

Electronic Information Management System to Improve Recording and Reporting for TB Control in Bangladesh: Initial Experience and Opportunities

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Introduction and Background

The USAID/SIAPS program is working with the NTP Bangladesh to:

- Strengthen electronic information management system to improve recording and reporting
- Strengthen Procurement and Supply Chain Management (PSM) unit
- Implement Logistics Management Information System (LMIS) for TB commodities
- Provide forecast and supply planning for product availability
- Make informed decisions on stock situation of TB commodities
- Monitor supply chain progress and performance



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Problem Statement

- Submitting complete and accurate TB patient data records and reports within stipulated time-frame is significant challenge for the NTP
- Central manual data repository with limited variables hinders further epidemiological analysis
- Absence of capacity to transfer data in real time
- Reporting rates are low and there is a long lead-time to generate TB reports
- Difficulty complying with WHO reporting requirements
- Untapped potential to use data to improve surveillance and performance



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Process to Establish the Electronic Information Management System

- System review, feasibility analysis, and redesign
 - ❑ Conceptualized needs of the NTP's information management system
 - ❑ Identified key stakeholders and constraints
 - ❑ Option analysis identified the solution for improving the situation
 - ❑ Adopted of e-TB Manager (e-TBM), a web-based system, to manage TB patients and medicines and generate key reports and indicators
 - ❑ Built capacity (NTP, BRAC, HEED, Lepra, TB Care II, Damien Foundation) and set up pilot programs in limited geographical area



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e-TBM Tool for Case Management of TB & MDR-TB (1)

35 Districts covered



e-TB Manager allows for a holistic approach to TB control management and avoids a common disconnect between activities focused on treatment of susceptible TB, drug resistant TB, TB/HIV co-infection, inventory management for first- and second-line TB medicines. It also reports outcomes by levels of a health system and types of TB cases.

Advantages:

- Provides online notifications, validations, and follow-up.
- Tracks patient transfers in and out of clinics.
- Generates all standard Stop TB reports for TB and MDR-TB.



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e-TBM Tool for Case Management of TB & MDR-TB (2)

In collaboration with WHO, pilot programs for six sites started in November 2010 –

- After successful implementation in pilot sites, the system has already been rolled-out in another 104 new sites [in two phases-cPMDT sites are included] as of now with the technical and logistics support of USAID/SIAPS program
 - 4 MDR sites have been covered
- Country-wide implementation—needs partners support
- NTP’s recognition to e-TBM as the mandatory tool for recording and reporting

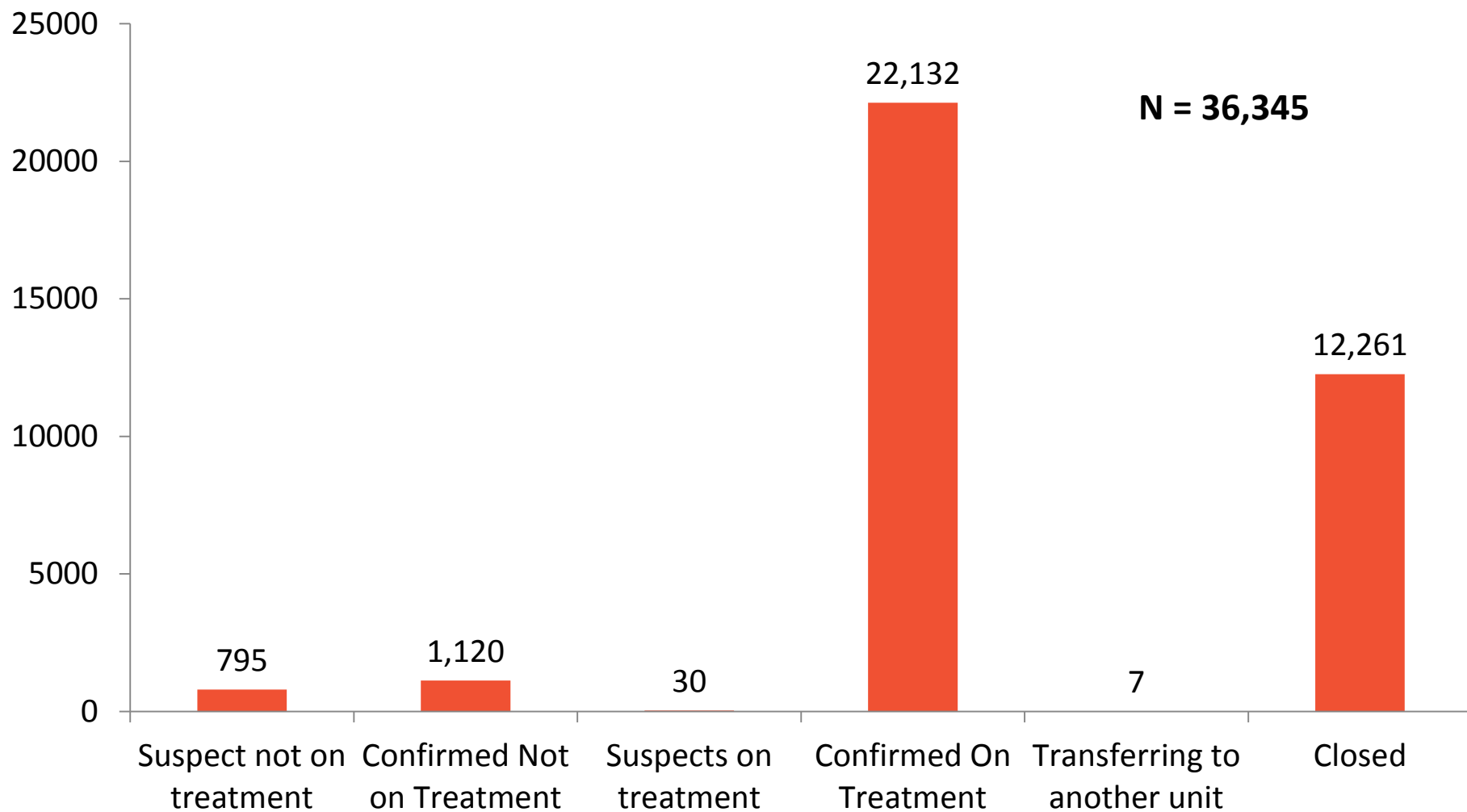
Division	e-TBM roll out status till to date in DOTS sites
Barisal	4
Chittagong	21
Dhaka	36
Khulna	12
Rajshahi	21
Rangpur	7
Sylhet	5



