centres studied. The data suggest capreomycin might be associated with less otoxicity when compared to amikacin. There are no UK guidelines to inform best practice and better evidence, including clinical and cost-effectiveness studies, is needed to inform the implementation of current technology including genetic testing.

**S5** FACTORS FOR SUCCESSFUL TREATMENT COMPLETION AMONG MDR TB CASES IN THE UK
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Background UK guidelines recommend at least 18 months treatment for patients with multi-drug resistant tuberculosis (MDR TB). Prior to 2008, treatment completion was only available for 12 months nationally in the UK, therefore the proportion completing treatment was unknown. There is also a lack of recent guidance for the treatment and management of MDR TB cases in resource rich low TB incidence settings.

Aims To report the treatment outcome at 24 months for MDR TB patients between 2004 and 2007 and examine treatment regimens and management associated with successful outcomes, taking clinical, social and demographic factors into account.

Methods A retrospective cohort study was used to follow-up MDR TB patients at 24 months nationally in the UK, therefore the proportion completing treatment was unknown. Aims were identified using the national surveillance system which contains demographic and clinical characteristics of cases and is matched routinely to reference laboratory data. Questionnaires were sent out to case managers to collect information on outcome of care and associated risk factors for treatment completion.

Results 69.6% (142/204) of patients completed treatment at 24 months and 2.9% (6) of these completed treatment within 12 months. 4.4% (9) were still on treatment, 6.9% (14) had their treatment stopped, 6.9% (14) died, 7.8% (16) were lost to follow-up and 4.4% (9) were transferred overseas. Only 40.3% (77/191) patients started on treatment received directly observed therapy at any time. Treatment with a recommended fluoroquinolone (OR=2.3; 95% CI 1.2 to 4.2, p<0.0001) or a bacteriostatic (OR 2.86; 95% CI 1.6 to 5.3, p=0.0001), a change in treatment regimen (OR=2.2; 95% CI 1.2 to 4.0, p=0.01) and treatment with four or more effective drugs (OR=2.8; 95% CI 1.1 to 3.8, p=0.02) were significantly associated with a successful treatment outcome.

Conclusion The proportion of MDR TB cases completing treatment is similar to cases with drug susceptible disease due to the use of individualised treatment regimens. However, treatment completion still remains below World Health Organization targets.

**S6** PREVALENCE OF LATENT TUBERCULOSIS INFECTION IN IMMIGRANTS TO THE UK: FINDINGS FROM A MULTI-CENTRE STUDY
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BackgroundNotifications for tuberculosis (TB) in the United Kingdom (UK) increased by 30% between 1992 and 2007 with overseas-born migrants accounting for 72% of cases in 2007. Much of this increase is due to the synergy of migration from high-TB burden countries and the reactivation of pre-existing latent TB infection (LTBI). Since 2006, NICE guidance advocates screening for LTBI in all children from countries with a TB incidence >40/100 000 and adults from Sub-Saharan Africa and countries with a TB incidence >500/100 000. The rationale underpinning these guidelines remains unclear particularly as there are little data on the prevalence of LTBI in immigrants to the UK from regions with different TB incidence rates.

Aims To quantify the prevalence of LTBI in immigrants, assess factors associated with IGRA positivity and to determine LTBI yield from current screening thresholds recommended by NICE.

Methods Analysis of data prospectively obtained through IGRA testing (QuantiFERON-Gold/QuantiFERON-Gold-in-tube) of immigrants in three different centres in the UK during 2008–2010. Descriptive analyses were undertaken. Yields at different screening thresholds were calculated. Subsequent univariate and multivariate analyses were undertaken to assess independent factors associated with IGRA positivity; p<0.05 considered significant.

Results In total 915 immigrants were screened during the study period. Median age was 26.8 years (interquartile range 22–33), 50.6% were female and 72.5% had previously been BCG vaccinated. 48.9% and 28.5% of migrants screened originated from the Indian Subcontinent and Sub-Saharan Africa, respectively. Overall 911/915 individuals had determinate IGRA results—199 (21.7%) tested positive and 712 (77.8%) tested negative; 4 (0.4%) individuals had indeterminate results. Multivariate analysis revealed that increasing age (p<0.0001) and increasing TB incidence of country of origin (p=0.0014) were independently associated with IGRA positivity. Applying current NICE guidance resulted in a yield of 76/311 (24.4%) but would miss 61.8% of the immigrant population with LTBI (Abstract S5 Table 1).
Conclusions Immigrants have a high prevalence of LTBI but current NICE guidance detects only 38.2% of new entrants with LTBI. Given the high rates of reactivation of LTBI in new entrants, our findings suggest that consideration should be given to reducing the screening threshold to include those from the Indian Subcontinent (incidence 170/100 000) which would result in 67.2% of all LTBI cases being identified.

Conclusion High throughput mobile digital radiographic screening for pulmonary tuberculosis has high sensitivity and specificity in high risk groups and should be considered as a key tool for active case finding in these populations.

Economics and the burden of respiratory disease

Introduction and Objectives Recent government initiatives rooting care of chronic conditions in primary care settings with particular emphasis on reducing hospital use require on-going collection of high-quality data. However, in most Trusts this data are not systematically reported. Data around readmissions have recently become a priority issue with proposals to penalise secondary care Trusts with high readmission rates.

Methods Asthma emergency attendances and readmissions to our Trust from 2003/4 to 2009/10 and hospital admissions and readmissions from 2001/2 to 2009/10 were obtained from Symphony and Patient Administration System (PAS). For hospital admissions discharge coding was used to identify cases.

Results 8185 emergency attendances were recorded over the 7 year period between 2003/4 and 2009/10, of which 4691 were adult (>=18 years) and 3464 children (<18 years). During this time, 2927 patients out of 4479 (65%) attended just once. Emergency