transplant are enormous. We propose that hepatitis screening is incorporated into current TB guidelines.

P95 WHY HAVE TB NOTIFICATIONS DECREASED BY 50% IN FOUR YEARS, IN A RURAL DISTRICT OF ZIMBABWE?

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Introduction Annual TB notifications in Buhera District, Manicaland, peaked at 1,665 in 2008 and fell to 866 in 2012. The fall in TB notifications is disproportionate to national trends.¹ We considered three possible reasons for the fall in TB incidence; a real reduction related to improved health of the population, an apparent reduction due to failure to identify or register new cases, and an apparent reduction due to fewer patients coming from outside the district to use relatively high quality services. We analysed existing data and planned further exploration.

Methods We used the district's electronic TB database maintained by the charity TB Alert. We also accessed data relating to a recent pilot of the use of GeneXpert in the District. We planned further analyses to explore within district variation in notifications. We planned interviews with TB coordinators, primary care, hospital staff and senior staff from within and outside the province.

Results The district TB register appeared complete. Treatment success rates increased from 2006 (55%) but stabilised at 65–70%. The proportion of TB patients who died peaked at 20% in 2006 and reduced to 10.5% in 2011 possibly due to changes in case ascertainment. Re-treatment cases increased from 2% in 2007 to 8.5% in 2012. Use of the GeneXpert machine identified 1 case of multi-drug resistant TB in 2008, increasing to 29 cases in 2012. The proportion of TB patients coming from outside the district seeking services appears to be constant, but high, at 22% in 2008 and 23% in 2012.

Conclusions Initial analyses suggest that TB documentation in the district is well maintained.² However there are significant changes in the local epidemiology of TB and the dramatic fall in the local incidence of tuberculosis is not completely explained. Further exploration of local TB documentation and practice associated with consultation with national and international TB experts should help to clarify the situation.

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P96 CHARACTERISTICS AND OUTCOMES OF MULTI-DRUG RESISTANT TUBERCULOSIS PATIENTS IN A MAJOR URBAN CENTRE IN THE UK

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Introduction and objectives Multi-drug resistant tuberculosis (MDR-TB), defined as TB resistant to rifampicin and isoniazid is an expanding problem. 1.6% of TB isolates in the UK are MDR-TB, but rates are higher in some parts of the world. Treatment is usually 20–24 months and frequently associated with significant side effects. In our city, MDR-TB is mostly managed in two main hospitals. We sought to examine the characteristics and outcomes of our MDR-TB patients. **Methods**

Patients from 1st Jan 2008 from one institution and 1st Jan 2009 from the other institution were included with a cutoff period of 1st May 2013 and follow up to 1st June 2013. Data was gathered from case note review and enhanced tuberculosis surveillance data.

Results 31 patients were identified; demographics are shown in table 1. Site of TB was pulmonary in 18(58%) patients, lymph node in 10(32%), soft tissue in 2(6%), and intra-cerebral in 1 (3%). 10(32%) patients were on standard anti TB treatment at time of diagnosis. 22(71%) patients developed side effects of treatment; these included ototoxicity (7 patients), gastrointestinal side effects (4 patients), hypothyroidism due to para-aminosalicylic acid or prothionamide (2 patients) and neuropsychiatric side effects from cycloserine (2 patients). 9(29%) patients underwent a surgical procedure; 7 for diagnosis and 2 to assist treatment (both lobectomies). Treatment was ongoing in 14(45%) patients and 11(35%) patients had completed treatment by the cutoff period. 4(12%) patients defaulted and 2 patients were transferred out during treatment (1 overseas, 1 to another UK centre).

Conclusions The lack of MDR-TB risk factors in a proportion of patients underscores the importance of trying to obtain microbiological samples and utilisation of resistance mutation analysis. Side effects are frequent and treatment should be undertaken by physicians with expertise. The BTS MDR-TB service plays a valuable role in management of these complex patients.

Abstract P96 Table 1.

No. Male	22 (67%)
Mean age (Median +/- IQR years)	29 (+/- 11)
UK Born	6 (19%)
Born in South Asia/Former USSR/Sub-Saharan Africa	14 (45%)/6 (19%)/5 (16%)
Time in prison	4 (13%)
HIV +ve	2 (6%)
Extensively drug resistant tuberculosis	3 (9%)
Previous or current TB treatment at diagnosis	11 (35%)
MDR-TB Contact	6 (19%)
Homelessness	2 (6%)
Renal disease	2 (6%)