

Increased child contact investigation and tuberculosis preventive treatment management through a community-based intervention in Cameroon and Uganda: Results of the contact cluster randomized trial

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Context

In tuberculosis (TB) endemic countries, the screening and management of household contacts remains low including the uptake of TB preventive treatment (TPT). One of the challenges is the necessity for parents to bring children to the health facility for TB screening and TPT initiation. This study evaluated TPT initiation and completion in a community-based intervention compared to the facility-based standard of care among eligible household child contacts in Cameroon and Uganda.

Methods

This is a multicentre cluster randomized controlled trial with twenty TB diagnostic and treatment facilities and catchment areas randomized between intervention and standard of care arms. Bacteriologically confirmed index cases were asked to declare household contacts. The intervention included screening for TB in household contacts by community health care workers with referral of symptomatic child contacts to a facility for TB diagnostic investigations; TPT initiation for child contacts—a negative symptom screen and <5 years irrespective of HIV status or 5-14 years for children living with HIV (CLHIV); and TPT follow-up through home visits. TPT completion was defined as > 90% drug intake within 120 days. We compared the proportion of declared child contacts <5 years or CLHIV (5-14 years) who initiated and completed TPT between the two arms using a generalized linear mixed model.

Results

Between November 2019 and December 2021, a total of 558 and 341 index cases were enrolled in the intervention and standard of care arms, declaring 1,895 and 1,005 child contacts, respectively. Of them, 383 index cases were enrolled in Uganda with a total of 1244 declared child contacts. Of the 941 and 459 potentially TPT eligible declared child contacts (<5 years or CLHIV aged 5-14 years) in the intervention and standard of care arms, 80% initiated and completed TPT in the intervention arm vs 61% in the standard of care arm, respectively.

Conclusion

Scaled-up, community-based interventions have the potential to improve TPT coverage and outcomes among child contacts in resource-limited settings.