

Survey of vision screening practices for patients on ethambutol for TB



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Introduction

In the UK there is a lack of clear guidance on what assessments are needed for patients prescribed ethambutol as part of treatment for tuberculosis. The UK Royal College of Ophthalmologists issued guidance in October 2017 *'whilst regular screening of adults or children taking ethambutol is not considered necessary, it is important to establish if there is any history of eye disease and a baseline visual assessment should be arranged by the prescriber before taking the drug. The responsible practitioner should advise the patient/carer to discontinue the drug if fresh visual symptoms are experienced and to seek prompt medical review.'* The UK National Institute for Health and Care Excellence (NICE) TB Guidelines recommend treatment with ethambutol (2HRZE/4HR) but make no statement on vision testing. Other guidance such as the British Thoracic Society's TB Drug Monographs recommend regular testing of selected groups. The British National Formulary recommends 'Visual acuity should be tested by Snellen chart before treatment with ethambutol. In young children, routine ophthalmological monitoring recommended' (BNF 2018).

Aims

We report a survey of UK TB units assessing whether vision is routinely tested in patients treated with a standard course of ethambutol with the aim to highlight if clear guidelines on the testing of vision in such patients is needed

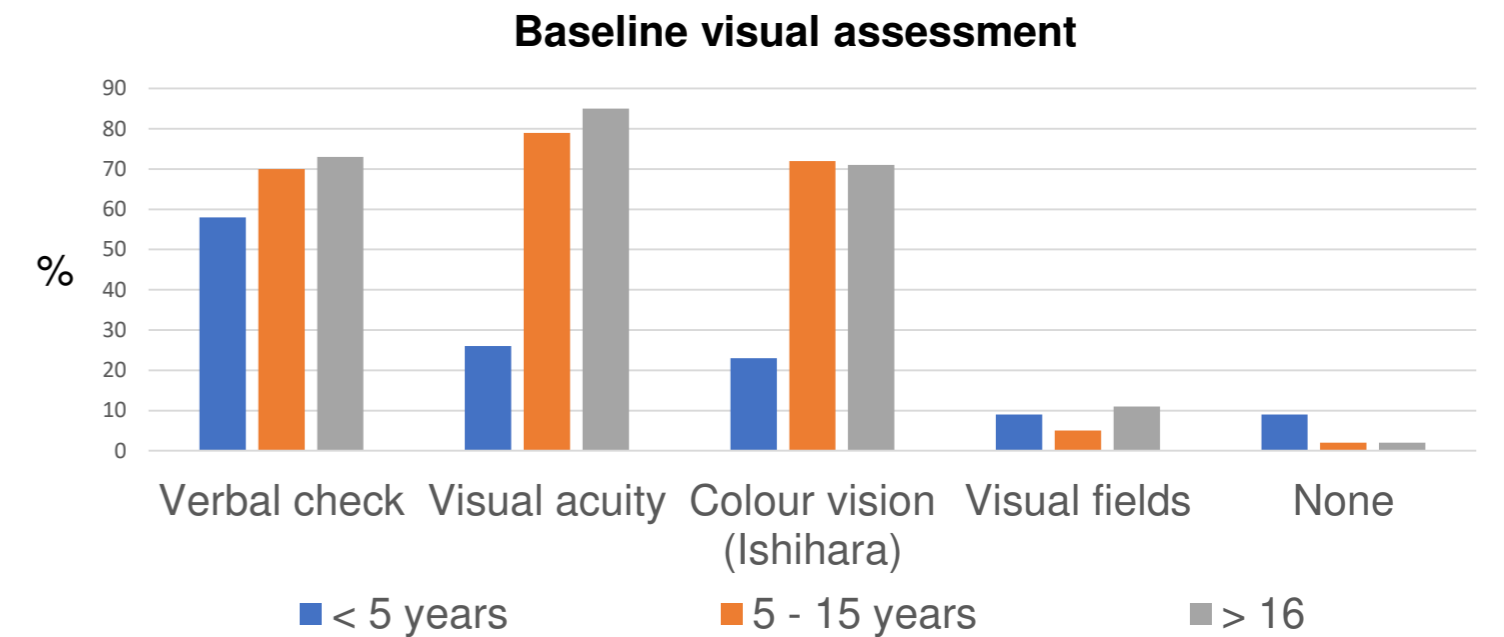
Methods

Sixty six TB professionals responded to the online survey sent to the lead TB nurse in each acute Trust in England. This represented a response rate of 54%. Of the 66 responses 43 (65%) were from TB nurses who care for children and adults and 35% from nurses who care only for adults. Twelve percent of respondents cared for over 10 paediatric cases in 2016, 8% 5 to 10 cases and 80% less than five cases. Respondents were fairly evenly distributed across the country. We present here the paediatric related responses.

