Supplementary material for THORAX/2010/148866

**Methods**

Patients with MDRTB were identified from the NMRL records of specimens received over a two year period from January 2008 to December 2009. For each patient, a single sample was selected, this being the earliest sample in which MDRTB was demonstrated either genotypically or phenotypically.

##### Definitions

First line drugs: rifampicin (R), isoniazid (H), ethambutol (E) and pyrazinamide (Z). Reserve drugs: amikacin, capreomycin, kanamycin, moxifloxacin, ofloxacin, prothionamide and streptomycin. (Streptomycin, although traditionally grouped with the first line drugs, is very seldom prescribed and is here placed among the reserve drugs).

Genotypically, the NMRL operates a rapid molecular service known as “Fastrack”, which uses commercial line probe assays for the rapid identification of Mycobacterium tuberculosis complex (MTBC) and rifampicin resistance, as detected by mutations in the RpoB gene.[2] Results are available within two days. Cultures are identified as MTBC using the GenoType®-Series molecular assay (Hain Lifescience GmbH, Nehren). Phenotypically, DSTs for rifampicin, isoniazid, ethambutol, pyrazinamide and streptomycin are carried out on all culture positive MTBC isolates, using the resistance ratio method on Lowenstein-Jensen slopes.[3]

When isolates were found to be either genotypically or phenotypically MDRTB, DSTs for reserve drugs were carried out in the liquid-based Mycobacteria Growth Indicator Tube (MGIT) 960 system (Becton Dickinson, Microbiology Systems, Sparks, MD) using critical concentrations previously determined, namely: moxifloxacin (0.25 µg/ml), ofloxacin (2.0 µg/ml), kanamycin (5.0 µg/ml), capreomycin (2.5 µg/ml), amikacin (1.0 µg/ml) and prothionamide (2.5 µg/ml), as described elsewhere.[4, 5]

### **Criteria for inclusion in the main study**

Patients were included who had a “complete drug profile” as defined above. Failure to complete drug profiles was due either to individual contaminated drug tubes or to isolates contaminated by non-tuberculous mycobacteria. In either case, no pure culture could be obtained after attempted decontamination.