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LABORATORY STRENGTHENING

Vietnamese laboratories improve technical skills and equipment with support from USAID/Vietnam.

HIV AND TUBERCULOSIS

The lack of confirmatory labs for HIV testing in Vietnam delays patient enrollment into HIV treatment. USAID works with the Vietnam Authority of AIDS Control to guide the implementation and accreditation of three rapid test confirmatory laboratories at the primary level of the health care system to enable same-day results of HIV confirmatory tests. Due to the operational and policy changes resulting from this support, Nghe An and Dien Bien provinces have expanded from only one HIV confirmation laboratory each at the provincial level and none at the district level to eight and six district-level labs, respectively. Services are now more localized and provided in remote and mountainous areas. Time to wait for results and enrollment of new HIV patients to antiretroviral therapy have been reduced from nearly a month to the same day.

Vietnam has successfully reached the 2015 Millennium Development Goal of reducing the rate of new tuberculosis (TB) infections. However, detection and treatment of TB represents a serious challenge to attaining prevalence and mortality targets set by the Vietnam National Tuberculosis Program (NTP). TB detection and management among HIV positive patients is also difficult. This requires building clinical capacity, close collaboration between established HIV and TB systems, and laboratory strengthening from the central level to the primary health care level. USAID helps the NTP and the Vietnam Authority of AIDS Control to detect TB earlier, improve TB treatment, enhance the laboratory network, and

USAID support to increase the number of community-level laboratories has reduced the wait time for HIV testing results from one month to one week, helping patients receive treatment sooner.



USAID provides new equipment for rapid tuberculosis detection.



Lab workers learn to use new equipment for rapid tuberculosis detection.

prevent TB transmission. USAID has provided technical assistance to the NTP to ensure adequate laboratory biosafety standards, develop standard operating procedures for relevant labs and laboratory safety; ensure the availability of appropriate equipment and consumables, and introduce and evaluate new diagnostic techniques. With substantial USAID support through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), rapid testing to confirm TB and drug-resistant TB has expanded with more than 61,000 people tested, 27,000 TB patients detected, and over 5,400 drug-resistant TB patients diagnosed since 2012.

GLOBAL HEALTH SECURITY

Since most emerging infectious disease threats arise at the interface of animals and humans, USAID works in both public health and animal laboratories to increase technical skills and diagnostic capacities, improve laboratory biosafety and biosecurity, and strengthen quality assurance. Contributions to expand the range of testing available, help detect novel viruses in wildlife, sample in high-risk settings like live markets and wildlife farms, and harmonize procedures across animal and public health laboratories are just some of the actions that will help Vietnam prevent, detect and respond more effectively to pandemic threats. Activities are part of the Global Health Security Agenda and include close collaboration with other key Global Health Security Agenda partners such as the U.S. Centers for Disease Control and Prevention, the U.S. Defense Threat Reduction Agency, and other bilateral and multilateral partners.

To help ensure that undergraduates and practicing health workers are prepared to respond to emerging pandemic threats, USAID's IMPACT MED Alliance improves the capacity and quality of university hospital clinical laboratories in collaboration with private sector partners. Roche Vietnam works with partner universities to improve the quality and reliability of laboratory testing. Roche supports university development and implementation of systems to improve clinical laboratory workflow for improved productivity and efficiency and helps laboratories at partner universities achieve medical laboratory certification.

DIOXIN ANALYSIS

Through the Environmental Remediation of Dioxin Contamination at the Danang Airport Project, USAID partners with Vietnam's two, ISO-certified dioxin labs—the Vietnam Dioxin Laboratory housed within the Ministry of Natural Resources and Environment, and the dioxin laboratory housed within the Ministry of National Defense's Vietnam-Russia Tropical Centre—to improve monitoring of remediation activities as well as to build the quality assurance and quality control (QA/QC)

capacity and service orientation of the local dioxin labs. This is primarily conducted through the employment of split sampling, where one of two equivalent portions of the same sample is analyzed in different laboratories to spot-check the accuracy of data and on-the-job QA/QC documentation training. As the Ministry of National Defense's Academy of Military Science and Technology seeks to establish a new dioxin lab in southern Vietnam, USAID plans to expand its lab strengthening activities to build both technical and institutional capacity for the new lab by partnering U.S. laboratory technicians and human and institutional capacity building experts with Vietnamese laboratory technicians and managers. The new activity will include training in U.S. laboratories and streamlining operations at the laboratory in Vietnam.



Lab assistants receive training in human forensic identification.

DNA ANALYSIS

Through its Unidentified Remains program, USAID partners Vietnamese labs with experts from the United States to train and provide technical assistance on forensic human identification, quality assurance processes, and assistance with laboratory setup and equipment. The program assists with laboratory design, instrument selection and information management. Lab assistants and lab managers of DNA laboratories are trained to determine the best scientific human identification methods. As a result, the Vietnam Academy of Science and Technology and other Vietnamese forensic laboratories can better identify war-era remains through DNA analysis and kinship matching. The program also helps laboratories prepare for future accreditation under the applicable standards issued by the International Organization for Standardization.