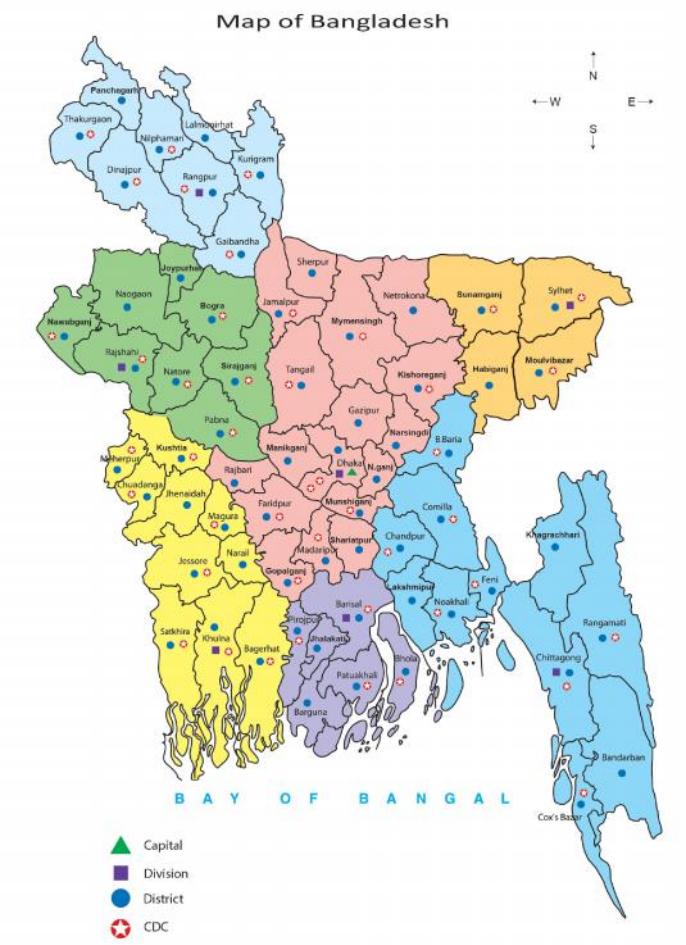
Tuberculosis Control in Bangladesh

Annual Report
2013



National Tuberculosis Control Programme
Directorate General of Health Services
Mohakhali, Dhaka-1212

Table of Contents

Abbreviations …… i

1. Summary …….. 1

2 Introduction: History of the National TB Control Program…… 2

3. Tuberculosis Scenario

3.1. Global TB Scenario…….. 4

3.2 South-East Asia Regional Scenario…….. 6

3.3. Bangladesh Tuberculosis Scenario…….. 6

4. National TB Control Program: Vision, Mission, Goal……

4.1. Vision statement of National Tuberculosis Control Program ……. 7

4.2 Mission statement of National Tuberculosis Control Program…… 7

4.3 Goal of National Tuberculosis Control Program…….. 7

4.4 Objectives of National Tuberculosis Control Program ……. 7

4.5 Services of the TB Control Program…….. 7

4.6 Major Events/Achievements …… …… 8

4.7 Major Challenges 8

5. Progress in TB Control……

5.1 DOTS Coverage…… 9

5.2 Case notification…… 9

5.2.1 Nationwide case notification…… 9

5.2.2 Division-wise case notification…… 13

5.2.3 District-wise case notification …… 14

5.3 Treatment outcomes…… 15

5.3.1 Nationwide Treatment outcomes…… 16

5.3.2 Division-wise treatment outcome…… 18

5.3.3 District-wise treatment outcomes…… 19

5.3.4 Treatment outcome of relapse, smear negative and EP TB cases 21

6. Drug Resistant TB 22

7. Laboratory Activities

71 Sputum Microscopy and Quality Assurance…… 22

7.2 -3 National and Regional TB Reference Laboratory 23

8. TB/HIV Co-infection 24

9. Training Courses and Meeting…… 25

10. Collaborating Partners…… 27-35

Annex 1 District-wise TB case Notifications. 2011 36-37

Annex-2 District-wise Treatment Results, New Smear- positive cases, 2010 Cohort 38-39

Annex-3 Laboratory report

Annex-4 List of EQA Centres

Annex 5 Addresses of TB Diagnostic and Treatment Services affiliated to NTP in Metropolitan Cities 40-46

Annex 6 List of Sub-recipients (SR) of BRAC…… 47

ABBREVIATIONS

ACSM	Advocacy, Communication and Social Mobilization
AFB	Acid - fast Bacilli
AHI	Assistant Health Inspector
AIDS	Acquired Immune Deficiency Syndrome
BRAC	Bangladesh Rural Advancement Committee
CDC	Chest Disease Clinic
CDR	Case Detection Rate
CNR	Case Detection Rate
CS	Civil Surgeon
DGHS	Directorate General of Health Services
DOT	Directly Observed Treatment
DOTS	Internationally recommended strategy for TB control
DST	Drug Susceptibility Testing
EQA	External Quality Assessment
ESP	Essential Services Package
FDA	Fluorescent diacetate staining
FDC	Fixed-dose Combination
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
GLC	Green Light Committee
HEED	Health, Education and Economic Development
HI	Health Inspector
HIV	Human Immunodeficiency Virus
HNPSP	Health, Nutrition and Population Sector Program
HPSP	Health and Population Sector Program
HPNSDP	Health, Population, Nutrition and Sector Development Program
HRD	Human Resources Development
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
LAMB	Lutheran Aid to Medicine in Bangladesh
LEPRA	(British) Leprosy Relief Association
MBDC	*Mycobacterial* Disease Control
MDG	Millennium Development Goal
MDR-TB	Multidrug Resistant Tuberculosis
MO	Medical Officer
MoH&FW	Ministry of Health and Family Welfare
MO (TB/Lep)	Medical Officer (Tuberculosis and Leprosy)
MoU	Memorandum of Understanding
NATAB	National Anti-TB Association Bangladesh
NGO	Nongovernmental Organization
NIDCH	National Institute of Diseases of the Chest and Hospital
NTP	National Tuberculosis Control Program
NTRL	National Tuberculosis Reference Laboratory
PO	Program Organizer
PPM	Public-private or Public–public Mix
RDRS	Rangpur Dinajpur Rural Service
RTRL	Regional Tuberculosis Reference Laboratory
SEARO	WHO Regional Office for South-East Asia (New Delhi)
TB	Tuberculosis
TLCA	Tuberculosis & Leprosy Control Assistant
TLMB	The Leprosy Mission, Bangladesh
IUATLD	The Union (International Union Against Tuberculosis and Lung Disease)
UHC	*Upazila* Health Complex
UH&FPO	*Upazila* Health and Family Planning Officer
UPHCP	Urban Primary Health Care Project
UPHCSDP	Urban Primary Health Care Service Delivery Project
URC	University Research Corporation
USAID	United States Agency for International Development
WHO	World Health Organization

1. SUMMARY

Tuberculosis (TB) is a major public health problem in Bangladesh since long. Under the Mycobacterial Disease Control (MBDC) unit of the Directorate-General of Health Services (DGHS), the National Tuberculosis Control Program is working with a vision of eliminating TB as a public problem from Bangladesh. The goal of the programme is to reduce morbidity, mortality and transmission of TB until it is no longer a public health problem. Initially NTP's main short-term objectives were to sustain the global targets of achieving at least 70% case detection and 85% treatment success among new smear-positive TB cases under DOTS. The medium-term objectives include reaching the TB-related Millennium Development Goals of halving TB prevalence and death rates by 2015 compared to 1990. The present objective is to achieve universal access to quality TB care for all TB patients.

The NTP adopted the DOTS strategy[1] and started its field implementation in November 1993. The programme progressively expanded to cover all *upazilas* by mid-1998. By 2007 the DOTS services were made available throughout the country including the metropolitan cities

High treatment success rates were achieved from the beginning and NTP crossed the target of 85% treatment success in 2003. Since 2005, treatment success rate over 90% have been maintaining The program has successfully treated 90,976 (91.96%) out of 98,932 (91.62%) new smear-positive cases registered in 2011 and has notified 106,840 (70/*100 000 population)* new smear-positive cases in 2012. (Population 152,500,000 –Census 2011) . Case Notification for all TB cases in 2012 is 164,903 (108/100 000 population).

This report covers the activities related to TB control performed in 2012, case finding in 2012 and treatment outcomes of cases registered in 2011. In this report, information related to drug resistant TB and laboratory activities have been elaborated more in comparison to previous year.

[1] DOTS: initially acronym for Directly-observed Treatment, Short-course; this has evolved to a brand name for the TB control strategy with the following five components: (1) political commitment with increased and sustained financing; (2) case detection through quality-assured bacteriology; (3) standardized treatment with supervision and patient support; (4) an effective drug supply and management system; and (5) monitoring and evaluation system, and impact measurement.

2. INTRODUCTION: HISTORY OF THE NATIONAL TUBERCULOSIS CONTROL PROGRAM

Tuberculosis (TB) is a major public health problem in Bangladesh since long. The history of tuberculosis in Bangladesh has different stages.

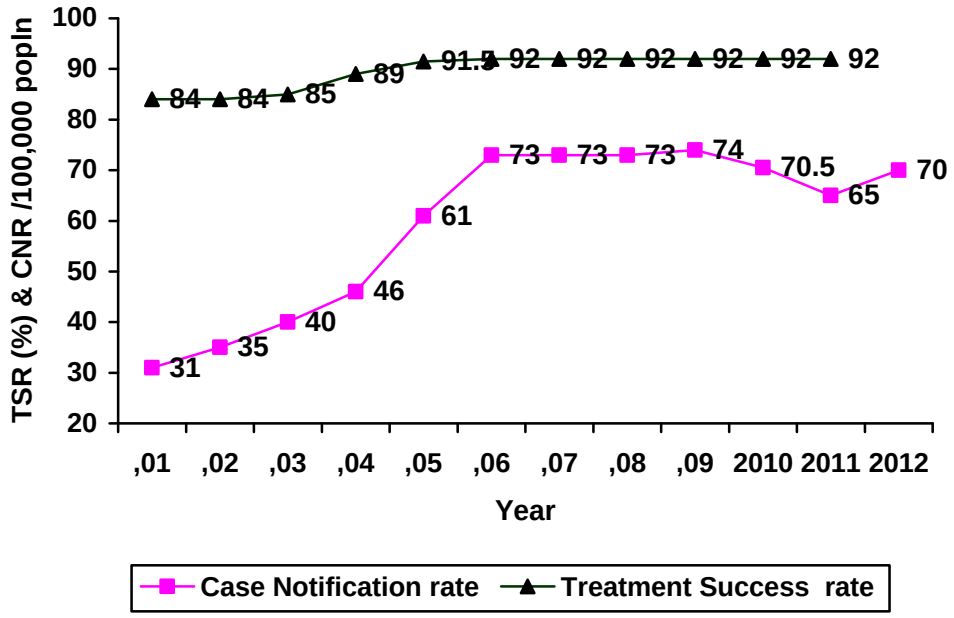
In 1965, tuberculosis services were mainly curative and based in TB clinics and TB hospitals. TB services were expanded to 124 *upazila* health complexes (UHCs) during the Second Health and Population Plan (1980-86), and were operationally integrated with leprosy during the Third Health and Population Plan (1986-91) under the Mycobacterial Disease Control (MBDC) unit of the Directorate-General of Health Services (DGHS).

The revised NTP adopted the DOTS strategy during the Fourth Population and Health Plan (1992-98) under the project "Further Development of TB and Leprosy Control Services". The NTP started its field implementation in November 1993 in four *thanas* (*upazilas*) and progressively expanded to cover all *upazilas* by mid-1998. In July 1998, the NTP was integrated into the Communicable Disease Control component of the Essential Services Package under the Health and Population Sector Program (HPSP). In 2003, HPSP was renamed as "Health, Nutrition and Population Sector Program" (HNPSP), (2003-2011). Now Ministry of Health and Family Welfare (MOHFW) has been implementing the Health, Population and Nutrition Sector Development Program (HPNSDP) for a period of five years from July 2011 to June 2016, with the goal of ensuring quality and equitable health care for all citizens in Bangladesh by improving access to and utilization of health, population and nutrition services. In all the sector programs tuberculosis control has been recognized as one of the priority programs .

In 2002, DOTS services were expanded to Dhaka Metropolitan City and by 2007 the services were available throughout the country. The country is implementing Stop TB Strategy since 2006

The quality of NTP continues to improve. The program is maintaining high treatment success rates from the beginning and crossed the target of 85% treatment success in 2003. The program has been maintaining a treatment success rate of the new smear-positive cases over 90% since 2006. The treatment success rate for the new smear positive cases registered in 2011 was nearly 92%. Regarding case notification (of new smear positive cases) the program made slow and steady progress till 2003. Since then due to multi-sectoral approach and support from development partners the notification rate (per 100,000 population) increased from 40 in 2003 to 61 in 2005 and 73 in 2006. Afterwards the case notification rate remained static till 2008, and in 2009 it increased slightly to reach the peak of 74/ 100,000 population. During 2010 and 2011 this notification rate decreased to 70.5 and 65 per 100,000 population respectively. In the year 2012 the notification rate has been again increased to 70 per 100,000 population. (Fig 1).

