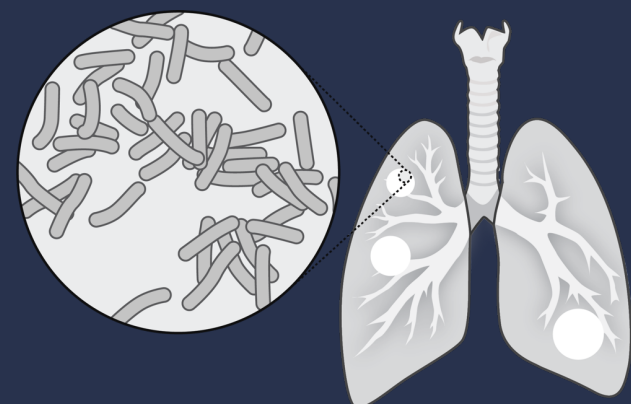


Cost-Effectiveness of Alternative Strategies for Tuberculosis Household Contact Investigation in Rural and Urban South Africa



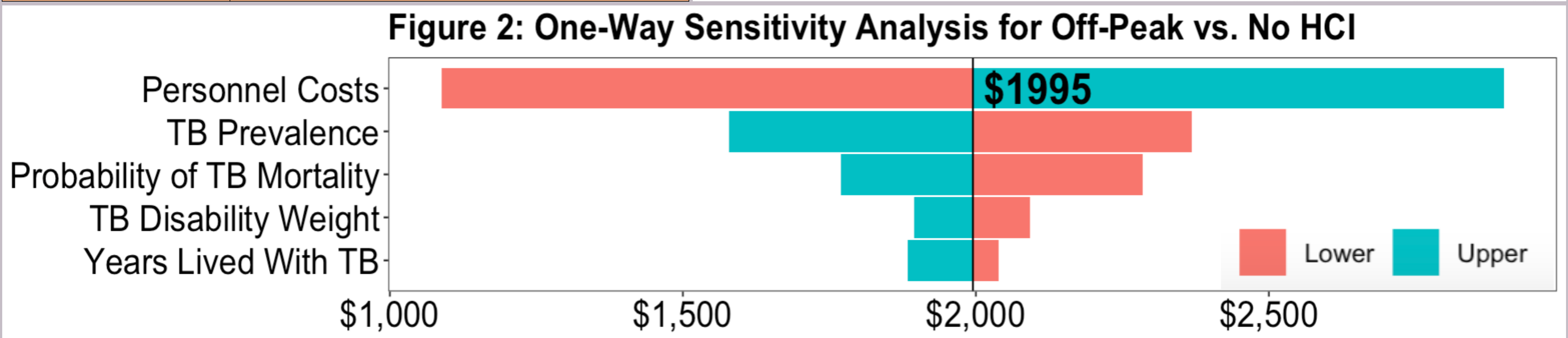
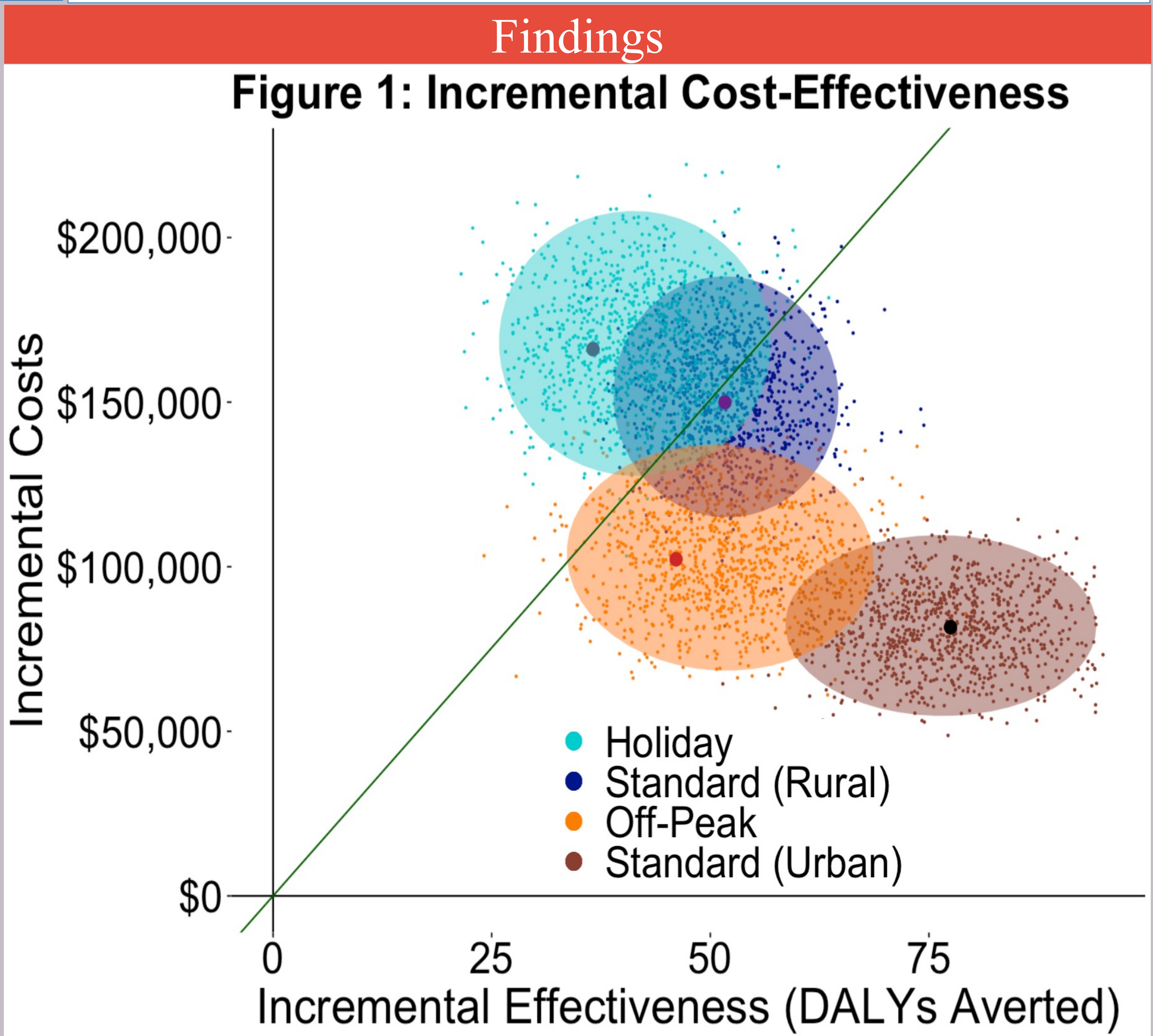
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Introduction
<ul style="list-style-type: none">• High Risk of TB Among Contact Persons: ~ >40% have latent TB infection.¹• Challenges in LMICs: Contact persons are often unavailable during business hours.^{2,3}• Cost-effectiveness Question: Is <u>extending routine hours of standard household contact investigation</u> (HCI) cost-effective?

