MPE trials. We developed 2 semi-objective definitions of NEL, which we hypothesised might prove more accurate and more consistent than the currently used subjective British Thoracic Society (BTS) method.

Materials and Methods A retrospective cohort study was performed, involving 93 consecutive patients who underwent local anaesthetic thoracoscopy at our centre (July 2010- January 2015). NEL was defined prospectively at 3 month follow-up in all. Post-drainage chest radiographs were retrospectively classified as 'NEL' or 'expansile' by 2 independent assessors using the subjective BTS method and the 2 semi-objective methods (Re-expansion Proportion (REP) and Lateral Apposition Ratio (LAR), shown in figure 1). Sensitivity, Specificity and Inter-observer Agreement (Cohen's Kappa, k) for NEL by each method were compared. Overall Survival (OS) based on expansion status by each method was compared using Kaplan-Meier methodology (MPE cases only).

Results 65/93 patients had MPE. Sensitivity (0.81 (95%CI 0.71–0.89)) and specificity (0.87 (95%CI 0.81–1.00)) by the BTS method were highest. REP (sensitivity 0.61 (95%CI 0.49–0.72), specificity 0.94 (95%CI 0.73–1.00)) and LAR (sensitivity 0.56 (95%CI 0.44–0.67), specificity 0.94 (95%CI 0.73–1.00)) were less accurate. Inter-rater agreement (k) for BTS, REP, LAR were 0.68, 0.46 and 0.53, respectively. In MPE patients, NEL was consistently associated with a 2–4-fold lower median OS by all methods.

Discussion The subjective BTS method appeared more accurate in predicting NEL than REP or LAR in this retrospective study, however all methods were subject to significant inter-observer variation. NEL is strongly associated with mortality. Our data highlight the clinical importance of NEL and its potential impact on MPE trial design, but do not strongly support any of these reported end-points as reliable clinical decision-making tools, trial end-points, or entry/stratification criteria. Further prospective research is needed to standardise the definition of NEL for these purposes, ideally prior to pleural drainage, and link this to patient-centred end-points.

patients before and after the policy change using a student paired t-test. To further evaluate non-UK born patients, we labelled a delayed diagnosis as ≥median time to treatment for all patients (79 days). We used a chi-squared test to look for an association before developing a logistic regression model adjusting for age, sex, occupation, time in the UK and social risk factors. Other potential confounders were not included in the final model if they had no effect on the original association. Analyses were performed using Stata15.

Results 2237 cases were identified (for summary statistics see Table 1). Pre-MVCRP there was no difference in the mean time to treatment between the UK born and non-UK born (p=0.559) but post MVCRP there was a non-significant increase for the non-UK born (p=0.076). Amongst non-UK born patients only, time to treatment increased following introduction of MVCRP (p=0.0008) and they were more likely to have a delayed diagnosis (p<0.001). A logistic regression model adjusting for confounders found that the non-UK born were 37% more likely to have a delay in diagnosis post introduction of the MVCRP (aOR 1.37, 95% CI 1.13–1.66, p=0.001).

Conclusion Our findings suggest an association between the introduction of the MVCRP and risk of a delayed TB diagnosis amongst migrants. We cannot exclude the possibility of unknown confounders. However, further investigation into the effect of policies restricting access to healthcare for migrants is urgently needed.

Abstract 27 Table 1

	Pre-MVCRP		Post-MVCRP	
	UK born	Non-UK born	UK born	Non-UK born
Total cases	178	1037	158	864
Mean age (years)	36.4	36.8	37.6	41.2
Proportion female sex	0.42	0.37	0.34	0.38
Mean time to diagnosis	133.2	122.1	120.3	163.9

TB: from screening to compliance

S27 HAVE RECENT CHANGES TO HEALTH POLICIES INCREASED DIAGNOSTIC DELAY AMONGST MIGRANT PATIENTS WITH ACTIVE TB?

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Background In April 2014 the UK government launched the 'Migrant and Visitor Cost Recovery Programme' (MVCRP): a series of policy changes to recoup costs from 'chargeable' (largely non-UK born) patients. In England approximately 75% of tuberculosis (TB) cases occur in those born abroad. Delays in treatment increase the risk of morbidity and mortality and threaten public health. We considered whether time between symptom onset and starting treatment for TB has increased since the introduction of the MVCRP.

Methods Adult TB cases notified on the London TB Register across Barts Health NHS Trust between 2011 and 2016 were identified. Incomplete data sets were excluded. We examined time to treatment between UK born and Non-UK born

S28 CHANGING DIAGNOSTIC PATTERN OF HIV AND TUBERCULOSIS CO-INFECTION IN ENGLAND, WALES AND NORTHERN IRELAND, 2000–2014

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Background HIV co-infection of tuberculosis (TB) patients is associated with TB disease progression, treatment complications, and higher mortality. Over the last decade, national guidelines have encouraged earlier diagnosis of HIV infection and greater use of anti-retroviral therapy (ART). We investigated the relationship between HIV and TB diagnoses at a national level.

Methods TB patients aged ≥15 years notified to Public Health England from 2000–2014 were linked to national HIV surveillance data. Amongst co-infected patients, we examined the order of TB and HIV diagnoses. Diagnoses were classed as 'simultaneous' if TB and HIV were diagnosed within 91 days of each other.