Fig. 1. Treatment Success Rates (TSR) and Case Notification Rates (CNR) of new smear positive TB cases: 2001-2012



For diagnosis and management of multidrug resistant TB (MDR-TB), a National TB Reference Laboratory (NTRL) has been established in National Institute of Diseases of Chest and Hospital (NIDCH), Dhaka. Since August 2008 till 31December 2012,NIDCH has enrolled a total of 971 confirmed MDR-TB patients including 290 in 2012. NTP established a RTRL at CDH, Chittagong in October 2010 and enrolled 41 and 86 MDR-TB patients in 2011 and 2012 respectively..

The MDR TB patients are also managed in the chest disease hospital (CDH), Rajshahi with 9-month regimen in collaboration with Damien Foundation, Bangladesh. Since May 2005 this centre has been managing MDR TB patients, and by end of December 2012 a total of 980 patients including 132 in 2012 have been enrolled. A regional TB reference laboratory (RTRL) has been established in the CDH, Rajshahi in May 2008.

The Government of Bangladesh, together with its many and diverse partners from the public and private sectors, is committed to further intensify the TB control activity in order to sustain the achieved success and to reach the TB control targets linked to the Millennium Development Goals (MDGs)

Millennium Development Goal, Target and Indicators related to TB Control

Goal 6: To combat HIV/AIDS, Malaria and other diseases

Target 6c: To have halted by 2015, and began to reverse the spread (incidence) of malaria and other major diseases

Indicator 6.9: Prevalence and death rates associated with tuberculosis: Halve TB death and prevalence by 2015 (compared to 1990)

Indicator 6.10: Proportion of Tuberculosis cases detected and cured under DOTS: Sustain or surpass the 70% case detection and 85% treatment success among new smear positive cases.

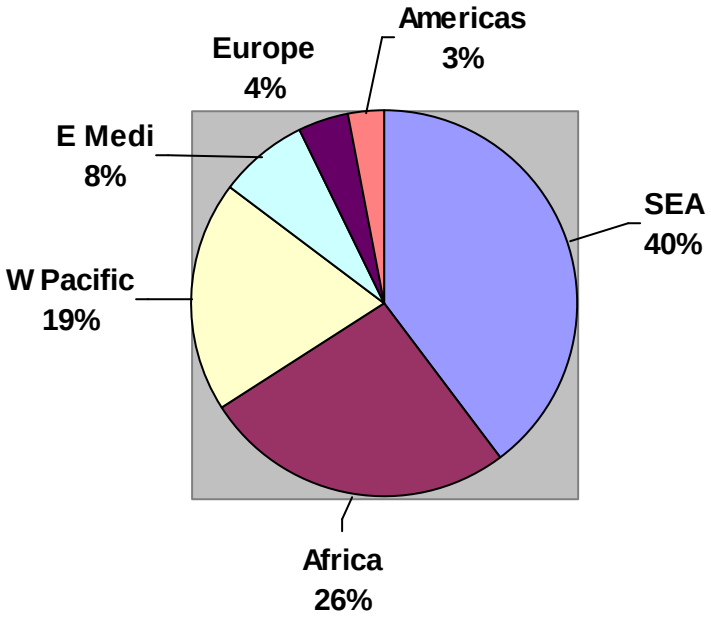
This report covers the activities related to TB control performed in 2012, case finding in 2012 and treatment outcomes of cases registered in 2011. The country's population for 2012 was projected based on the 2011 census report of the Bangladesh Bureau of Statistics.

3. TUBERCULOSIS SCENARIO

3.1 Global TB Scenario[2]

WHO estimates that in 2011 about 8.7 (8.3-9.0) million new TB cases occurred globally; among these 2.9 million were women and 0.5 million were children. Among the incident cases 1.1 million(13%) were co-infected with HIV. In this year there were 1.4 million death from TB ((0.99 million among HIV negative TB patients and 0.43 million among HIV positive TB patients). According to this estimate 12 million people were suffering from active TB disease in the year 2011 globally. Geographically, the burden of TB is highest in Asia and Africa. Among all the WHO regions, the South East Asia Region accounts for 40% of the global TB cases and next to it is Africa with 26% followed by Western Pacific with 19%. (fig 2)

Fig. 2. Proportion of estimated incidence of all forms of TB by WHO Region



Source: Global Tuberculosis Control, WHO, 2012

Globally, there were 6.2 million notified cases of TB (all forms) in 2011. Among new smear positive pulmonary TB cases registered during 2010, 87% were successfully treated.

The Stop TB strategy is the approach recommended by WHO to reduce the burden of TB in line with global targets set for 2015.

[2] According to "*Global Tuberculosis Control, WHO, 2012" report. Estimates for the year 2012 will be available after publication of Global Tuberculosis Control, WHO, 2013" report.*

Stop TB strategy at a glance

Vision: A TB- free world

Goal : To dramatically reduce the global burden of TB by 2015 in line with the Millennium Development Goals and the stop TB partnership targets.

Objectives:

- Achieve universal access to high-quality care for all people with TB
- Reduce the human suffering and socioeconomic burden associated with TB
- Protect vulnerable populations from TB, TB/HIV and drug resistant TB
- Support development of new tools and enable their timely and effective use
- Protect and promote human rights in TB prevention, care and control

Targets:

- MDG 6. Target 6c. Halt and begin to reverse the incidence of TB by 2015
- Targets linked to the MDGs and endorsed by the stop TB partnership
    - 2015: reduce prevalence of and deaths due to TB by 50% compared with a baseline of 1990
    - 2050: eliminate TB as a public health problem (that means reduce the global incidence of active cases to less than one case per one million populations per year).

Components of Stop TB strategy

1. ***Pursue high quality DOTS expansion and enhancement***
    - *a. Secure political commitment, with adequate and sustained financing*
    - *b. Ensure early case detection and diagnosis through quality assured bacteriology*
    - *c. Provide standardized treatment with supervision and patient support*
    - *d. Ensure effective drug supply and management*
    - *e. Monitor and evaluate performance and impact*

2. ***Address TB/HIV, MDR-TB, and the needs of poor and vulnerable populations***
    - *a. Scale- up collaborative TB/HIV activities*
    - *b. Scale- up prevention and management of multi-drug resistant TB (MDR-TB)*
    - *c. Address the needs of TB contacts, and of poor and vulnerable populations*
3. ***Contribute to health systems strengthening based on primary health care***
    - *a. help improve health policies, human resource development, financing, supplies, service delivery, and information*
    - *b. Strengthen infection control in health services, other congregate settings and households*
    - *c. Upgrade laboratory networks, and implement the Practical Approach to Lung Health (PAL)*
    - *d. Adapt successful approaches from other fields and sectors, and foster action on the social determinants of health*
4. ***Engage all care providers***
    - *a. Involve all public, voluntary, corporate and private providers through Public-Private Mix (PPM) approaches*
    - *b. Promote use of the International Standards for Tuberculosis Care (ISTC)*
5. ***Empower people with TB and communities through partnership***
    - *a. Pursue advocacy, communication and social mobilization*
    - *b. Foster community participation in TB care, prevention and health promotion*
    - *b. Promote use of the patients' charter for tuberculosis care*

6. ***Enable and promote research***
    - *a. conduct program based operational research*
    - *b. Advocate for and participate in research to develop new diagnostics, drugs and vaccines*

3.2 South-East Asia Regional Scenario

Tuberculosis continues to remain one of the major health and developmental problems in the South-East Asia Region of WHO. With 26.3 % of the world's population this region caries over 40% of the global TB burden. An estimated 3.5 million new TB cases and 480 000 TB deaths occurred in 2011; and about 5 million people were suffering from the active TB disease in that year. Five of the 11 Member countries in the region are among the 22 high burden countries while India alone accounts for over 25% of the world's TB cases. (The WHO South-East Asia Region includes the following countries: Bangladesh, Bhutan, DPR Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste (High burden).

3.3 Bangladesh Tuberculosis Scenario

According to the revised estimates by WHO, the incidence and prevalence rates of all forms of Tuberculosis in 2011 were 225 and 411 per 100 000 population respectively. It is further estimated that about 45 per 100 000 people died of TB in the same year. (Table 1)

Table 1: Estimated population and TB Burden, Bangladesh- 2011*

• Population:	150 million
• Mortality rate (excluding HIV)	45 / 100 000 pop
• Prevalence rate (all cases, including HIV)):	411/ 100 000 pop
• Incidence rate (all cases, including HIV):	225 /100 000 pop
• Incidence rate (HIV positive TB cases):	0.42/100 000 pop
• Proportion of new TB cases with MDR-TB	1.4%
• Proportion of retreatment TB cases with MDR-TB:	29%

Ref: Global Tuberculosis Control, WHO, 2012

* *Estimates for the year 2012 will be available after publication of Global Tuberculosis Control, WHO, 2013" report*

4. NATIONAL TUBERCULOSIS CONTROL PROGRAM (NTP)

4.1 Vision of NTP

Tuberculosis is eliminated from Bangladesh as a public health problem (i.e. incidence of TB disease is less than one new case per million population per year).

4.2 Mission of NTP

The NTP aims to strengthen the effort of TB control through effective partnerships, mobilization of resources and ensuring quality diagnostic and treatment services under defined DOTS strategy. The NTP strives to make services equally available to all people in Bangladesh irrespective of age, sex, religion, ethnicity, social status or race.

4.3 Goal of NTP

The overall goal of TB control is to reduce morbidity, mortality and transmission of TB until it is no longer a public health problem.

4.4 Objectives of NTP (to be taken from TB guidelines 5th ed)

The objectives of NTP are:

- To sustain the global targets of achieving at least 70% case detection and 85% treatment success among smear-positive TB cases under Directly Observed Short-course for the country as whole;

  in order to then

- Reach the interim target of halving the TB death and TB prevalence rates towards achieving a reduction of incidence of TB, as stated under the MDGs (2015).

4.5 Services of the Programme

The NTP introduced the DOTS strategy in 1993 and since 2006 NTP has been implementing the Stop TB Strategy. The TB diagnostic and treatment services are available free of charge all over the country. The common places where free-of-charge diagnostic and treatment services for TB are available are given below:

- ✓ All Upazilla Health Complexes
- ✓ 44 Chest Diseases Clinics;
- ✓ 7 Chest Disease Hospitals (Previous segregation hospitals) linked to the Chest Diseases Clinics
- ✓ 4 Divisional Chest Disease Hospitals
- ✓ The National Institute of Diseases of the Chest and Hospital (NIDCH), Dhaka
- ✓ The Government Leprosy Hospital in Nilphamari
- ✓ District Sadar Hospitals.
- ✓ Urban health centre's in all metropolitan cities (GoB and NGOs)
- ✓ Public and private medical college hospitals
- ✓ Work places
- ✓ Prisons
- ✓ Combined Military Hospitals and other defense hospitals

4.6 Major Events /Achievements

The major events/achievements during 2012 are as follows:

- Number of microscopy lab were increased from 1058 to 1072
- Number of EQA lab were increased from 37 to 40
- MDR-TB Guidelines -2nd edition drafted
- Recording and reporting forms for MDR-TB patients developed
- MDR-TB expansion plan drafted
- Drafted cPMDT Training modules
- Drafted SOP for cPMDT
- Drafted cPMDT guidelines
- C-PMDT piloted in 4 districts (Gazipur, Narayanganj, Chittagong and Jessore) and started scaling up
- Introduced new diagnostic tools for diagnosis of drug resistant TB
    - Gene-Expert Machine in NIDCH, Dhaka (2) and CDH, Chittagong (1)
    - LPA (Line Probe Assay) in NIDCH, Dhaka
- Introduced Social Protection Scheme under which
    - diagnostic and transport cost is supported to TB symptomatics to increase smear negative, extrapulmonary, MDR-TB and child TB cases.
    - Nutritional support is provided to MDR-TB, TB/HIV patients and TB patients from ultra poor family.
- Introduced Isoniazid preventive therapy (IPT)
- Published National Guidelines for the management of tuberculosis in children
- Observed World TB Day 2012
- Improved cooperation and collaboration between the Government of Bangladesh and non-governmental organizations involved in control of tuberculosis
- Further expansion of public –private partnership (PPP) and involvement of civil society and the community.

4.7. Major Challenges:

- Sustaining the quality DOTS
- Further strengthening laboratory services including expansion of culture and DST
- Improving case notification of smear-negative, extra-pulmonary TB cases
- Improving capacity for diagnosis and management of child TB cases
- Scaling up management of MDR-TB patients
- Ensuring un-interrupted supply of quality drugs and logistics.
- Establishing System for assessing quality of Anti-TB Drugs
- Sustaining partnerships with NGOs, private sector, academic institutes and work place in TB Control

5. PROGRESS IN TB CONTROL

Since the introduction of DOTS in Bangladesh in 1993, remarkable progress in TB control has been made in terms of DOTS coverage, diagnosis and treatment of TB cases.