Methodology
<ul style="list-style-type: none">• Costs from expenditures (Jan 1 – Dec 31, 2022).• Health system perspective.• Outcome: Incremental cost per TB-attributable disability-adjusted life-year (DALY) averted.<ul style="list-style-type: none">• Compared to a <u>no-HCI</u> scenario.• Cost effectiveness <u>threshold of \$3,015 per DALY averted (2022 USD).</u>

Strategies	
<ul style="list-style-type: none">• Rural Limpopo: Standard HCI (weekdays 08:00 –16:00) vs. public holiday periods.• Urban Soshanguve: Standard HCI vs. off-peak (after 16:00 and weekends).	
Treatment Arm	Cost per DALY Averted (2022 USD)
Standard (Rural)	<u>\$2,900 [\$2,100 - \$4,000]</u>
Holiday (Rural)	\$4,500 [\$2,800 - \$6,300]
Standard (Urban)	<u>\$1,000 [\$710 - \$1,500]</u>
Off-Peak (Urban)	<u>\$2,000 [\$1,300 – \$3,200]</u>



Discussion & Conclusion
<p>While <u>novel strategies are less cost-effective than the standard approach</u>, HCI during off-peak hours remains likely cost-effective in urban areas. Key drivers of cost-effectiveness are <u>personnel costs, TB prevalence, and travel expenses (rural only).</u></p>

References
<ol style="list-style-type: none">1. Velen, K., Shingde, R. V., Ho, J., & Fox, G. J. (2021). The effectiveness of contact investigation among contacts of tuberculosis patients: A systematic review and meta-analysis. <i>European Respiratory Journal</i>, 58(6), 2100266. https://doi.org/10.1183/13993003.00266-20212. World Health Organization. (2012). <i>Recommendations for investigating contacts of persons with infectious tuberculosis in low- and middle-income countries</i>. https://www.who.int/publications/i/item/97892415044923. Paudel, K., Nalutaaya, A., Robsky, K. O., Kitonsa, P. J., Nakasolya, O., Mukibi, J., Isooba, D., Kendall, E. A., Katamba, A., & Dowdy, D. (2023). The impact of time at home on potential yield of home-based TB contact investigation. <i>The international journal of tuberculosis and lung disease: the official journal of the International Union against Tuberculosis and Lung Disease</i>, 27(2), 121–127. https://doi.org/10.5588/ijtld.22.0394