

# Sex-disaggregated data on food-supplement spending and cost-effectiveness of the short MDR-TB treatment within the STREAM trial

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## Background

### STREAM Phase I:

- was a non-inferiority trial which showed that the 9-11 months 'Bangladeshi' regimen is non-inferior to the 20-24 months regimen
- included a prospective assessment of the MDR-TB treatment costs to participants and health systems within the clinical trial, in Ethiopia and South Africa
- short-regimen reduced health system costs by 20-25%, and was associated with an earlier return to work and a reduction in the purchase of supplementary food



The health economic data collected are now being explored in relation to gender

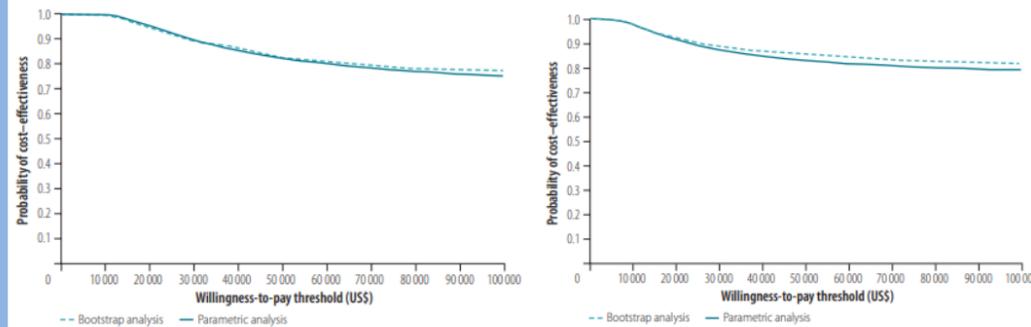
Probabilistic estimates of the likelihood that the Short-regimen is cost-effective will be presented

Probabilistic sensitivity analyses were conducted separately for Ethiopia and South Africa using 1,000 bootstrapped estimates of mean costs and outcomes, to calculate the probability of cost-effectiveness for each country, at a range of willingness-to-pay thresholds for the trial primary outcome

All data analysis was performed in Stata v.15.1

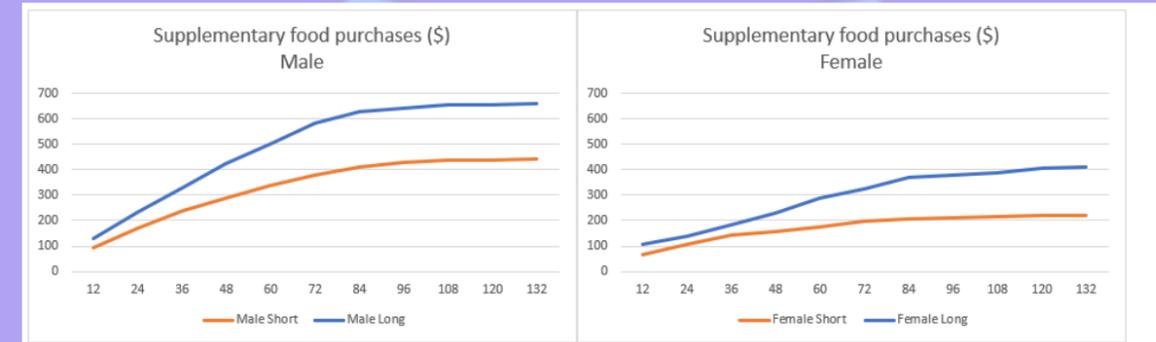
## Results

**The probability that the short regimen is cost-effective is above 95% if the willingness to pay for each additional favourable outcome is less than US\$19,000 in Ethiopia and US\$14,500 in South Africa**



Madan, Jason, Rosu, Laura & Tefera, Mamo et al. (2020). Economic evaluation of short treatment for multidrug-resistant tuberculosis, Ethiopia and South Africa: the STREAM trial. *Bulletin of the World Health Organization*. 98. 306-314. 10.2471/BLT.19.243584.

**Men spent more than women on supplementary food on both the Short (by US\$221) and Long-regimen (by US\$249) over the duration of the study**



- women on the Short regimen substantially reduced their supplementary expenditure after treatment end, while men spent approx. \$32 a month until week 96, when they reported a spend of \$16.
- both men and women on the Long regimen reported substantially reduced supplementary food spending at week 96, first interview after treatment end

More women than men were working 8 hours or longer at week 48, on both regimens, however, by week 132, approx. 69% of male and females on the short regimen and 77% on the long regimen were working 8 hours or longer a day

## Methods

Supplementary spending and working hours data were collected at 12-week intervals from the start of treatment (week 0) up to week 132

For each arm (short n=80, long n=40), patients have been split by gender, with mean supplementary food spending and mean working hours at each interview time point.

## Conclusions

### Study strengths:

- Short regimen is highly likely to be cost-effective;
- Expenditure on supplementary food is an important driver of gender differences in MDR-TB patient costs

### Limitations:

- Willingness-to-pay threshold difficult to determine precisely;
- Supplementary food expenditure and working hours data only available for Ethiopia;
- This study only measures the TB/TB treatment impact on the patient, but usually the impact of the disease is also felt strongly by their children and families

### Further research:

- To determine why more was spent by men than women on supplements;
- Recommend targeted interventions for men and women
- Estimate the willingness-to-pay threshold

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