ADVANCING CHILDHOOD TUBERCULOSIS CONTROL IN VIETNAM

CHILDHOOD TB IN VIETNAM: GAPS IN DETECTION AND PREVENTION

- Approximately 2,000 new TB cases among children in 2018
- Almost 90 percent of new childhood TB cases are currently undetected
- Limited childhood TB diagnosis and management capacity at primary and secondary health care levels
- Low uptake of isoniazid preventive therapy (less than 50 percent) among eligible at-risk children
- Limited prevention and treatment of multi-drug resistant TB (MDR-TB) in children
- Inadequate recording and reporting of TB cases in children

LINKING PUBLIC AND PRIVATE PARTNERS TO REDUCE TB BURDEN AMONG CHILDREN

Tuberculosis (TB) is a leading cause of illness worldwide. The World Health Organization (WHO) ranks Vietnam as the 16th highest TB-burdened country in the world. In 2018, 102,171 TB cases were identified in Vietnam—approximately 2,000 of which were among children aged 0-14 years. An estimated 3.6% of new cases and 17% of previously treated cases had forms of the disease that do not respond to the most powerful TB medicines. Approximately 13,000 people died of TB in Vietnam that year.

Since 2008, PATH has been working with national and international partners to improve TB case detection and treatment in Vietnam, harnessing the power of a mix of public and private sector partners to identify and treat people with TB. By 2018, over 12,000 cases of TB had been detected through this successful approach.

Since 2016, PATH and Johnson & Johnson have been working together to address the high TB burden among children in Vietnam. Recent data indicates that almost 90 percent of new childhood TB cases in Vietnam are undetected. TB progresses more rapidly in children, but can be much harder to detect than in adults. Preventive treatment for children in close contact with people with TB is available, but a lack of systematic screening and treatment enrollment means that only 26% of eligible children in Vietnam are placed on preventive treatment each year. Because of the significant gap in screening, diagnosis, and preventive treatment, tens of thousands of children are suffering unnecessarily, and infection is left to spread.

BREATHE FOR LIFE

PATH and Johnson & Johnson initiated Breath for Life in recognition that cross-sector collaboration can play a powerful role in reducing childhood mortality and morbidity caused by TB. The overall goal is to demonstrate a replicable model—in Nghe An, a province heavily burdened with TB and HIV—for strengthening the detection, treatment, and management of pediatric TB. Breath for Life leverages the capacity of both the National TB Control Program (NTP), and the public and private non-NTP systems. Key project collaborators include the Nghe An Provincial Health Department (PHD) and the Nghe An Provincial Lung Hospital (NAPLH).

RESULTS FROM B4L 1.0

- In one year, Breath for Life doubled the number of children diagnosed with TB in four districts of Nghe An, from 74 to 148, and the project contributed to an overall increase in case-detection in the entire province.

- In under two years, the number of eligible children in the four project districts enrolled in isoniazid preventive therapy (IPT) multiplied by almost five times: growing from 49 in 2015 to 271 by the end of 2017. IPT enrollment also increased across Nghe An. The proportion of eligible children enrolled in IPT versus those who were not enrolled in the four project districts also increased by over 20 percent from 77 percent in 2015 to 92 percent in 2016. This rate was sustained for 2017.

- A social return on investment analysis found for every US$1 invested in Breath for Life, project stakeholders (health workers, decision-makers, communities, and families) gained US$32 worth of benefit; including increased confidence and knowledge among health care professionals, and reduced psychological and economic burden for parents of children with or at risk of TB.
TECHNICAL APPROACH

Breath for Life applies a health systems strengthening approach to optimize pediatric TB services, including:

- **Strengthening the capacity of health workers** at primary, secondary, and tertiary health care levels to diagnose, treat, prevent, and manage TB cases in children.
- **Engaging non-NTP health facilities to collaborate with the NTP on pediatric TB management**, leveraging the public-private mix network previously developed by PATH in Nghe An.
- **Working with the Nghe An PHD and PTLH to establish four pediatric TB consultation units at district level**, which are implementing a collaborative procedure for childhood TB diagnosis at the district level (rather than referring to the provincial level by default).
- **Supporting communes to implement a systematic approach for identifying and screening children in close contact with adults diagnosed with TB** to actively detect new cases and enroll eligible children in isoniazid preventive therapy (IPT).
- **Capturing and sharing the results and lessons learned with decision makers** to drive and support provincial and national level scale up of the Breath for Life model.

FOCUS OF B4L 2.0: FROM PILOT TO POLICY

The results of Breath for Life provide a strong foundation to strategically scale up the model across Vietnam. PATH and Johnson & Johnson are continuing to work with the NTP, Nghe An PHD, and NAPLH—as well as other international and local stakeholders—to apply three approaches to achieve this goal:

1. Fostering learning and innovation between Nghe An and other provinces and the NTP, including facilitating provincial learning exchanges, and introducing and documenting innovative diagnostic tools such as the use of GeneXpert for stool sample analysis and artificial intelligence for chest x-ray screening.
2. Integrating the Breath for Life model into national technical guidance and training curricula, which will be used to train and support staff of the NTP system and public-private mix networks on pediatric diagnosis for drug susceptible and drug resistant TB, treatment, and prevention, as well as preventive therapy.
3. Advocating for policy change at the national level, by pinpointing and integrating key approaches and technological advances for revised pediatric TB policy, guidelines, and work plans.

*Implemented by PATH. Breath for Life is supported by Johnson & Johnson.*

Data sources: WHO Estimates of TB and MDR-TB burden. Vietnam country Tuberculosis profile; National Tuberculosis Programme Viet Nam.