Implementation of e-TB Manager in Vietnam: Early outputs and lessons learned

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Background
- In 2011, Vietnam ranked 14th among the world’s 27 countries with the highest prevalence of multidrug resistant tuberculosis (MDR-TB).
- Since it began in 2009, Vietnam’s National TB Program (NTP) had used a paper-based system for recording national data on MDR-TB. This system caused the following problems:
  - compromised national MDR-TB data due to recording errors and omissions,
  - MDR-TB management challenges due to inaccurate and incomplete patient data, and
  - difficulty managing TB drug and commodity supplies.
- In 2012, to address these problems, the NTP began implementing e-TB Manager (e-TBM), a web-based tool that integrates data on TB and MDR-TB patients, medicines, laboratories, diagnoses, treatment, outcomes, operational research, and clinical research.
- The tool also includes features for registering and dispensing medicines, calculating the cost of treatment per patient, determining treatment compliance, and reporting treatment outcomes.
- Staff from TB and MDR-TB service sites enter data into e-TBM. Once it is entered into e-TBM, this data is then available to help the NTP:
  - determine where interventions are most needed,
  - generate TB reports required by World Health Organization, and
  - manage drug and commodity supplies.

Methods
- Before implementing e-TBM, the NTP worked with the USAID-funded TB CARE I team to adapt the tool for Vietnam.
- This customized tool targeted the nation’s high MDR-TB incidence by collecting data on cases, drugs, and commodities to inform and enhance MDR-TB interventions.
- Beginning in June of 2012, TB CARE I through one of its subcontracted partners, Management Sciences for Health (MSH), worked with the NTP to train more than 200 health professional to use e-TBM.

Results
- In just six months, the trained health professionals had entered approximately 70,000 transactions into e-TBM, reflecting information on over 95% (682/713) of all MDR-TB patients in Vietnam.
- At 65 health facilities, e-TBM showed that nearly 88% (1,140/1,300) of all MDR-TB patients had received treatment and follow-up services.
- By the end of 2012, 80% (12/15) of all MDR-TB centers had updated their stock of MDR-TB drugs, based on e-TBM’s inventory records.
- Health professionals reported they were able to:
  - access MDR-TB information quickly by opening their patients’ e-TBM files and navigating through individuals’ case data, examination results, treatment history, etc.; and
  - track patients transferring between sites to ensure they were not defaulting from treatment.
- NTP staff reported that e-TBM records allowed them to access timely data on MDR-TB drug stocks and transfer medicines between treatment sites, as needed.

Conclusions
- Health facilities using e-TBM recorded more data on TB patients and were able to use the database to make informed decisions regarding TB drug supplies to prevent stock-outs.
- Health professionals using e-TBM were able to quickly access a robust database of patient information and track patients to ensure treatment compliance.
- The NTP should sustain and expand e-TBM implementation to improve MDR-TB data collection and use in Vietnam.

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