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Sustainable Practices

Biosafety and Laboratory Organization



TBLM Improvement Process



"It's like we had poor eyesight and we couldn't see the road ahead,"
 "But now we see clearly – and we see the method to manage the labs more effectively. Things have really changed."

Da Nang Hospital

New Tools Integrated

Laboratory Information Management Systems



Scheduler Reminder Software/ Equipment Management



Cold Chain Management Software



Participating labs

National
National Lung Hospital
National 74 Hospital
National 71 Hospital
Regional
Pham Ngoc Thach Hospital for TB and Respiratory Diseases
Da Nang Hospital for TB and Respiratory Diseases
Provincial
Can Tho Hospital for TB and Respiratory Diseases
Hanoi Lung Hospital

Document Management



Staff Management



Reagent/Stock Management



Data/Logbook Management



Vision

TBLM has created a platform for ongoing support and quality improvement from CDC, FIND and VNTP to the participating labs and will be offered to additional labs in the network.

Abstract

Background:

In spite of many efforts by WHO, TB remains a major public health problem. Vietnam is among the 22 high TB burden countries. Accurate and prompt diagnosis is the key to combating this disease. Recent developments in TB diagnostics allow for faster diagnosis; however integration and proper implementation of newer technologies, biosafety, and maintenance of the equipment, supply chain, EQA and judicial use pose a challenge to TB Laboratory Managers.

Methodology:

To target the TB laboratory-specific needs and challenges of Vietnamese laboratory managers, a course was designed that comprises the essentials of TB laboratory (collaboration between CDC and FIND with PEPFAR funding). This includes: *Laboratory organization / optimum workflow, Specimen reception, Quality Assurance (Internal Quality Control and External Quality Assessment), Biosafety, Data / logbook Management, Equipment management / temperature monitoring, Maintenance Scheduler software, Reagents / Stock Management, Staff Management, TB Documentation Management, Cold Chain Management, and Laboratory Information Management System (LIMS), all in line with ISO 15189 requirements.* This course was delivered to 16 laboratory managers representing 7 national, regional and provincial level labs in two four-day sessions separated by a six month interval allowing for supervisory visits, collection of baseline data and follow-up on improvements. Engagement with laboratory managers lasted one year and concluded with individual presentations to the management of the National TB Reference Laboratory outlining laboratory improvements.

Results:

All participating laboratories have improved work flow and data management according to program standards. Two laboratories have completed Equipment and Reagent/Stock management, 5 laboratories have started these tasks and are near to complete. Two laboratories have completed Staff management and 5 others are near completion. Biosafety measures have been improved in all the participant laboratories, 4 laboratories have reorganized their premises and 3 are in the process of improving safe workflow. Two laboratories have begun implementation of Cold Chain Management Software; 3 laboratories have started maintaining equipment through Management Software; and 3 laboratories have started to deploy LIMS.

Conclusions:

The laboratory management course resulted in significant improvements in all participating laboratories; however, continuous monitoring and regular onsite visits are necessary to further improve and sustain the capacity of the laboratories and properly implement all essential elements of TBLM.