5.1 DOTS Coverage

Bangladesh adopted the internationally recommended DOTS strategy in 1993. DOTS services were made available to all *upazilas* by June 1998 and by 2007 NTP reached the 100% DOTS coverage.

DOTS coverage refers to the population living in areas where DOTS services are available. This does not mean that all people have equal access to diagnostic and/or treatment facilities

5.2 Case Notification

Case detection rate:
Case detection rate for new smear-positive cases was one of the two indicators globally used to measure progress with DOTS implementation. This indicator is also selected for measuring progress towards achieving the Millennium Development Goals. The global target linked to this indicator is at least 70%.

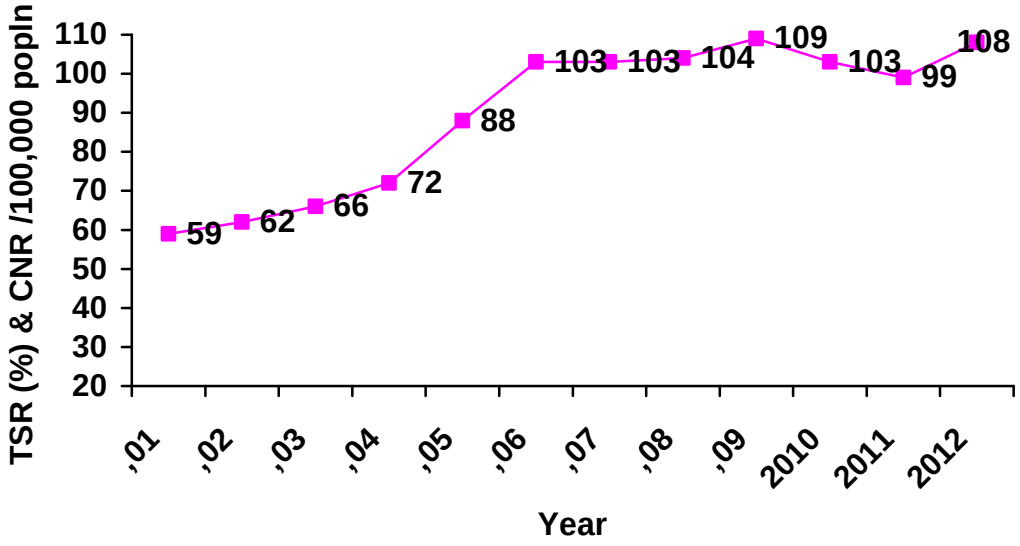
Case detection rate is defined as the number of cases detected expressed as a percentage of cases estimated to occur during a period of one year. Now World Health Organization (WHO) is not providing any estimate for new smear positive cases, rather providing combined estimates for all new TB cases.

The reporting format (performance framework) for The Global Fund performance report has also replaced the indicator “case detection rate” by “case notification rate”. So in this report case notification rate is used and trend analysis is shown using the reported data since 2001.

Case notification rate:
Case Notification rate is defined as the number of cases registered and reported to NTP per one hundred thousand population per year

After the introduction of the DOTS strategy in 1993, the overall progress in case finding was slow and steady until 2001 to reach case notification rate for new smear positive cases of 31/100,000 population. From 2001 onwards, case notification accelerated to reach 46/100,000 in 2004 and further increased to 61/100,000 in 2005 and 73/100,000 in 2006. In 2009, the case notification was further increased to 74/100,000. In 2010 the number of reported TB cases were lower (70.5/100,000 cases) than that in 2009, and in 20011 NSP TB case notification rate was further decreased to 65/100,000 population. As a result of additional effort in special situation like smear negative child TB cases as well as effort to hard to reach areas with social support for ultra-poor group and hard to reach areas case notification increased to 70/100 000 population during 2012, (Figure 1) along with overall increase in notification of all forms of TB cases (Fig 2,9).

Fig 3. Case notification rate/100 000 population, all forms of TB ,2001-12



5.2.1 *Nationwide Case Notification*

A total of 169 807 (164903+ 4904) cases including 4 904 combined cases of return after failure, return after default and others have been reported to NTP in 2012. So the overall case notification rate excluding those 4 904 cases was (109/ 100 000 population). Among the total 169 807 cases, about 84% were reported through the *upazilas*. nearly 63.% of the cases were new smear-positive and only 1.8% were relapses. New smear-negative and extra-pulmonary cases were 14.4 % and 18% respectively. Proportions of extra-pulmonary and new smear-negative cases reported from metropolitan cities and by CDCs were higher compared to *upazilas* (Table 2).

Table 2: Case notification by type of reporting unit, 2012

Reporting unit	Pulmonary smear Positive								New Pulmonary smear Neg		EP New		Others		Total	
	New		Previously treated													
			Relapse		Return after failure		Return after default									
	#	Row %	#	Row %	#	Row %	#	Row %	#	Row %	#	Row %	#	Row %	#	Column %
Upazila	95,132	66.74	2,135	1.50	676	0.47	150	0.11	18,851	13.23	22,507	15.79	3,081	2.16	142,532	83.94
Metro. city	10,068	43.28	820	3.52	109	0.47	100	0.43	4,640	19.95	6,849	29.44	677	2.91	23,263	13.70
CDC	1,640	40.88	112	2.79	21	0.52	21	0.52	955	23.80	1,194	29.76	69	1.72	4,012	2.36
Total	**106,840**	62.92	**3,067**	1.81	**806**	0.47	**271**	0.16	**24,446**	14.40	**30,550**	17.99	**3,827**	2.25	**169,807**	**100.00**

About 38% of the total 169 807 notified cases were female; (M:F=1.63:1). In case of both New Smear positive and new smear negative cases proportions of female cases were about 35%; where as in case of extra pulmonary cases it was nearly 52% (Table 3).

Table. 3. Case notification by type of cases and sex, 2012

Type of cases	Male		Female		Total	M/F Ratio
	Number	(%)	Number	(%)		
NSP	69,481	65.03	37,359	34.97	106,840	1.86
Relapse	2,235	72.87	832	27.13	3,067	2.69
Failure	585	72.58	221	27.42	806	2.65
Default	217	80.07	54	19.93	271	4.02
NSN	15,870	64.92	8,576	35.08	24,446	1.85
EP	14,574	47.71	15,976	52.29	30,550	0.91
Others	2,394	62.56	1,433	37.44	3,827	1.67
Total	**105,356**	**62.04**	**64,451**	**37.96**	**169,807**	**1.63**

Age sex distribution of new smear positive cases

Among the notified new smear positive cases the number of male patients was higher in all age groups except in children (less than 15 years old), where TB cases among girls are two times higher than that among boys. Seventy one percent of the reported cases belong to 15 - 54 years age group, who are economically most active The male–female ratio increases with the age. In old people (more than 65 years old), there are about 4.5 times more men notified than women (Figure 4 ,7).

Age sex distribution of new smear negative cases

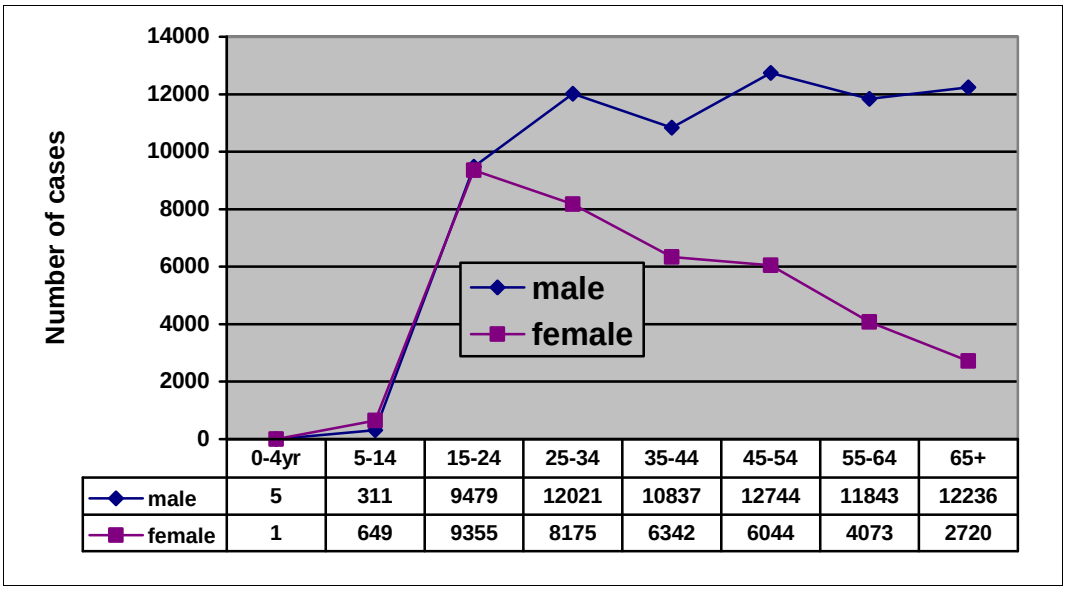
Figures 5 and 7 shows that the number of notified new smear negative cases was almost equal in both sexes up to age 24 years. From 25 years and onwards the number of male cases was higher in all age groups and male–female ratio increases with the age

Age sex distribution of new extra-pulmonary cases

Among under – five age group the number extra-pulmonary cases in boys is 1.4 times higher than that in girls. From age 5 to 44 years the number of female cases exceeds than that of male cases. And beyond that age (after 44 years) the number of male cases is higher than that among female cases. (Fig 6, 7).

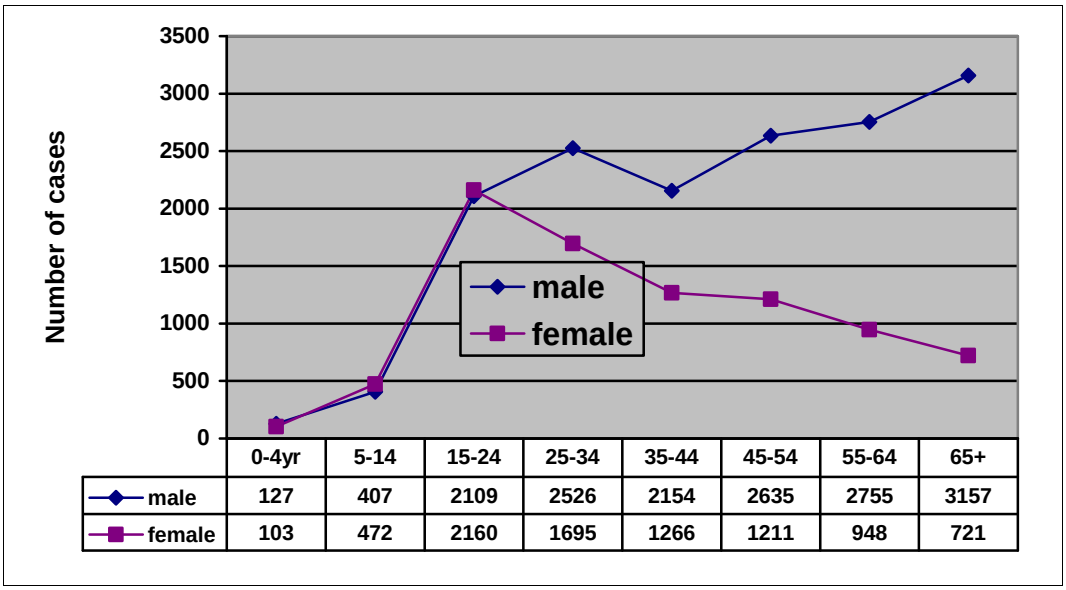
Nationwide case notification in absolute number and rate per 100 000 population is shown in figure 8 and 9 respectively.

