

DAILY ENGLISH READING

25 July 2026 · 30-minute active reading pack for Davin

TODAY'S QUESTION

Which tuberculosis interventions create the greatest population impact - and are they worth the cost?

WHY SELECTED

This open-access study is ideal for practising research English that is directly useful in clinical and health-economic work: model calibration, intervention comparison, uncertainty intervals, DALYs, incremental cost-effectiveness ratios and sensitivity analysis. It also trains an important habit: a clinically effective intervention may still have limited population impact if it reaches only a small target group.

Difficulty: C1 · public health modelling + health economics

READING ORDER · 30 MINUTES

Min	Task	Focus
0-3	Preview	Read the title, abstract numbers and comprehension questions. Predict which interventions will have the largest impact.
3-15	Main article	Read the abstract and Discussion. Scan Results for impact, ICERs and sensitivity analysis.
15-20	Support 1	Read the WHO TB fact sheet. Note disease burden, treatment access and structural risk factors.
20-25	Support 2	Read the WHO Global TB Report overview. Connect the modelling results to funding constraints.
25-30	Output	Answer the questions briefly, then complete the speaking task.

SOURCES · OPEN ACCESS

MAIN · Nature Health · 21 Jul 2026

Global impact and cost-effectiveness of tuberculosis interventions

<https://www.nature.com/articles/s44360-026-00171-5>

SUPPORT 1 · World Health Organization · 24 Mar 2026

Tuberculosis: fact sheet

<https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

SUPPORT 2 · World Health Organization · 12 Nov 2025

Global Tuberculosis Report 2025: top findings and messages

[WHO top findings page](#)

BRIEF BACKGROUND

Tuberculosis remains the world's leading cause of death from a single infectious agent. WHO reported that 10.7 million people developed TB and 1.23 million died from it in 2024. TB burden is shaped not only by diagnosis and treatment, but also by structural drivers such as HIV, undernutrition, incarceration, diabetes and poverty.

The main study calibrated a deterministic transmission model to Brazil, India and South Africa. It compared seven interventions across prevention, screening, diagnosis and treatment. The researchers standardized scale-up, coverage and evidence assumptions so that very different interventions could be compared on a common basis.

Three interventions prevented more than 10% of incident symptomatic TB episodes by 2050: vaccination, symptom-agnostic community-wide screening and prison screening in Brazil. Other interventions generally prevented fewer than 5% of total episodes because they targeted smaller populations.

Cost-effectiveness did not move in exactly the same direction as epidemiological impact. Shorter treatment for drug-resistant TB was cost-saving across settings. Prison screening and nutritional support had low ICERs, while community-wide screening could be highly impactful but expensive.

STATISTICAL / SP LENS

Separate four layers: (1) model inputs and calibration targets, (2) intervention assumptions, (3) outcomes such as episodes and DALYs averted, and (4) economic comparisons such as incremental cost and ICER. Then examine uncertainty intervals and sensitivity analyses before accepting a point estimate.

KEY VOCABULARY

Term	中文	Meaning / use
cost-effectiveness	成本效果；成本效益	Whether an intervention delivers sufficient health benefit for its additional cost.
incremental cost	增量成本	The additional cost compared with business as usual.
ICER	增量成本效果比	Incremental cost divided by the additional health benefit.
DALY averted	避免的伤残调整生命年	A measure of healthy life years preserved by an intervention.
calibrate a model	校准模型	Adjust model parameters so outputs match observed indicators.
deterministic model	确定性模型	A model in which fixed inputs produce fixed outputs.
transmission model	传播模型	A model that represents infection and disease transmission over time.
business as usual	常规情景；维持现状	The baseline scenario used for comparison.
coverage	覆盖率	The proportion of the target population reached.
target population	目标人群	The population eligible for or reached by an intervention.
structural driver	结构性驱动因素	A social or system-level factor that shapes disease risk.
incident episode	新发病例/事件	A newly occurring episode during a defined period.
uncertainty interval	不确定性区间	A range reflecting uncertainty in model estimates.
sensitivity analysis	敏感性分析	How results change when assumptions or inputs vary.
cost-saving	节约成本的	Improves outcomes while reducing total cost.

USEFUL PHRASES

1. compare interventions across settings

5-MINUTE SPEAKING / OUTPUT TASK

Your role: Give a short English summary during a CRO or public-health evidence meeting.

Minute 1 · Build the structure

Write six keywords: *TB burden / model / three countries / seven interventions / impact / cost-effectiveness*.

Minutes 2-3 · First take

Speak for 60-90 seconds. Use at least three phrases from the phrase list. Do not stop to correct grammar.

Minute 4 · Add analytical caution

Explain why a single ICER or percentage averted should not be read alone. Mention uncertainty intervals, assumptions, coverage or real-world operational constraints.

Minute 5 · Final take

Speak again for about 90 seconds using this structure:

1. The study compares...
2. The model was calibrated to...
3. The interventions with the largest projected impact were...
4. However, impact and cost-effectiveness did not always move together...
5. My main takeaway is that...

ONE SENTENCE TO KEEP

“An intervention's population impact depends not only on how well it works, but also on how many high-risk people it can realistically reach.”