INFECTIOUS DISEASE DETECTION AND SURVEILLANCE - TUBERCULOSIS

2018 - 2023 | IMPLEMENTER: ICF, PATH, FHI360 | PLANNED BUDGET: $4,300,000

USAID'S Infectious Disease Detection and Surveillance (IDDS) – Tuberculosis (TB) activity in Vietnam supports Vietnam's National TB Program (NTP) strengthen disease detection networks and surveillance systems to: (1) improve the detection of TB and identification of antimicrobial resistance through a networked diagnostic laboratory and clinical services system; and (2) improve the quality of real-time surveillance systems for TB.

OPTIMIZE THE DIAGNOSTIC NETWORK TO IMPROVE ACCESS, TIMELINESS, AND ACCURACY

In 2020, IDDS and Vietnam's NTP conducted an assessment on the TB diagnostic network system. The assessment produced evidence-based recommendations to improve diagnostic capacity – especially chest x-ray and GeneXpert (GX) (a rapid TB bacterial detection tool) – to increase presumptive TB patients' access to quality diagnostic services at national, provincial, and peripheral levels. IDDS will strengthen the specimen transport system, support expanding the GX network, and introduce Truenat and other advanced TB diagnostic tools to improve TB detection capacity of the NTP. IDDS will introduce artificial intelligence-enabled x-ray readers and incorporate phenotypic and genotypic drug susceptibility testing into the TB diagnostic system.

PEDIATRIC TUBERCULOSIS DETECTION

The World Health Organization (WHO) ranks Vietnam as the 16th highest TB-burdened country in the world and estimates that in 2019 there were approximately 170,000 new cases of TB and 10,000-12,000 cases of TB in patients 14 years or younger. However, WHO estimates that less than 20 percent of these pediatric TB cases were detected, leaving over 80 percent of children living with TB in Vietnam undetected, undiagnosed, and untreated. To improve detection and diagnosis of TB in children in Vietnam, IDDS piloted a globally endorsed method for stool-based TB testing , using GX, in Nghe An province in 2020 which aims to reduce the burden of collecting sputum from children for ease of TB diagnosis. IDDS will expand the use of stool-based testing and integrate the technique into active case finding.

DEPLOY INNOVATIVE TOOLS AND EQUIPMENT FOR VIETNAM TB DIAGNOSTICS

IDDS will support the introduction and expansion of new testing tools in Vietnam including the Ultra cartridge for GX and the newly WHO-recommended Truenat. IDDS will support the NTP to evaluate the potential of whole-genome sequencing and its accompanying operational needs.

EXPECTED RESULTS

This project will 1) Strengthen the TB diagnostic network to improve accuracy and accessibility for TB testing; 2) Expand and enhance laboratory detection systems for Drug Sensitive TB and molecular testing of stool specimens to increase pediatric TB diagnosis; 3) Improve quality of x-ray readings through artificial Intelligence and targeted training for radiologists; and 4) Establish a technical working group to improve coordination and pursue potential for whole-genome sequencing.