How tuberculosis contact management by community health workers improved the uptake of tuberculosis preventive treatment in high tuberculosis incident and resource-limited countries

Press release | Marseille, October 31, 2023

The *Lancet Global Health* journal publishes two important papers, on October 30, showing the effectiveness and health economical impact of community-based intervention for household child contact management. Led by the French National Research Institute for Sustainable Development (IRD), the CONTACT study for Community Intervention for Tuberculosis Active Contact Tracing and preventive therapy, was part of the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)’s CaPT-Tuberculosis (TB) Project and was funded by global health organization Unitaid. The study, performed in Cameroon and Uganda in collaboration with Epicentre in Uganda, EGPAF in Cameroon and National Tuberculosis Programs of both countries, sought to introduce innovative models of care to address the diagnostic and prevention gaps in children affected by or exposed to TB. The University of Sheffield evaluated the cost-effectiveness of the CONTACT study intervention.

The World Health Organization (WHO) estimates that more than 1 million of children are suffering from tuberculosis each year but less than 40% of them have been notified to WHO by national tuberculosis programs in 2021, mainly because they are not diagnosed. Identifying people who have been exposed to tuberculosis (contacts) and ensuring that they are screened for tuberculosis critical to ensuring early diagnosis and, thereby providing tuberculosis preventive treatment (TPT) for those who are living with or at risk for TB infection. Child contacts under 5 years old and individuals living with HIV are priority target populations for TPT because they are at a higher risk of getting sick and dying of TB. In 2018, Member States committed to provide TPT to 4 million child contacts under 5 years of age by 2022 yet only 55% of this target was met as reported at United Nations High Level Meeting on TB in September 2023.

Despite available evidence and recommendations, contact investigation remains poorly implemented in many high TB incidence and resource-limited countries due to operational challenges such as a lack of financial investments and limited human resource capacity. A key challenge affecting the coverage of contact investigation is the necessity for parents to bring child contacts to the health facility for TB screening and management of TPT. Community-based approaches for household child contact management could increase the contact investigation coverage and TPT uptake by bringing those services closer to the people in need and reducing the financial burden.

The CONTACT study is the first cluster randomized controlled trial to evaluate a community-based intervention for tuberculosis screening and TPT management of household child contacts by community-health workers. The study compared its effectiveness, feasibility, and cost-effectiveness to the facility-based standard of care. The study was performed in Cameroon and Uganda and shows that community-based contact investigations performed by community-health workers increases the coverage, initiation, and completion of TPT among child contacts under 5 years old or 5-14 years old children living with HIV. The proportion of child contacts of all ages who were screened for TB increased from 47.3% in the standard of care arm to 81.9% in the intervention arm and the proportion of child contacts in the TPT target group that initiated and completed TPT increased from 61.7% in the standard of care arm to 79.9% in the intervention arm. The intervention prevented 15 tuberculosis deaths in Cameroon and 10 in Uganda. The incremental cost-effectiveness ratio was $620 per disability-adjusted life-year (DALY) averted in Cameroon and $970/DALY averted in Uganda. The intervention in Cameroon and Uganda would be considered cost-effective at willingness-to-pay thresholds of $1,000/DALY averted. In addition, as previously reported the
intervention significantly reduced the median household cost as compared to the standard of care in both countries.

The CONTACT study confirms that decentralizing contact investigation at the household level using community-health workers is feasible and effective in improving child contact screening coverage, TPT uptake and completion as compared to facility-based standard of care. Impact and cost-effectiveness of such interventions would be greater in settings with higher TB disease prevalence among contacts and lower for existing coverage of screening for child household contacts. Decentralizing contact investigations at household level is likely to contribute to filling the TB case finding and prevention among children and can play a critical role to reach the targets set for 2027.

---

References


Contacts

Maryline Bonnet, pulmonologist and epidemiologist, IRD research director – maryline.bonnet@ird.fr
Martina Casenghi, PhD, Director of TB Program, Elizabeth Glaser Pediatric AIDS Foundation – mcasenghi@pedaids.org
Pete Dodd, professor of Mathematical Modelling and Epidemiology, University of Sheffield – mediateam@sheffield.ac.uk

---

Press contact

IRD | Charlotte Gabet – presse@ird.fr
EGPAF | Daniel J. Pino – dpino@pedaids.org
University of Sheffield | Amy L Huxtable – a.l.huxtable@sheffield.ac.uk / mediateam@sheffield.ac.uk
About IRD
IRD is a multidisciplinary French public research organization committed to equitable partnerships with countries in the Global South and in the French overseas territories for nearly 80 years. As a contributor to the achievement of the international development agenda, the IRD aligns its priorities with the implementation of the Sustainable Development Goals (SDGs). Together, scientists and the Institute's partners propose concrete solutions to the global challenges facing societies and the planet. This win-win relationship makes science and innovation major levers for development.

About EGP AF
EGPAF is the global leader in the fight against pediatric HIV and AIDS and has reached nearly 34 million pregnant women with services to prevent transmission of HIV to their babies. With a global footprint spanning support to 19 countries, EGPAF currently supports direct health service delivery in nearly 5,000 sites; advances innovative research; and broadens global advocacy to ensure dramatic, positive change to the lives of millions of women, children, and families worldwide.
https://pedaids.org/

About university of Sheffield
The University of Sheffield is a leading Russell Group university, with a world-class reputation. Over 30,000 students from 150 countries study at Sheffield. In a truly global community, they learn alongside over 1,500 of the world’s leading academics. Sheffield’s world-shaping research feeds into its excellent education. Students learn at the leading edge of discovery from researchers who are tackling today’s biggest global challenges. Driven by outstanding people, staff and students share a commitment to changing the world for the better, through the power and application of ideas and knowledge. From the first documented use of penicillin as a therapy in 1930, to building Europe’s largest research-led manufacturing cluster, Sheffield’s inventive spirit and top quality research environment sets it apart.
Current research partners include Boeing, Rolls-Royce, Unilever, AstraZeneca, GlaxoSmithKline, Siemens and Airbus, as well as many government agencies and charitable foundations. Sheffield’s Students’ Union has won the Whatuni StudentChoice Award for Best Students’ Union for five consecutive years. Students can choose from 350 societies and clubs, or join over 2,000 volunteers. Over 300,000 Sheffield alumni from 205 different countries make a significant influence across the world, with six Nobel Prize winners included amongst former staff and students.
https://www.sheffield.ac.uk/

About Epicentre
Epicentre is a Médecins Sans Frontières (MSF) satellite dedicated to epidemiology, medical research, innovation and training. Its experience and presence within MSF enable it to design and carry out projects in complex and often unstable situations, specific to humanitarian aid, to meet the health needs of populations and support MSF’s public action. Today, Epicentre carries out field epidemiology activities, research projects and training sessions in support of MSF’s objectives to provide medical aid in regions where people are suffering from conflicts, epidemics, disasters or where access to healthcare is insufficient or non-existent.
https://epicentre.msf.org/
About Unitaid
We save lives by making new health products available and affordable for people in low- and middle-income countries. We work with partners to identify innovative treatments, tests and tools, help tackle the market barriers that are holding them back, and get them to the people who need them most – fast. Since we were created in 2006, we have unlocked access to more than 100 groundbreaking health products to help address the world’s biggest health challenges, including HIV, TB, and malaria; women’s and children’s health; and pandemic prevention, preparedness and response. Every year, more than 170 million people benefit from the products we’ve helped roll out.
https://unitaid.org/