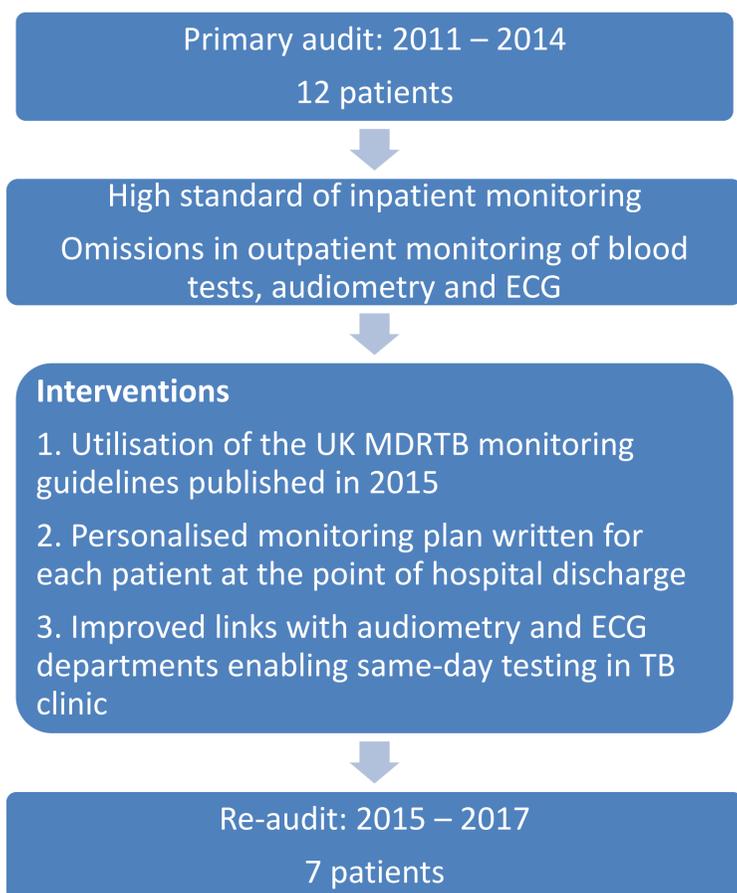


Using the UK multi-drug resistant tuberculosis monitoring guideline to improve the monitoring of patients in the community

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Background

The complex treatment regimens used to treat multi-drug resistant tuberculosis (MDR-TB) frequently result in significant drug toxicity. Monitoring for toxicity is often poorly executed. We used the UK MDR-TB monitoring guideline¹ as a standard to audit and improve practice in our tertiary TB centre.

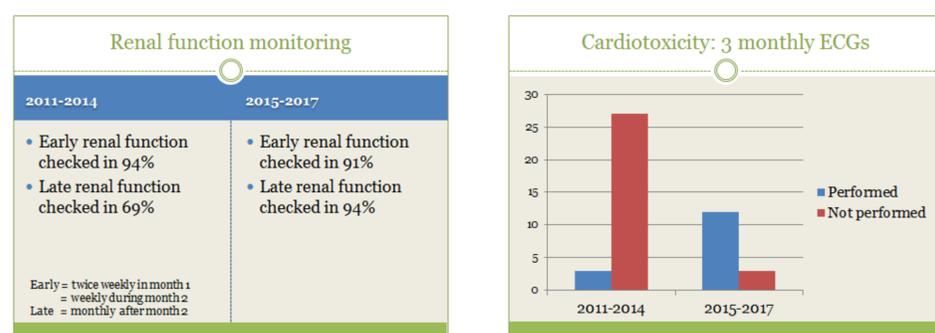
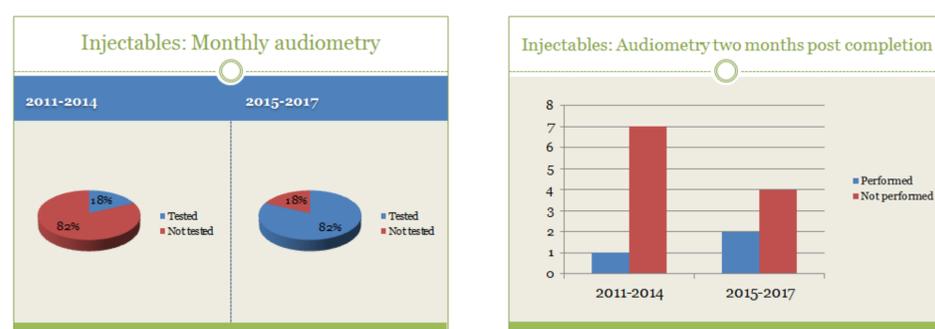


Methods

Adherence to monitoring guidelines, defined by the UK TB Drug Monographs (www.tbdrugmonographs.co.uk), were compared pre and post-intervention. Data were collected from patient case notes. We present five areas which showed low standards of monitoring in the first audit: audiometry, renal function, ECG, amikacin levels and thyroid function tests.

Results

The following results were superior after the interventions.



Overall results

Test	2011-2014	2015-2017
Monthly Audiometry	18%	82%
Late renal function	69%	94%
Three-monthly ECG	10%	80%
Amikacin levels	79%	69%
Monthly thyroid testing	57%	56%

Conclusion

Since 2014, the outpatient toxicity monitoring of MDR-TB patients at our centre has improved significantly which we attribute to the availability of the UK monitoring guideline and the interventions described above. Six patients in the second cohort required a switch in medication due to toxicity concerns which highlights the importance of this project. We recommend routine use of the TB drug monographs to monitor practice.

On-going work to improve monitoring includes exploring the feasibility of in-house testing of amikacin levels, reviewing visual acuity practices and uploading ECGs and audiometry reports to our electronic records system.

References

- Potter JL, Capstick T, Ricketts WM, Whitehead N, Kon OM. A UK-based resource to support the monitoring and safe use of anti-TB drugs and second-line treatment of multidrug-resistant TB. *Thorax*. 2015 Mar 1;70(3):297-8.