Fig. 4: Notification of new smear-positive pulmonary TB by age and sex, 2012



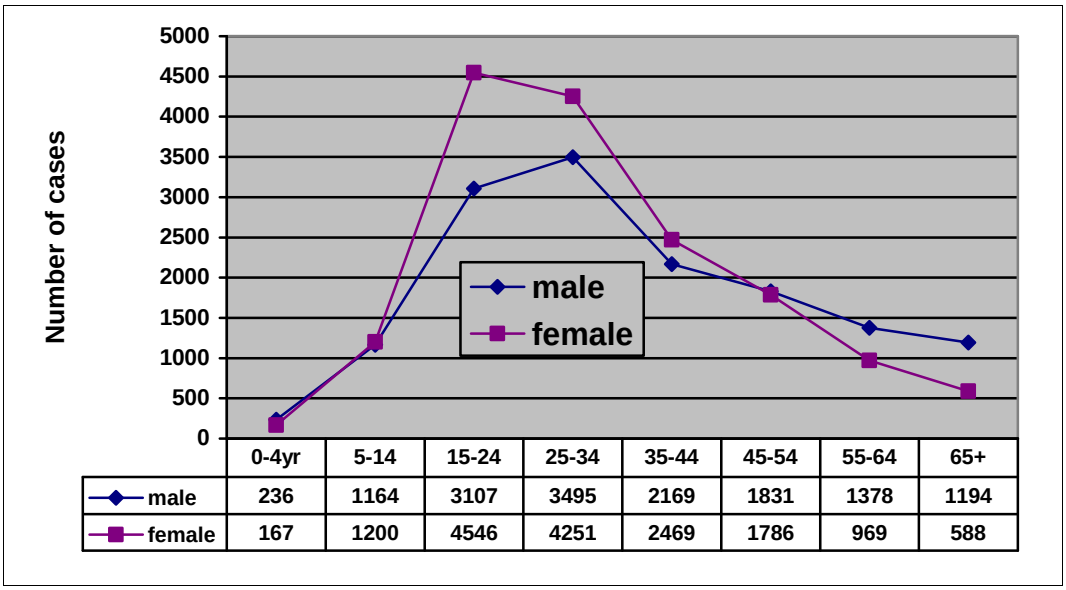
	0-4yr	5-14	15-24	25-34	35-44	45-54	55-64	65+
male	5	311	9479	12021	10837	12744	11843	12236
female	1	649	9355	8175	6342	6044	4073	2720

Fig. 5 Notification of new smear-negative pulmonary TB by age and sex, 2012



	0-4yr	5-14	15-24	25-34	35-44	45-54	55-64	65+
male	127	407	2109	2526	2154	2635	2755	3157
female	103	472	2160	1695	1266	1211	948	721

Fig. 6 Notification of new extra- pulmonary TB by age and sex, 2012



	0-4yr	5-14	15-24	25-34	35-44	45-54	55-64	65+
male	236	1164	3107	3495	2169	1831	1378	1194
female	167	1200	4546	4251	2469	1786	969	588

Fig. 7 Male- Female Notification Ratio by age group, New Smear- positive, New Smear- negative & New Extra-pulmonary cases, 2012

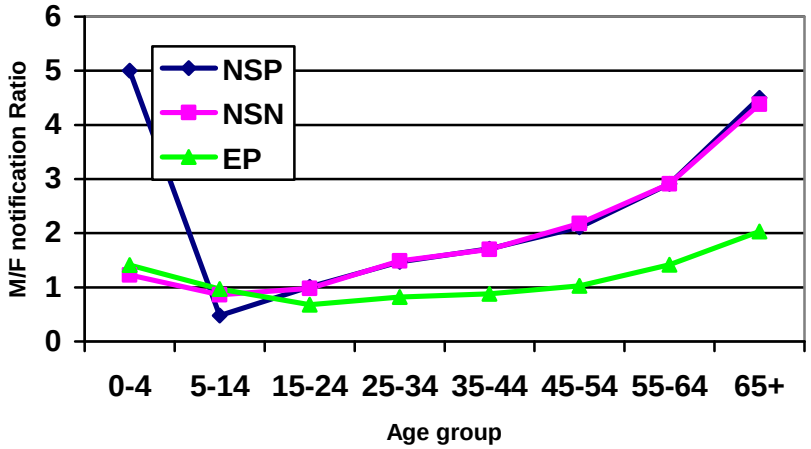


Fig. 8. Nation wide yearly case notification; absolute number; 2001-2012

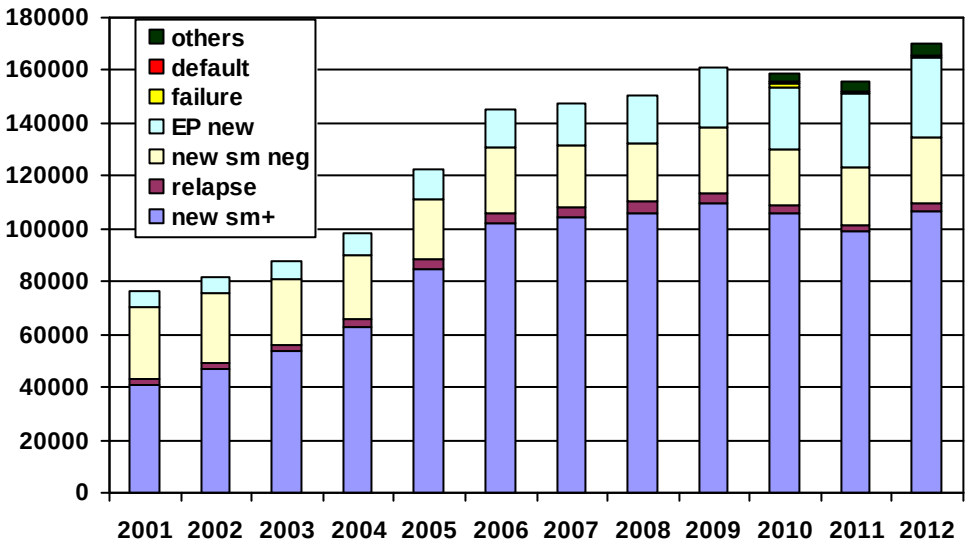
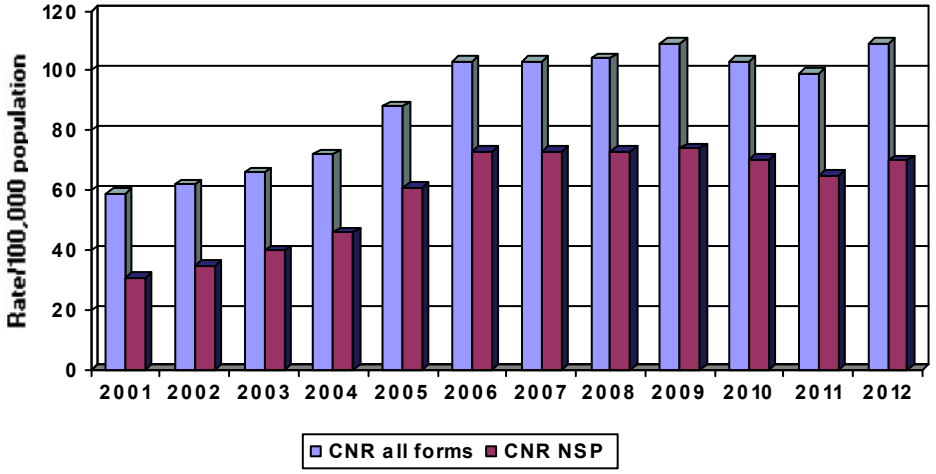


Fig. 9. Nation wide case notification rate (per 100 000 population/year), 2001-2012



5.2.2 Division-wise Case Notification; New Smear- positive Cases

Out of six divisions, four divisions showed new smear positive TB case notification rate (CNR) of more than 75 (76-100) per one hundred thousand population. The nationwide case notification rate for new smear-positive cases was 70 /100 000 population in 2012 (Table 4).

Table 4: ***Division-wise new smear-positive cases by type of reporting unit***

Division	Number of reported cases				Estimated Projected population of 2012	CNR /100000 population
	Upazila	Metro	CDC	Total		
Rajshahi	20,815	178	627	21,620	36,086,995	59.91
Khulna	12,171	438	235	12,844	16,414,018	78.25
Barisal	8,293	268	79	8,640	8,667,912	99.68
Dhaka	25,693	6,008	485	32,186	50,282,842	64.01
Sylhet	7,438	473	127	8,038	10,527,092	76.36
Chittagong	20,722	2,703	87	23,512	30,039,532	78.27
Total	**95,132**	**10,068**	**1,640**	**106,840**	**152,018,392**	**70.28**

5.2.3 District-wise Case Notification; New Smear- positive Cases

The district wise case- notification rates of 2012 are shown in Figure 10 and details of case notification by district are shown in Annexes (Case notification for the year 2011 is also kept in Fig 9)

Fig. 10: District-wise case-notification rate for new smear-positive cases 2011

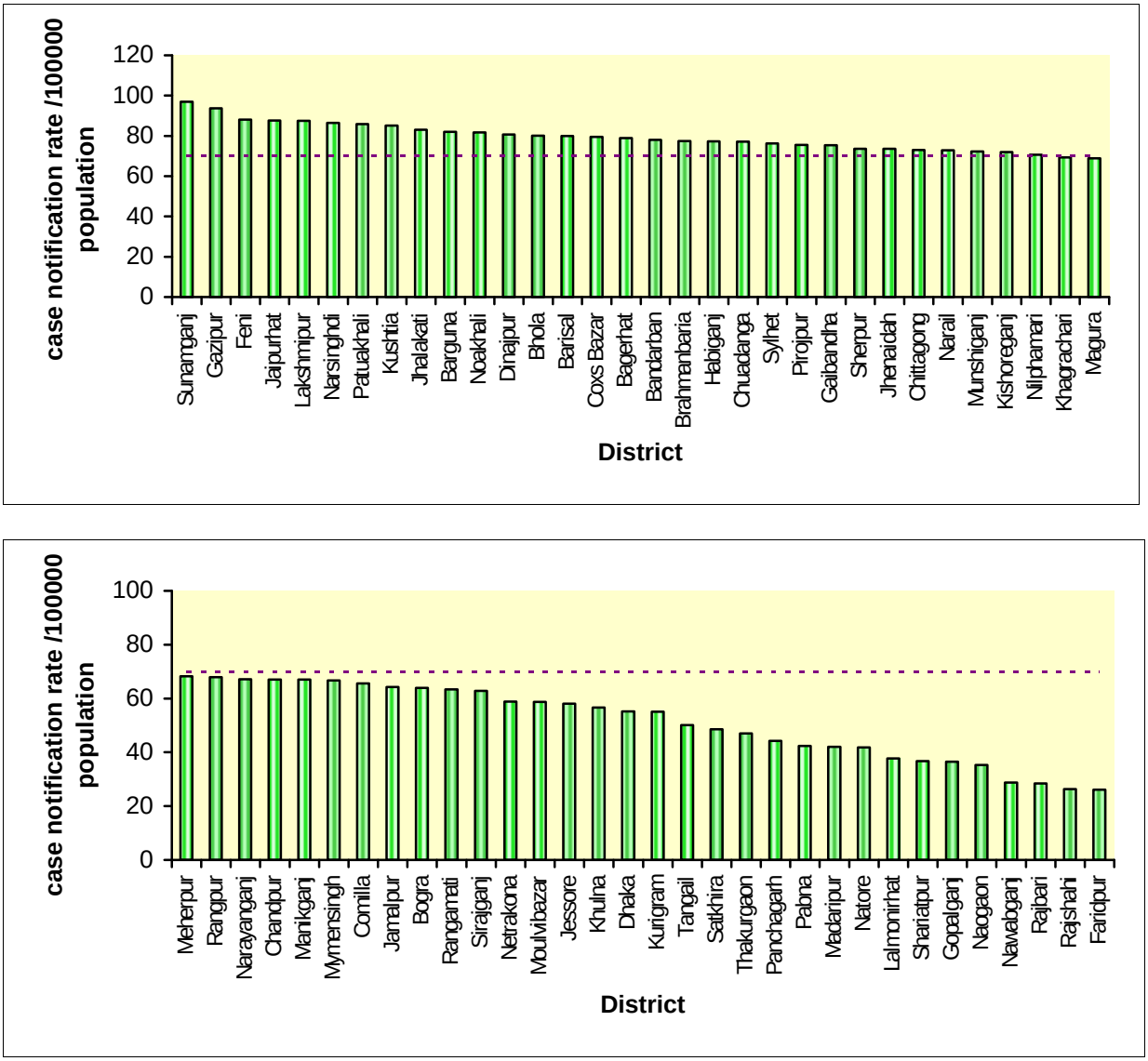
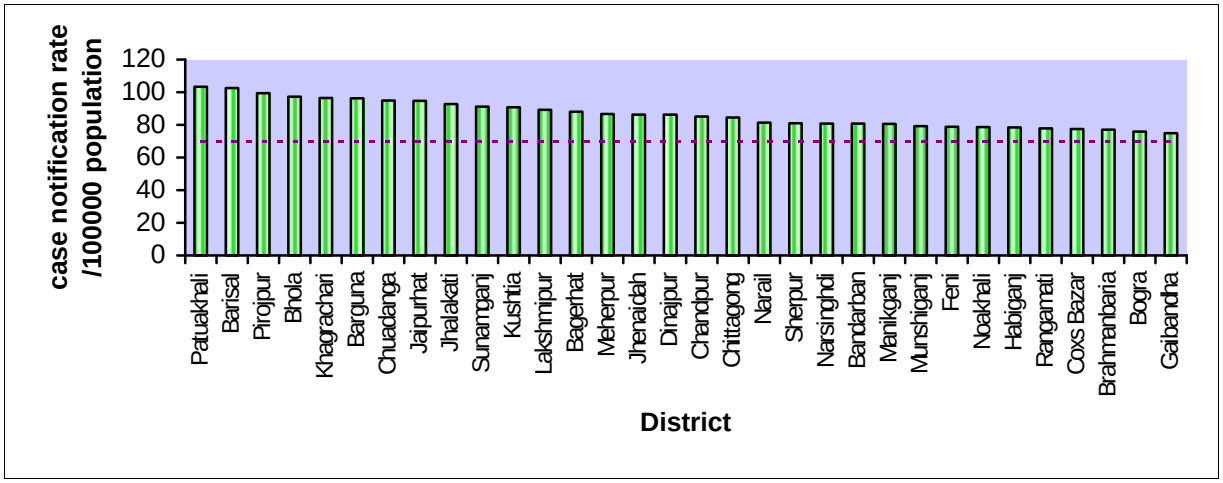
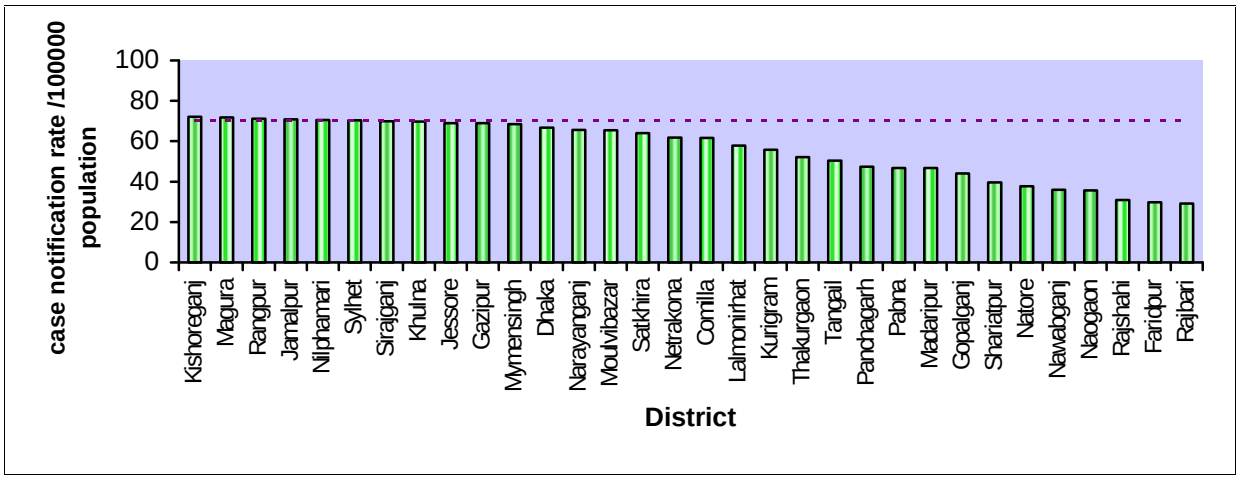


