FAST EXPERIENCE IN BANGLADESH – A PROMISING RESULT

The FAST Strategy

FAST is a novel infection control strategy with a focused approach to stopping TB spread in congregate settings. **FAST** stands for **F**inding TB cases **A**ctively, **S**eparating safely, and **T**reating effectively. It focuses health care workers on a simple but the most important administrative intervention to effectively contain TB infection in hospitals, clinics, prisons and similar other settings.

FAST – Relevance for Bangladesh

Bangladesh is a TB endemic country which ranks 6th in the world with estimates of 350,000 new TB and 4,700 MDR-TB cases a year.[1] Almost half of the TB cases and three-fourth of MDR-TB cases remain undiagnosed causing large scale new infections every year. In this context where prevalence of unsuspected TB and MDR-TB is higher, FAST was deemed to be quite apposite for Bangladesh to stimulate its case finding and infection control efforts. Availability of GeneXpert in Bangladesh also offered an ideal setting to effectively implement the approach in hospitals providing TB and other chest disease services.

System Design

The project focus during the initial stage was on designing a system that can be easily integrated with the existing hospital management and implemented by the existing staff with minimal

FAST ALGORITHM FOR NIDCH
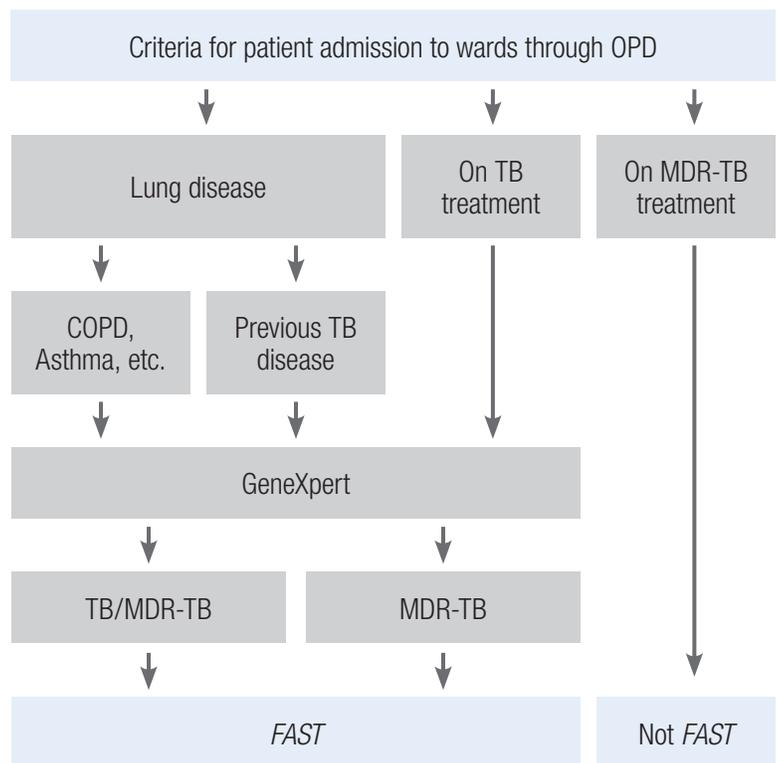
project support. An administrative decision was made to incorporate the strategy into the overall set of infection control interventions at NIDCH which was selected for piloting the FAST approach.

The project facilitated a participatory approach to set up the implementation mechanism and defining roles and responsibilities of relevant staff. An algorithm with patient criteria for FAST screening was developed and finalized in discussion with the NIDCH service providers. The focus was on early detection of TB/MDR-TB among patients with chest diseases and MDR-TB among TB patients.

1 Global Tuberculosis Report, 2014, WHO

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Training materials and tools were adapted to the local setting. Laboratory registers, ward registers, supervisory tools and reporting systems were developed for capturing data, monitoring performance and reporting results of the *FAST* initiative. Besides, a booklet with basic information on *FAST* and Referral Request Form for GeneXpert test was developed to support the system.

Implementation and Results

Implementation of *FAST* in Bangladesh started with a pilot in two non-TB patient wards and one TB ward at the National Institutes for Disease of the Chest and Hospitals (NIDCH) in Dhaka, Bangladesh in later part of 2013. This is the largest national reference hospital for TB and other chest diseases serving hundreds of patients every day. An evaluation of the site was conducted to ensure that administrative acceptance, sufficient diagnostic capacity, and necessary treatment options were available.

In order to successfully implement the *FAST* strategy at NIDCH, multiple trainings were conducted for physicians, nurses, porters, laboratory technicians, and NIDCH hospital administration in January 2014. These training were designed to develop a solid understanding of the *FAST* approach, familiarize the relevant staff with systems tools including laboratory registers, ward registers, and supervisory tools and potential operational challenges associated with the strategy were discussed. *FAST* has now been scaled up to all the non-TB and TB wards of the hospital.

Encourage by the NIDCH results, *FAST* approach was scaled up to BIRDEM hospital, the largest referral facility for management of diabetes and other non-communicable diseases, and Chittagong Chest Disease Hospital (CDH) in March 2014 and September 2014 respectively. Implementation at these facilities started with a limited scale with plans to gradually expand the scope. The project assisted with orientation of doctors and nurses and setting up the systems for data recording, reporting and monitoring progress.

Between July, 2014 and March, 2015 BIRDEM tested 243 patients of other lung health disease and some with previous history of TB by GeneXpert and diagnosed 32 TB and 1 MTB/RIF cases. Though the overall number of patients tested during this period is small, this provided significant evidence for these hospitals that *FAST* approach can make a big difference in detection and infection control of TB with minimum administrative effort and resources.

Conclusions and Lessons Learned

By implementing the *FAST* strategy at NIDCH and two other hospitals, increased numbers of unsuspected TB and MDR-TB cases were identified; cases that would have gone unidentified and untreated until the patient's continued clinically poor outcomes caused an alteration in medical investigation. Due to the rapid nature in which these cases were identified using GeneXpert® MTB/RIF, treatment was able to be initiated at an expedited rate and thus reducing the overall patient and systemic burden of addressing the challenges associated with the disease.

Implementation of FAST in Bangladesh demonstrated some key lessons:

- The *FAST* strategy is simple to integrate with existing management system and implement with existing staff;

- Minimal systemic alterations to practices around diagnosing and treating patients can greatly expedite and improve patient care;

- *FAST* is an effective approach to increase early detection and management of unsuspected TB and MDR-TB cases.

Figure 1. *FAST* Performance up to March 2015

Disease Category	Total Samples Tested	Unsuspected TB Identified	Unsuspected MDR-TB Identified
TB disease	682	–	31 (4.54%)
Other lung diseases	4,721	457 (9.68%)	41 (.86%)
Other lung disease with history of TB	1,064	244 (22.93%)	16 (1.5%)
Total	**6,710**	**701 (10.83%)**	**89 (1.36%)**

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