Results

Our survey showed that:

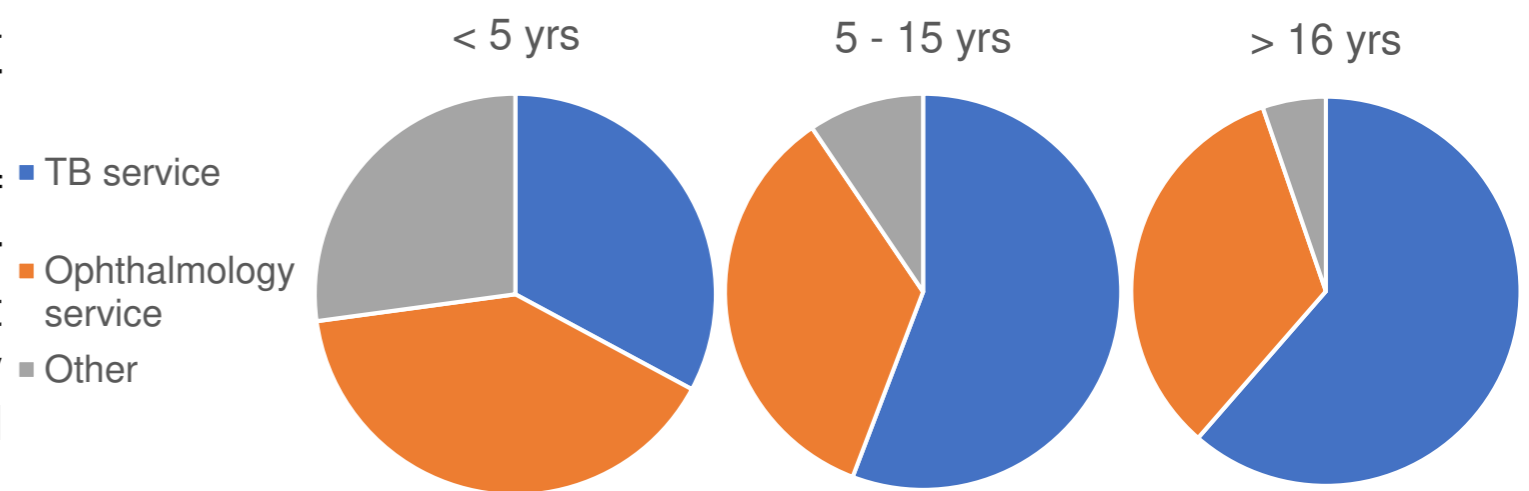
- 86% of children aged 5 to 15 and 44% of preschool children (<5 years old) have a visual assessment before starting ethambutol.
- Once on treatment visual checks vary by age group with 3/4 of 5 to 15 year olds having a symptom check with much smaller proportions having specific visual assessment undertaken (see table).
- For children aged 5 to 15, 53% have their vision checked by the TB Service and 33% by an ophthalmology service. In comparison for children under five 23% are checked by the TB Service and 28% by the ophthalmology service.
- Training in visual screening for TB nurses is provided on the job for 58%, by the ophthalmology service for 21% and by others in 5%.
- Nearly 3/4 of TB Services do not have a protocol for assessing vision before or during ethambutol treatment.
- All respondents advised patients that if they noticed any visual change after starting ethambutol they should contact their TB case manager immediately (45%) and in addition 55% also advised patients to stop their ethambutol.



Visual checks during the first 2 months of treatment

	None	Symptom check	Visual acuity	Colour vision	Visual fields	Other
< 5 yrs	21% (9)	53% (23)	5% (2)	5% (2)	2% (1)	5% (2)
5 - 15 yrs	14% (6)	74% (32)	16% (7)	23% (10)	7% (3)	2% (1)
> 16 yrs	17% (11)	73% (48)	21% (14)	24% (16)	9% (6)	2% (1)

Who performs the visual assessment for patients seen in outpatients



Conclusion

There is no question about the need for screening for high dose or prolonged treatment with ethambutol such as in multi-drug resistant TB, however this survey highlights the need for clear UK guidelines on the testing of vision for patients taking ethambutol at recommended doses, before and during treatment. The recommendations need to define the indications for testing of children by ophthalmologists, whilst recognising that starting treatment cannot be delayed. The guidance needs to be formulated by joint representation from both paediatric and adult infectious diseases specialist groups, the British Thoracic Society and the Royal College of Ophthalmologists.