

Accurate diagnosis of latent tuberculosis in children, people who are immunocompromised or at risk from immunosuppression and recent arrivals from countries with a high incidence of tuberculosis: systematic review and economic evaluation

Peter Auguste,¹ Alexander Tsertsvadze,² Joshua Pink,¹ Rachel Court,¹ Farah Seedat,¹ Tara Gurung,¹ Karoline Freeman,¹ Sian Taylor-Phillips,¹ Clare Walker,¹ Jason Madan,³ Ngianga-Bakwin Kandala,⁴ Aileen Clarke¹ and Paul Sutcliffe^{1*}

¹Warwick Evidence, Division of Health Sciences, Warwick Medical School, University of Warwick, Coventry, UK

²Evidence in Communicable Disease Epidemiology and Control, Division of Health Sciences, Warwick Medical School, University of Warwick, Coventry, UK

³Clinical Trials Unit, Warwick Medical School, University of Warwick, Coventry, UK

⁴Department of Mathematics and Information Sciences, Faculty of Engineering and Environment, Northumbria University, Newcastle upon Tyne, UK

*Corresponding author

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Plain English summary

Accurate diagnosis of latent tuberculosis in three population groups

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Tuberculosis (TB) is one of the biggest causes of illness and death worldwide. People with TB who are not infectious and have no symptoms (the majority) have latent tuberculosis infection (LTBI). Some people with LTBI may develop active TB during their lifetime.

There are two types of tests used to identify LTBI in the UK: (1) the tuberculin skin test (TST) and (2) interferon gamma release assays (IGRAs). This review compares whether the TST or IGRAs offer better value for money in detecting LTBI in children, in people who have low immunity and in recent arrivals from countries with high levels of TB.

We searched the evidence available and built a model to determine which test offers the best value for money in detecting LTBI.

We identified 90 studies. In children we found no difference between IGRAs and TST 5 mm but IGRAs performed better than TST 10 mm in identifying LTBI. In people with low immunity, IGRAs and TST performed better at ruling out LTBI than identifying people who did have LTBI. There was considerable variability in the results between different studies. For people recently arrived in the UK from high-incidence countries, TST performed better than IGRAs at identifying LTBI.

The economic model showed that the best-available options were:

- in children: TST followed by IGRAs if negative
- in people with low immunity: IGRAs followed by TST if negative
- in the recently arrived population: TST alone.

The evidence was limited and future research is needed.

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Editorial contact: nhredit@southampton.ac.uk

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