Fig. 11: District-wise case-notification rate for new smear-positive cases 2012





5.3 Treatment Outcomes

All diagnosed TB patients are regularly registered for treatment. The treatment lasts for six months (new cases) to eight months (re-treatment cases). At the end of the treatment, the patients are evaluated with regard to treatment outcomes. The possible outcomes are: cured (only applicable to smear-positive cases), treatment completed, died, treatment failure, defaulted and transferred out. "Cured" and "treatment completed" are also grouped as "treatment success" or treatment with favourable outcome while "died", "treatment failure", "defaulted" and "transferred out" are consider as unfavourable outcomes. In the same way as case finding, treatment outcomes are also analyzed by the central NTP unit at three levels: national, divisional and district. This report includes the outcomes of the treatments in TB patients registered during 2011. from all sources (*upazilas*, metropolitan cities and CDCs).

Definitions of treatment outcomes

Cured: Full course of treatment received with negative smear at the end of treatment

Treatment completed: Full course of treatment received but no proof of negative smear at the end of treatment

Died: Died due to any cause during the treatment

Defaulted: Interrupted treatment for two consecutive months or more

Treatment failure: Remaining or again becoming smear-positive after at least five (new cases) or eight months (retreatment) of treatment

Transfer out: Patient moved to another registration unit and no known treatment outcome

5.3.1 *Nation-wide Treatment Outcomes*

Treatment success rates under DOTS have been consistently high from the beginning and crossed the global target of 85% in 2003. After strengthening DOTS and ACSM activities the unfavourable outcomes have been remarkably reduced. As a result, this treatment success rate has improved further to reach 89% for the cases registered in 2004. The NTP has been maintaining over 91% treatment success rate since 2005 (Figure 12). In fact the NTP has successfully treated 90 976 (91.96%) of the 98 932 new smear-positive cases registered in 2011. The default rate was 1.66% while 3.78% of the patients have died during treatment (Figure 13).

Fig. 12: *Trends in treatment success rates, 1993-2011 cohorts*

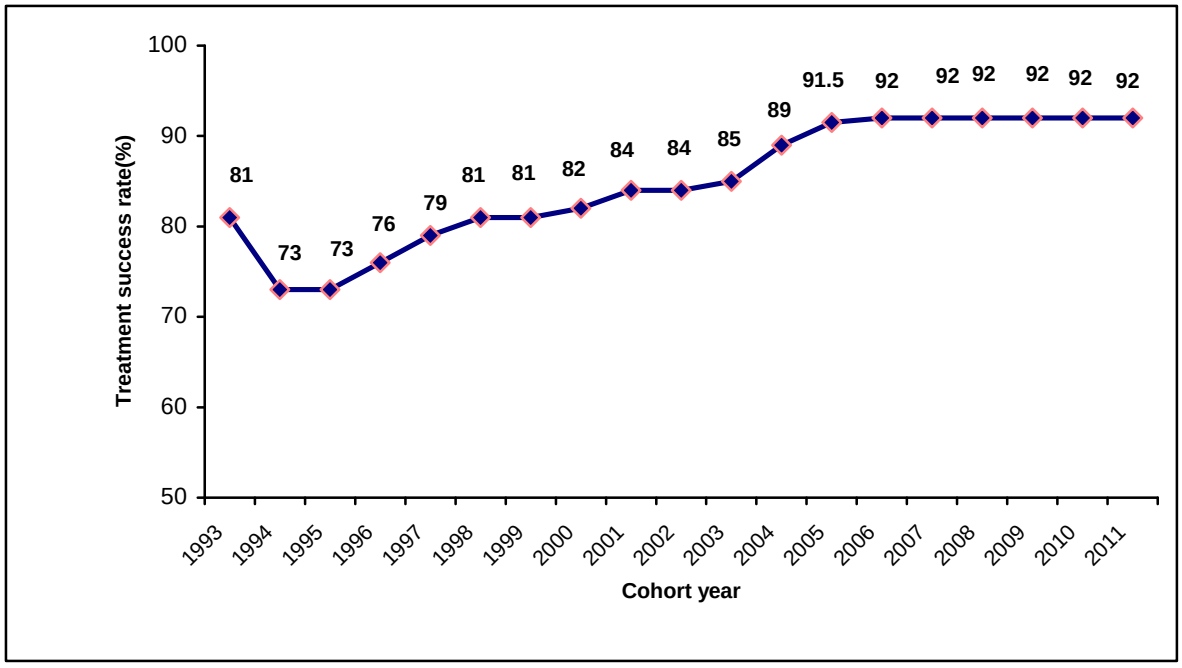
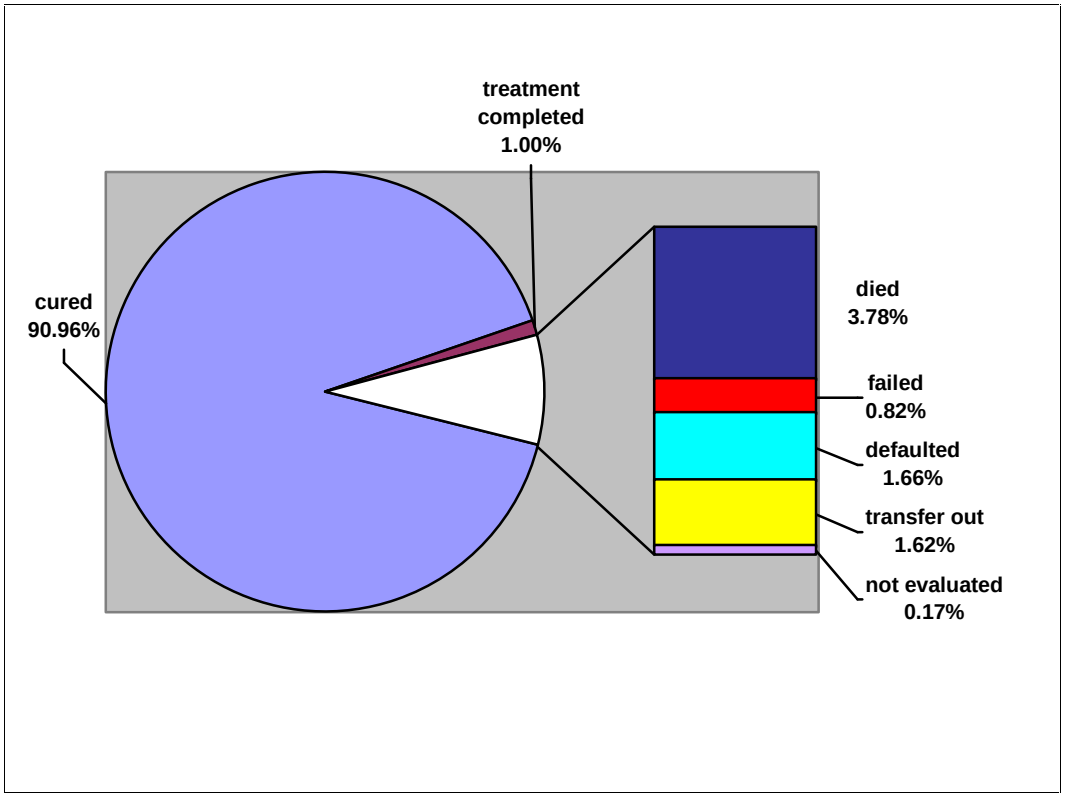


Fig.13: *Treatment outcomes of new smear-positive cases registered in 2011*

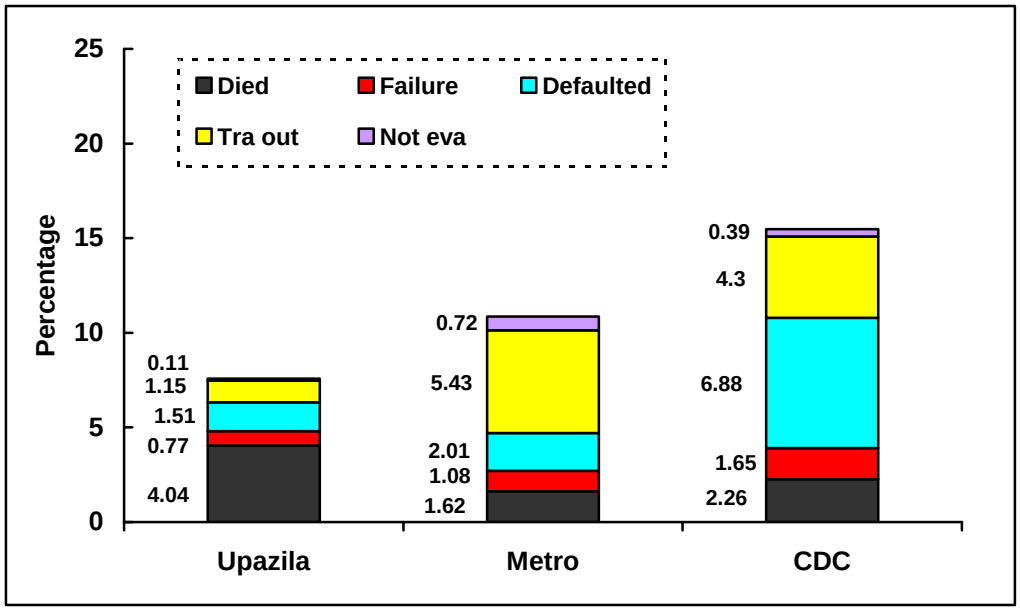


The treatment success rate is higher in *upazilas* compared to that in metropolitan cities or CDCs (Table 5). But the reported death rate in metropolitan cities or CDCs is less than that in *upazilas*. Compared to *upazilas* the default rate in metropolitan city and CDCs is 1.3 and 4.5 times higher respectively . The number of patients not evaluated (including transfer out) is also significantly higher in CDCs and metropolitan cities (Figure 14). **Therefore in order to further improve the treatment success rate, emphasis is to be given on defaulter tracing and getting feedback of transferred out cases with special emphasis in urban setting.** .