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Results: e-TB Manager Case Status*



*Data as of 11 March 2014



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Results

- Improved prompt on-line patient status tracking
- Reduced the lead time of report preparation to less than one minute compared to two days, thus improving timeliness
- Supported assessing the quality of implementing sites' reports and contributed to designing supervision plans at low-performing sites



Current Operational Status of e-TBM

Performance of e-TBM sites have been assessed and categorized-

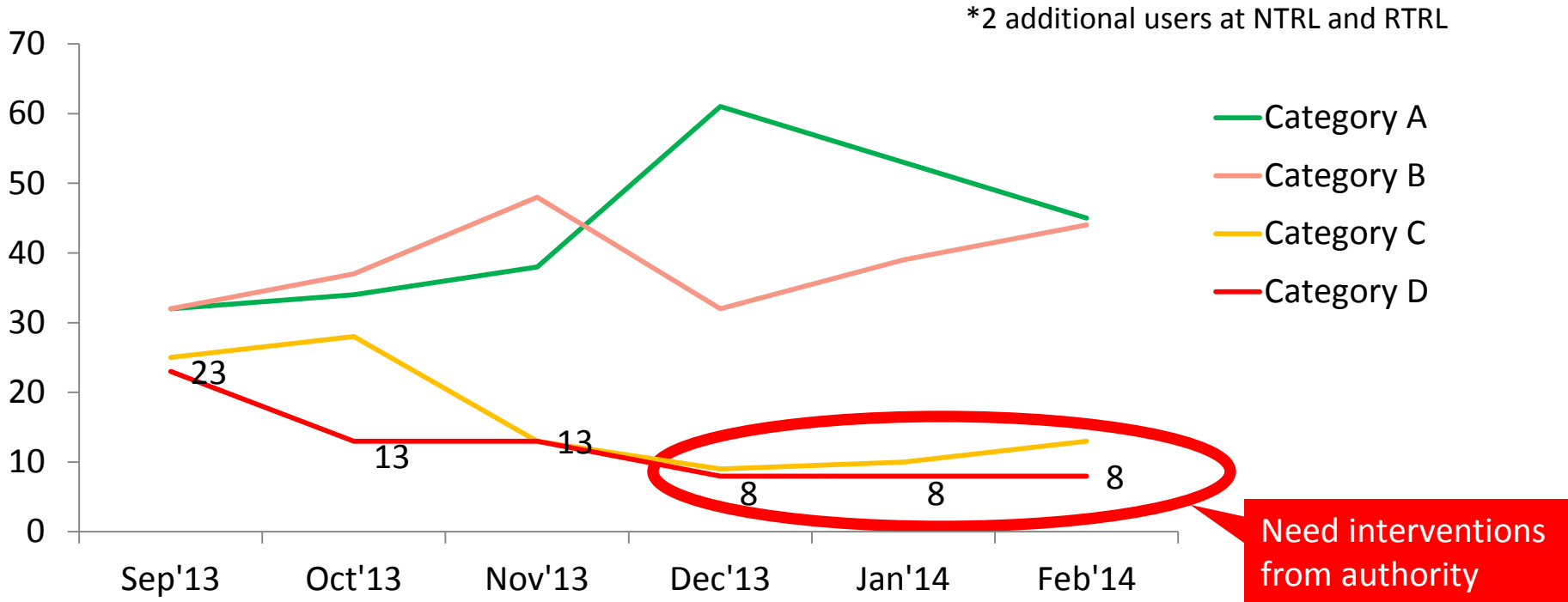
Legend	Category	Operational definition
	A	Regular and up-to-date in regards of case notification and follow-up
	B	Updated in case notification but not in follow-up or Updated in both case notification and follow-up but still at backlog
	C	Irregularly working, few case notified with/out follow-up
	D	No activity



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Categorization of sites	September 2013	October 2013	November 2013	December 2013	January 2014	February 2014	%
Category A	33 (29%)	35 (31%)	39 (35%)	61 (55%)	53 (48%)	45 (41%)	39.6%
Category B	31 (28%)	36 (32%)	47 (42%)	32 (29%)	39 (35%)	44 (40%)	34.8%
Category C	25 (22%)	28 (25%)	13 (12%)	9 (8%)	10 (9%)	13 (12%)	14.7%
Category D	23 (21%)	13 (12%)	13 (12%)	8 (7%)	8 (7%)	8 (7%)	10.9%
Total users	*112	*112	*112	110	110	110	



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Challenges

- Making sure case and follow-up data is updated regularly and on time
- Prompt actions taken based on information
- Improving the ICT infrastructure at all levels
- Ensuring feedback mechanism from upper tier/supportive supervision visit
- Thoroughly discussing TB program's performance in the district monthly meeting
- Turn-over of trained staff
- Staff motivation



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Opportunities

- e-TBM can support the systematic organization of critical information needed for timely decision making in TB control
- With data decentralization and more involvement of various stakeholders in health system, e-TBM has the potential to promote real-time collaboration and provide a feedback mechanism