Table 5: ***Treatment success by type of registration unit (2011 cohort)***

Type of registration unit	Number of cases registered	Treated successfully
Upazila	87,691	81,040 92.42%
Metropolitan city	9,425	8,401 89.14%
CDC	1,816	1,535 84.53%
Total country	**98,932**	**90,976** **91.96%**

Fig. 14: Unfavourable treatment outcomes of new smear positive cases by type of registration unit (2011 cohort)



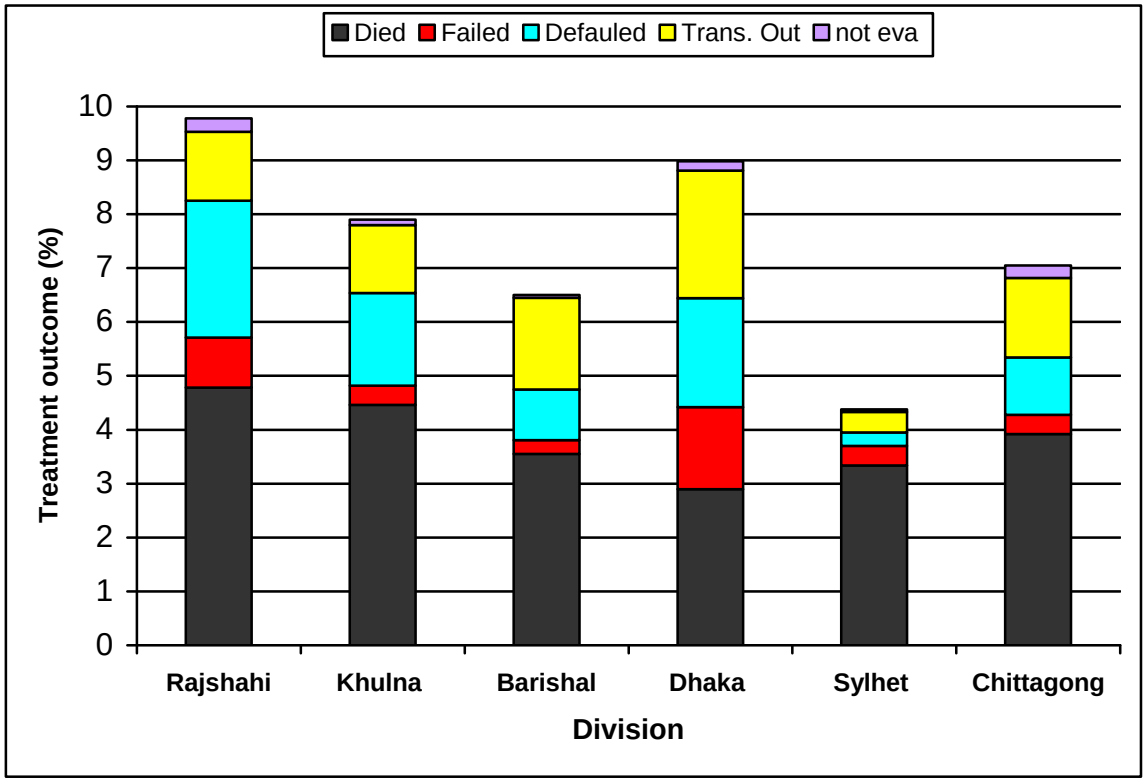
5.3.2 *Division-wise Treatment Outcomes*

Table 6 shows that all six divisions have successfully treated more than 90% of the new smear-positive cases registered in 2011. The patients died during treatment varied between 2.9 % and 4.78% in the divisions while the failure rate varied between 0.26 % and 1.52% in the divisions. The default rate among those patients varied between 0.25% and 2.54%. Data shown in Figure 15 include also metropolitan cities and CDCs.

Table 6: ***Division-wise treatment success rate of new smear-positive cases registered in 2011***

Division	Number of cases registered	Cured	Treatment completed	Successfully treated
Rajshahi	20,019	17,892 89.38%	169 0.84%	18,061 90.22%
Khulna	11,761	10,766 91.54%	67 0.57%	10,833 92.11%
Barisal	7,567	6,976 92.19%	98 1.30%	7,074 93.48%
Dhaka	29,876	26,831 89.81%	362 1.21%	27,193 91.02%
Sylhet	7,535	7,124 94.55%	80 1.06%	7,204 95.61%
Chittagong	22,174	20,400 92.00%	211 0.95%	20,611 92.95%
Total country	**98,932**	**89,989 90.96%**	**987 1.00%**	**90,976 91.96%**

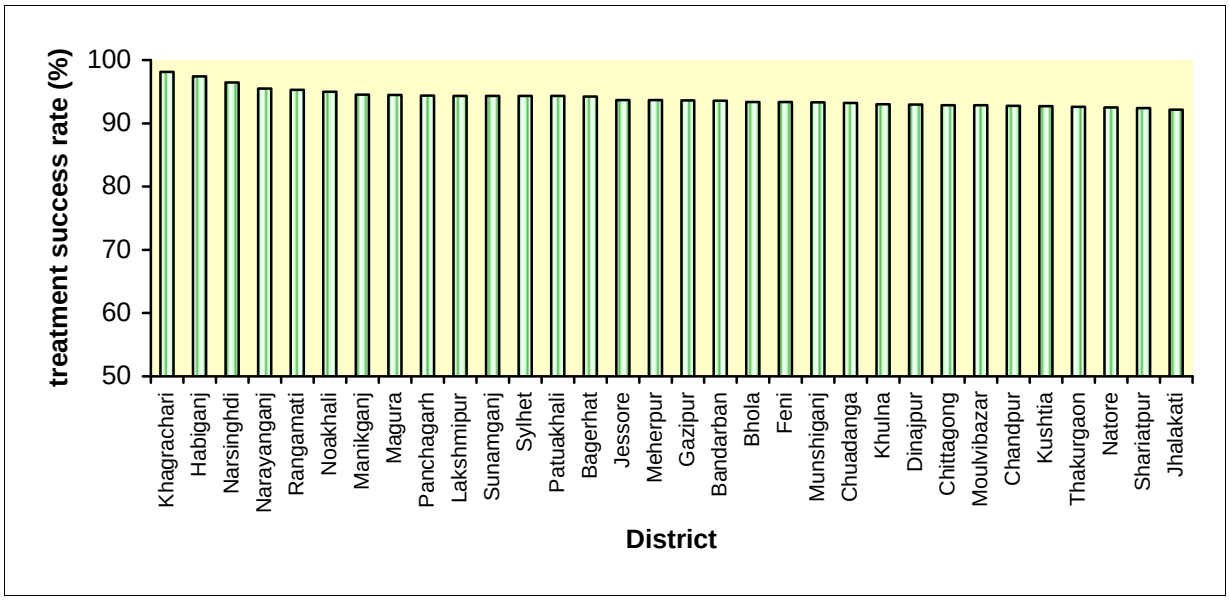
Fig. 15: Unfavourable outcomes of new smear-positive cases by division, 2011 cohort



5.3.*3 District-wise Treatment Outcomes*

The treatment success rates of new smear positive cases in each district for the new smear positive cases registered in 2011 are shown in Figure 17. Majority of the districts are showing 90% or > 90% treatment success rates. (Figure 16 shows district-wise treatment success rate for 2010 cohort).

*Fig. 16**: District-wise treatment success rates of new smear-positive cases, 2010 cohort***



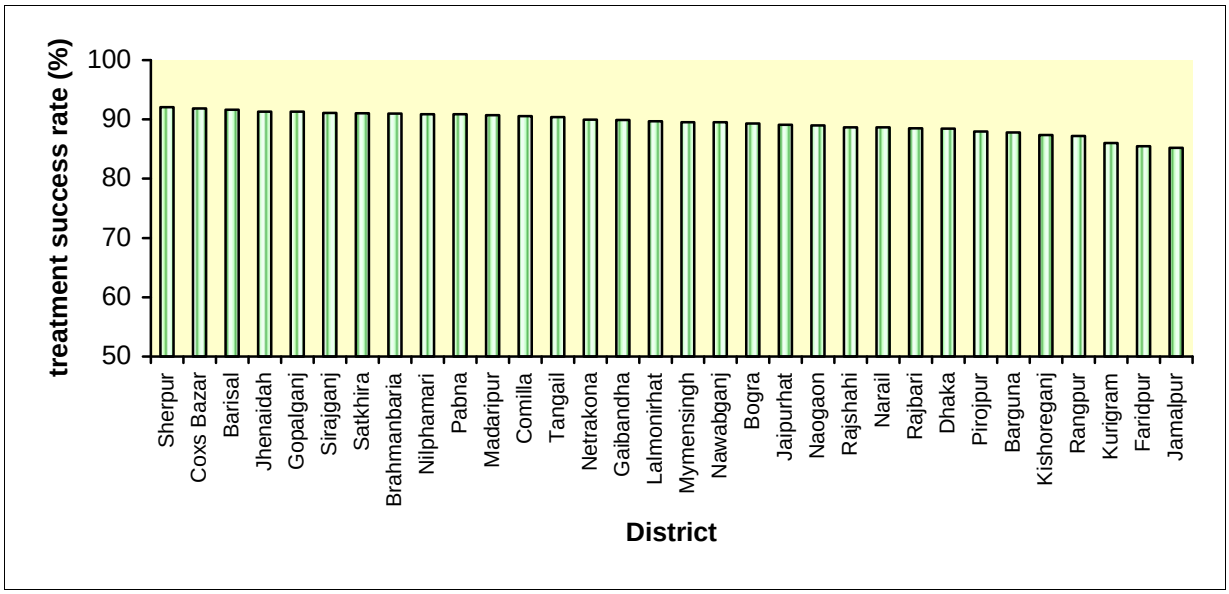
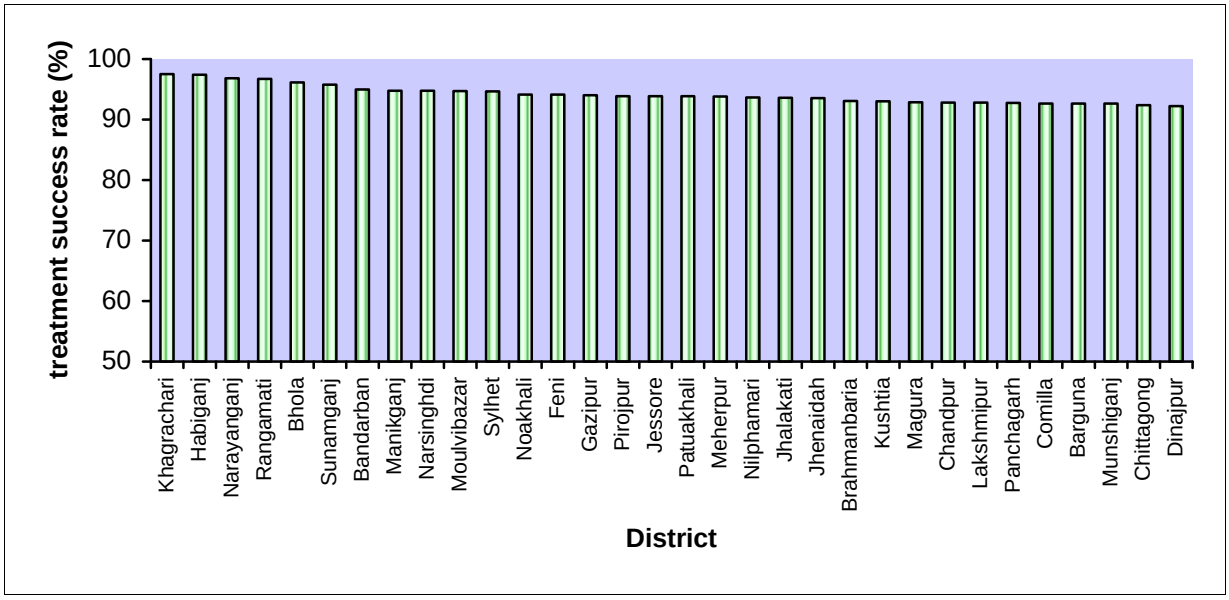
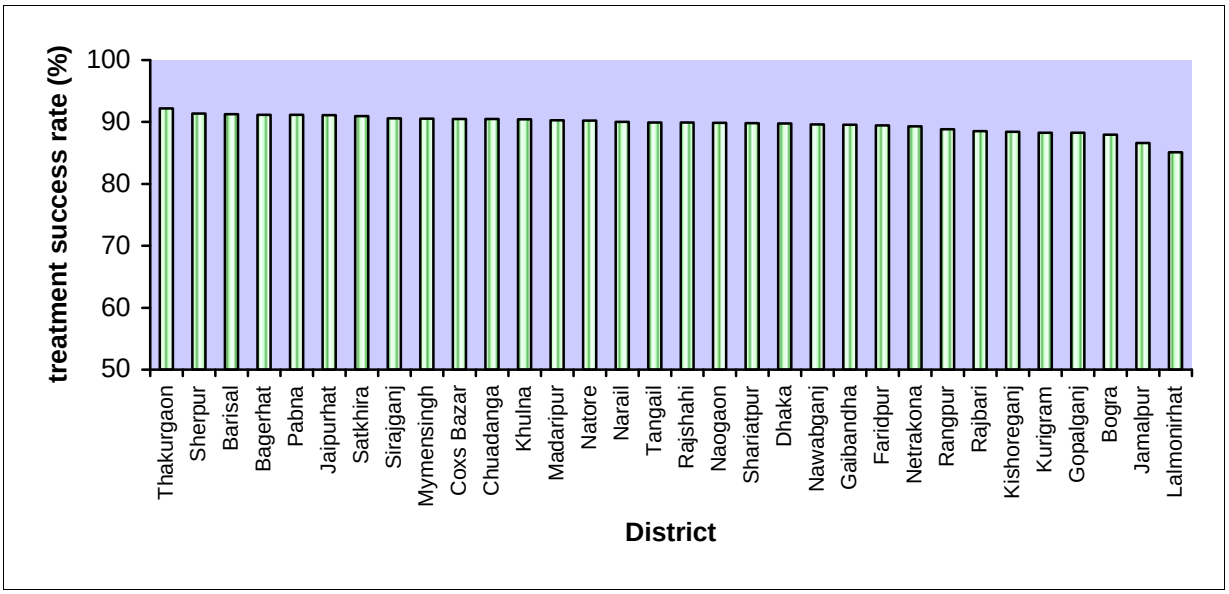


Fig.17 District-wise treatment success rates new smear-positive cases, 2011 cohort





5.3.4 Treatment Outcomes of Relapse, New Smear-negative and Extra-pulmonary (new) Cases

In 2011 a total of 2 695 relapse, 21 895 smear-negative and 27 329 extra-pulmonary TB cases were registered. The treatment success rate of relapse cases was 83.86%, and treatment completion rates of smear negative and extra-pulmonary cases were 89.09% and 89.71%, respectively. During the course of treatment 141 (5.23%) relapse, 1122 (5.12%) smear negative and 939 (3.44%) extra-pulmonary cases had died; over all death rate of these three categories was 4.24%.

6. Drug Resistant TB

Bangladesh ranks 10th in the list of 27 high MDR-TB burden countries. NTP Bangladesh has conducted countries first nationwide drug resistance survey in 2010-2011 According to this survey (preliminary report) the proportion of new TB cases with MDR-TB is 1.4% and that of retreatment cases with MDR-TB is 28.5%. On this basis the total estimated number of MDR-TB cases in 2012 in the country is about 4150. (Table-7)

Table 7. Annual estimated number of MDR-TB cases in Bangladesh (2011-2-12)

Year	New PTB	Retreated PTB	Total
2011	1700	2100	3800
2012	1850	2300	4150

For diagnosis and management of multidrug resistant TB (MDR-TB), a National TB Reference Laboratory (NTRL) has been established in National Institute of Diseases of Chest and Hospital (NIDCH). NDCH is a tertiary level hospital having 680 beds out which 330 beds are allocated for TB patients (220 for complicated drug sensitive TB patients and 120 for drug resistant TB patients). . The NTRL started functioning since 27th June 2007 for culture and Drug Sensitivity Test (DST). It is linked with supranational reference laboratory (SRL) in Antwerp, Belgium. In August 2008 NIDCH started enrolment of MDRTB patients with GLC approved 24 months regimen and supported by the Global fund. By end of December 2012 a total of 971 confirmed MDR-TB patients including 290 in 2012 have been enrolled. As a part of Programmatic Management of Drug resistant TB (PMDT) plan NTP established a RTRL at CDH, Chittagong in 2011 and enrolled 41 MDR-TB patients in that year and 86 in 2012. .

The MDR TB patients are also managed in the chest disease hospital (CDH) of Rajshahi division but with a shorter regimen of 9 months and supported by Damien Foundation, Bangladesh under operational research.. Since May 2005 this centre has been managing MDR TB patients, and by end of December 2012 a total of 975 patients including 127 in 2012 have been enrolled. A regional TB reference laboratory (RTRL) has been established in the CDH, Rajshahi in May 2008.

Suspect criteria for MDR-TB:

- ❑ Failures of Category I and II
- ❑ Non-converters of Category I and II
- ❑ All relapses
- ❑ All return after default
- ❑ Close contacts of MDR-TB patient with symptoms.
- ❑ All TB/HIV infected patients

The MDR patients diagnosed and enrolled for management are shown in the Table below.

Table 8 Summary, MDR TB Enrolment for Treatment

Year	**NIDCH Since August 2008) GLC approved 24 months regimen**	**CDH Chittagong**	**9 months regimen, including CDH, Rajshahi**
2005 (May) - 2007	**-**	**-**	**242 (67+69+106)**
2008	107	-	124
2009	179	-	172
2010	183	-	173
2011	212	41	137
2012	290	86	127
Total	**971**	**127**	**975**

Treatment outcome of MDR-TB patients under GLC approved 24 months regimen:

Diagnosed MDR-TB patients are enrolled for treatment. The treatment lasts for 20-24 months (6-8 months in hospitals and rest period in the community)*. At the end of the treatment, the patients are evaluated with regard to treatment outcomes.

The proportion of successfully treated patients are gradually increasing for the patients enrolled in 2008, 2009 and 2010 with a success rate of 64%, 68% and 70% respectively. (Table 9

Table 9: Treatment Outcomes MDR TB, NIDCH, 2008 - 2010 cohorts

Year	Registered	Confirmed MDR	Outcomes Abs #						Outcomes Percentage							Evaluation
			Cured	Treat completed	Failed	Defaulted	Died	Still on treatment	Cured	Treat completed	Failed	Defaulted	Died	Still on treatment	Treatment Success	
2008	107	104	61	6	1	28	8	0	58.7	5.8	1.0	26.9	7.7	0.0	64.42	After 36 months
2009	179	167	104	9	3	30	21	0	62.3	5.4	1.8	18.0	12.6	0.0	67.66	After 36 months
2010	183	175	99	24	0	25	27	0	56.6	13.7	0.0	14.3	15.4	0.0	70.29	After 30 months

.

* Bangladesh NTP has started community management of MDR-TB with initial hospitalization for 2-3 months followed by community management for the rest period. NTP is also planning to start community based management from the “zero’ date.

Treatment outcome of MDR-TB patients under DF supported 9 months regimen:

Under an operational research NTP in collaboration with DF Bangladesh has been managing MDR-TB Patients with 9 months regimen since 2008 and showing a good success with treatment success rates of 74% to 82% (Table 10)

Table 10: **Treatment outcome of MDR-TB patients under 9 months regimen**

Year	Registered	Confirmed MDR	Outcomes Abs #						Outcomes Percentage							Evaluation
			Cured	Treat completed	Failed	Defaulted	Died	No Result	Cured	Treat completed	Failed	Defaulted	Died	No Result	Treatment Success	
2008	129	129	103	0	3	12	6	5	79.84	0	2.3	9.3	4.65	3.876	79.84	after I year
2009	181	181	138	5	2	16	11	9	76.24	2.76	1.1	8.84	6.08	4.972	79.01	after I year
2010	154	154	125	2	2	17	8	0	81.17	1.3	1.3	11	5.19	0	82.47	after I year
2011	137	137	102	0	9	22	4	0	74.45	0	6.6	16.1	2.92	0	74.45	after I year

7. LABORATORY ACTIVITIES

7.1 Sputum Microscopy and Quality Assurance

Quality assured smear microscopy services which are essential part of TB control program are available through a large laboratory network in Bangladesh. During 2012, sputum microscopy under NTP was performed in 1072 (in 2011 it was 1058) laboratories across the country and sputum samples from a total of 14 22 910 suspects were tested for AFB, out of which 113 244 were sputum smear positive (positivity rate 8.0%). As follow up of treatment a total number of 346 730 sputum slides were tested out which 4.7% were found positive. (Detailed lab report for the year 2011 and 2012 is shown in Annex -3)

In 2012 number of EQA lab was increased from 37 to 40. All 1072 laboratories were brought under the quality assurance network of the EQA centers. Assessment reports had been received from these EQA centers (List of EQA centers shown in Annex -4) .

Lot of quality assurance sampling method were used for quantifying the number of slides to be rechecked. Each month five slides were selected from each laboratory. Slides were blindly rechecked by a first controller. A total of 62,240 slides were rechecked. This sample contained approximately the same distribution as the pool from where they were selected i.e. 4,744 (7.62%) positive, 422 (0.68%) scanty and 57,074 (91.70%) negative. Table 11 shows the result of the blinded rechecking analysis.

***Table 11: Result of blinded* rechecking of AFB smears**

Type of error	Number	Rate
Total False positive by MCs	49	0.95%
High false positive	26	0.50%
Scanty false positive	23	0.45%
Total False negative by MCs	311	0.54%
High false negative	220	0.39%
Scanty false negative	91	0.16%
Quantification error (QE) by MCs	173	3.35%

7.2 National Tuberculosis Reference Laboratory (NTRL)

On 27th June 2007 the National Tuberculosis Reference Laboratory (NTRL) formally started functioning. NTRL is the WHO/The Union recommended TB reference laboratory of NTP. It is the only National level laboratory for GLC-Approved project. Along with previous microscopy (Z-N stain, Fluorescent Stain, and FDA staining), Culture and DST (conventional culture and identification, conventional DST by proportionate method and slide DST); new diagnostic techniques such as GeneXpert and LPA (line probe assay) were introduced in 2012. Its services assist NTP in two ways: (i) Diagnosing and follow up drug resistant forms of TB (ii) Monitoring drug resistant trends through periodically conducting drug resistant surveys. NTP has already conducted country's first national drug resistance survey in collaboration with the NTRL during 2010-2011..

7. 3 Regional Tuberculosis Referenced Laboratory (RTRL) in Rajshahi and Chittagong

On 10th May 2008 Regional Tuberculosis Reference Laboratory was formally inaugurated in Rajshahi Chest Disease Hospital. Damien Foundation is providing Technical support for this Laboratory. Culture and Drug susceptibility Test (DST) for Tuberculosis are done within shortest duration by this laboratory. The RTRL in Chittagong has started its function since October 2010. Completion of establishing RTRL in Khulna division will enhance the expansion of MDRTB diagnosis and management..

The activities of NTRL and RTRL Chittagong are shown below in table 12 and table 13respectively.

Table 12. NTRL activities from 2008 to 2012 at a glance

Activities		**2008**	**2009**	**2010**	**2011**	**2012**
AFB Microscopy	Number of TB Suspect examined	21035	17890	18222	20771	24353
	Number of smear positive case identified	3034	2138	1912	2277	6100
	Suspect positivity rate (%)	14.42	12	10.5	10.96	13.4
	Number of slide examined	56755	48041	50379	58741	67338
	Slide positivity rate (%)	13.22	11.7	10.9	9.45	10.9
Culture & Drug sensitivity Test (DST)	Total culture done (including Pulmonary suspects, EP suspects & follow up)	1123	3781	3620	3902*	911
	Culture positive	461	341	402	452	359
	Total DST done	394	341	402	452	359
	Total MDR detected	274	166	261	302	251
GeneXpert	Number of total suspect tested					3039
	RR (Rifampicin Resistant) TB detected					273
LPA	Number of total suspect tested					705
	Sensitive					190
	Rifampicin and INH resistant					213
	Rifampicin resistant					18
	INH resistant					32

**Includes 808 Pulmonary suspects each having 2 samples, EP suspects 268, and follow-up 2018*

*Table **13. RTRL (Chittagong) activities from 2010 to 2012 at a glance***
RTRL (Chittagong) is doing microscopy only for the samples received for culture and DST)

Activities		**2010**	**2011**	**2012**
AFB Microscopy	Number of TB Suspect examined	73	247	500
	Number of smear positive case identified	22	192	249
	Suspect positivity rate (%)	30.13	77.33	63.6
	Number of slide examined	29	247	500
	Slide positivity rate (%)	36.98	54.65	49.8
Culture & Drug sensitivity Test (DST)	Total culture done	73	247	1199
	Culture positive	42	151	318
	Total DST done	22	151	318
	Total MDR detected	15	68	26

8.TB/HIV Co-infection

TB/HIV co- infection denotes two diseases in one body**.** HIV/AIDS and TB are so closely connected that the term “co-epidemic” “dual epidemic” or “twin epidemic” is often used to describe their relationship. The two diseases represent a deadly combination, since they are more destructive together than either disease alone. HIV affects the immune system and increases the likelihood of people acquiring new TB infection. It also promotes both the progression of latent TB infection to active disease and relapse of the disease in previously treated patients. On the other hand presence of TB bacteria in the body of a HIV infected people accelerate the progress of HIV infection to AIDS. TB is one of the leading causes of death in HIV-infected people.

Diagnosis of TB/HIV Co-infection

The diagnosis of TB means that a patient has symptomatic disease due to lesions caused by *M. tuberculosis.* The definitive diagnosis of HIV infection rests on a positive HIV test.

Diagnosis of TB in HIV patients

The diagnosis of tuberculosis is more difficult in HIV-positive people. Even then sputum smear examination for AFB remains the cornerstone of diagnosis to identify infectious patients so that transmission can be stopped by treating with anti-TB drugs. However, support of X-Ray and other diagnostic methods may be taken for diagnosis of other types of TB cases.

Practical points

- *TB is harder to diagnose in HIV-positive people.*
- *TB progresses faster in HIV-infected people.*
- *TB in HIV-positive people is almost certain to be fatal if undiagnosed or left untreated.*
- *TB is the leading cause of HIV related morbidity and mortality*
- *HIV is the most important factor fuelling the TB epidemic.*

TB/HIV Activities:

Table:14 a.HIV among Diagnosed TB Patients in 2011 and 2012

	2011		2012	
Category of TB Patients	# of TB patients tested for HIV before or during TB treatment	# of patients found HIV positive before or during TB treatment	# of TB patients tested for HIV before or during TB treatment	# of patients found HIV positive before or during TB treatment
New smear positive	1060	5	944	6
New smear negative	265	1	238	2
Retreatment cases	89	3	96	1
Extra-pulmonary	308	2	337	0
Others	37	0	26	0
MDR	141	1	147	0
Total	**1900**	**12**	**1798**	**9**

Table:14 b: TB among PLWHA in 2012 (from Ashar Alo Society only)

# of PLWHA tested for AFB	**# of PLWHA found AFB positive**
433	**15**

9. TRAINING COURSES AND MEETING

The development of skilled health staff in NTP is a prerequisite for a successful programme. NTP being primary responsible for training, plans all aspects of training and workshop with government and non-governmental entities to determine training content, develop materials, identify health staff to be trained, ensure training course implementation, and follow up for new hires and maintenance of training. Tables 15 and 16 give an overview of the activities related to training , workshop and meeting on TB control performed by NTP in 2012.

Table 15: ***Tuberculosis training activities-2012***

Course	Duration (Days)	Category of participants	No. of Participants		
			GFATM	GOB	USAID
Management training for Newly recruited Medical officers	6	Medical Officer,Clinic Managers from NGOs	66		
TB Management on X-Ray, EP, PMDT, IC, TB/HIV for Medical doctors (5 Days)	5	Medical Officer,Clinic Managers from NGOs	76		
Training on Data entry & Management	3	Statistcians & TLCA from District & Subdistrict	45		
Ambulatory Management of MDR-TB	1	UH & FPO,MO, Consultant CDC, field workers GO-NGO	129		
Field-level course on DOTS Orientation and Supervision	1	GO- HI, AHI, HA,TLCA, NGO-Counselor, Senior Service promoter and Service promoter	1494	5765	
Mid level course for paramedics on DOTS activities	1	MA, Pharmacists, TLCA from Subdistrict		562	
Orientation of Graduate Private Practitioners	1	Private Practitioners	118		
Training of Doctors on diagnosis of Child TB	3	Medical doctors from District & Upazilla	62		
Training of Lab staffs on Culture and DST(at NTRL)	14	Microbiologists & Medical Technologist (from NTRL & RTRLs)	6		
Training of Doctors on PAL	3	Medical doctors from CDCs & UHCs	25		
Conduct orientation with private hospitals in Metro	1	Doctors of private hospitals	89		
TOT for CHCP training	3	UH & FPO and MO (Disease Control) from UHC	97		
Train and retrain HIV counselor and other staff to identify and refer TB suspects	1	HIV counselor	30		
Training of trainers on PAL management	5	CDC consultants, Chest Disease clinic, MOs – Medicine Unit	13		

TB care for CHCP at Upazilla level	3	Community health care provider (CHCP)	2346		
Training for SMC bluestar providers on DOT	3	Blue Star Providers			120
TOT on LED Flourescence Microscopy	3	Lab Tecnologist			10
Training on AFB Microscopy for Sputum Smear Examination	6	Lab Tecnologist			339
Training on IPT	1	CS, UH&FPO, Pediatrician, MO			38
TOT on LED Flourescence Microscopy	14	Lab Tecnologist			27
Training on Clinical Management of Care for Outpatient MDR TB management team	3	UH&FPO, MO, Statistician, PO, TLCA, MT			274
Laboratory training on Gene Xpart for diagnosis of MDR/ RIF	3	MT			39
TOT for the Doctors on Management of Childhood TB	4	Pediatrician, MO, Consultants			178
Orientation on ambulatory management of MDR TB for field level	1	UHFPO, MO, PO, TLCA, NGO representative			164
Training on sputum collection and transpotation	1	MT(lab), PO, District coordinator, MO, UH&FPO, TLCA, lab Tech			157
TOT on management of TB for inservice training for the intern doctors	3	Physicians			24
Orientation on Gene Xpert	1	UHFPO, MO DC			50
Training on management on TB for Intern Doctors	3	Intern Doctors			534
Orientation on TB for Vulnarable group	1	Teachers of Anjuman Mofidul Islam and Madrasas			189
Training on Data collection and analysis	3	PO, Stastistician, TLMI			236

Table:16 ***Workshop and Meeting related to TB contro-2012***

Subject	Duration (day)	Participants category	No. of participants by funding source		
			GFATM	GOB	USAID
Workshop with civil surgeons, chest consultants, MOs	1	Civil surgeons, chest consultants, MOs	23		
PMDT Guideline revision workshop – 5 days	5	Managers ,Officers ,Consultants(WHO,GFATM, CDC) NGO personels involved in TB program	24		
Workshop for development/revision of guideline and other materials on PAL	5	Managers ,Officers ,Consultants (WHO,GFATM,CDC) NGOs personels involved in TB program	13		
Orientation Workshop with professional Associations	1	Bangladesh Paediatric Association (BPA)	34		
Workshop to develop linkage with Surgeon s and Pathologists	1	Surgeons & Pathologists from District hospitals	17		
Workshop on TB Management of Health Staff	1	UH & FPO, MO,TLCA, Pharmacist, Private Practitioners		163	
Dessemination workshop on national guidelines for management of child TB	1	Pediatrician, MO, Consultants,			307
Meeting to establish linkages between TB and HIV NGOs (Biannually)	1	Managers, Officers, NGO personels involved TB/HIV activities	39		
Quarterly monitoring meeting at district level	1	Mid level managers form both Govt & Non-govt organization	2217		

10. COLLABORATING PARTNERS OF NTP WITH AREA OF COLLABORATION

A number of nongovernmental organizations (NGOs) and institutes have been recognized as official partner of NTP. The relationship between NTP and most of these partner agencies is governed through a memorandum of understanding (MOU). Following are short profiles of each partner agency, listed in alphabetical order.

10. 1 BRAC

In 1972, BRAC began its journey in Bangladesh with a vision of making the world free from all forms of exploitation and discrimination where everyone gets the opportunity to realize their potential. Over the years, the organization has evolved and grown, guided by the principles of innovation, integrity, inclusiveness, and effectiveness. BRAC is the largest NGO partner of National Tuberculosis Control Program (NTP). A Memorandum of Understanding (MoU) was signed between the NTP and BRAC, in 1994 for rural areas and in 2001 for urban areas. Along with NTP, since 2004, BRAC is the principal recipient (PR) of GFATM fund for TB in Bangladesh.

Under the stewardship of NTP, currently BRAC covers 297 sub-districts (upazillas) of 42 districts with a population of 93 million, including Chittagong hill tracts, 41 prisons, 24 academic institutions, 392 peripheral laboratories, 2 port authority hospitals, Chittagong EPZ and 7 city corporations. It started its TB control activity in 1984 with its innovative community based approach which is operated by the Shasthya Shebikas (SS).

Shasthya Shebikas plays the pivotal role of connecting individuals with TB control services during household visits and health forums. Each shebikas receives a basic training and a one-day refreshers training every month. During household visits, Shasthya Shebikas identify TB symptomatic and refer them to the Upazilla Health Complex of BRAC laboratory services for sputum examination. To increase the accessibility of diagnostic facilities, outreach sputum collection centers have been established at the union level (a union is comprised of a few villages). Sputum samples are collected and smeared at the outreach centre once every month. Individuals diagnosed as TB patients are given Directly Observed Treatment (DOT) by *Shasthya Shebikas*, usually at her house, under the guidance of the field level staff of BRAC and a government or BRAC medical officer.

BRAC conducts orientations with different stakeholders of the community to engage them in efforts to identify patients, ensure treatment adherence, and reduce stigma. Some examples of specific groups that are oriented include: cured TB patients, local opinion and religious leaders, girls' guides and scouts, other NGO workers, village doctors, pharmacists, and private medical practitioners. To broaden the reach of TB messaging, BRAC also utilizes local popular theatre shows and folk songs. These activities have shown marked involvement and responses from the community members regarding TB control and have led to increased referral of suspects and thereby better adherence to treatment.

In addition to its original shasthya shebikas model, BRAC has forged partnerships with a variety of providers, industry partners, and other government authorities to create a portfolio of innovative strategies to provide referral networks and expanded access to vulnerable patients in diverse settings, and this has provided the programme a strong technical base. Currently, there are 42 NGOs participating as sub-recipients of PR-BRAC under the national programme. (List annexed –Annex -5)

10.2 Damien Foundation

foundation damien BANGLADESH

Damien Foundation, a Belgian NGO has been active in Bangladesh since 1972. The organization was engaged primarily in leprosy elimination in 6 districts. Later on the organization included Tuberculosis in its agenda considering the disease burden and expanded its working area. The organization now covers 14 districts (= 111 upazillas) of which 13 districts (102 upazillas) are for combined TB and leprosy control. The organization has set up 151 centers including 5 in medical colleges and 1 in workplace (DEPZ).

The organization also runs three own hospitals with a total 255 beds to guarantee quality services for complicated TB (including MDR TB) and leprosy patients. A total of 627 national staffs including 11 doctors are engaged with DF in providing service in Bangladesh. About 25,000 TB, including about 130 MDR TB and around 500 new leprosy cases are being detected and treated by the organization annually. The shortest 9-month Bangladesh regimen for MDR TB, which is being tested now by many other countries, was developed by Damien Foundation Bangladesh.

A TLCA is consulting a TB suspect in the UHC

A Village Doctor providing DOT to a TB patient

10.3 Gonoshasthya Kendra

Gonoshasthaya Kendra (GK) The Peoples Health centre is a pioneer non government organization that provides innovative community health care services that is affordable and accessible to the rural people of Bangladesh. The idea was conceived during the liberation war of Bangladesh from Pakistan in 1971 through establishing “Bangladesh Field Hospital” at Melaghar in Tripura State of India to provide medical care services to freedom fighters and Bangladeshi refugees.

In 1972 Gonoshasthaya Kendra started its work in Bangladesh. The working concept of the organization was introduced in a paper titled, “Basic Health Care in Rural Bangladesh”. Its activities focus on providing basic healthcare to the rural areas. The organization also runs a university, vocational training centre, agricultural cooperatives, hospital, a printing press, community schools and a generic drug manufacturing plant. Gonoshasthaya Kendra has been very successful in providing family planning services, lowering maternal and infant mortality rates.

It is supporting TB control in Savar upazila as well as through its Dhaka Nagar Hospital. There are about 200 field paramedics employed by GK who provide door step health care services at community. These paramedics refer patients suffering from chronic cough to the static health facilities of GK for x-ray chest and Sputum examinations. The positive cases are identified and given 3 days supply of prescribed anti tubercular drugs. These positive cases are then referred to the Government health complex for the continuation of further treatment and follow-up.

10.4 HEED Bangladesh

HEED's Background

HEED Bangladesh (Health, Education and Economic Development) is a non-profit, non-political and non-governmental organization (NGO) committed to participate and promote national development through upgrading the socio-economic condition of the disadvantaged and underprivileged people in the society. The organization, as a national non-governmental organization (NGO), was formed in 1974, by national Christian leaders and several western partner organizations in response to the post war needs in Bangladesh. Since 1974, HEED Bangladesh has been working in the fields of health, education, agriculture, aquaculture, livestock, forestry, environment & natural resource management, bio-diversity conservation, disaster management, socio-economic development of marginalized and under privileged people, micro finance, nutrition & Hygiene education, water and sanitation, HIV/AIDS, rural development, awareness raising, arsenic, women, street children, etc.

HEED's Mission

Ensure basic Health and Medicare services for the target (agreed) communities in need, within the specific operation locations, delivered through awareness rising, demand creation, institutional development, building of community capacity, linking with GO-NGO service delivery points.

HEED's Coverage

HEED Bangladesh is working at 120 Upazilas under 32 Districts with 132 offices. Sector wise projects and Programs with their man focus are given below:
For TB it is working on 24 Upazillas under Moulovibazar District

10.5 icddr,b

icddr,b is an international health research institution located in Dhaka, Bangladesh. With unique proximity to the health challenges of the developing world, both urban and rural, icddr,b provides cutting-edge research that is relevant, rigorously tested, and scalable in resource-limited settings. From discovery of oral rehydration solution to innovative methods for treating severe malnutrition, icddr,b's researchers have developed some of the most important health interventions of the past century. Its scientists, one of the largest multi-disciplinary cohorts in the developing world, collaborate with dozens of international academic, research, and development partners to develop and share knowledge about global lifesaving solutions.

icddr,b researchers are conducting a wide range of research in TB priority areas. For many years it has been monitoring at community level the disease burden, methods of transmission and care-seeking behavior on tuberculosis in its Matlab project area.
icddr,b has also established enhanced case-finding activities in the private sector, which includes the extensive use of the Xpert MTB/RIF assay (GeneXpert), at private sector laboratories – an innovative public private mix (PPM) initiative. Other TB activities include identification of risk factors of TB and its transmission in rural Bangladesh as well as in urban slums, control of TB and prevention of its transmission inside four large prisons (Dhaka, Chittagong, Rajshahi Central Jail

and Gazipur District Jail), studies on TB transmission dynamics, childhood TB diagnosis and management, a prevalence study of HIV in TB cases and other operational research. icddr,b's Tuberculosis Laboratories (BSL 2 and 3) have been used in a variety of programs and studies and also working as a key resource in diagnosis of TB in the private sector.

10.6 LAMB Hospital

Lutheran Aid to Medicine in Bangladesh (LAMB) works to improve the health of poor people in north-west Bangladesh. Services cover a population of well over a million people. The main site is 2km west of the town of parbatipur about 24km east of the district city of Dinajpur.
LAMB was started in the early 1970s by missionaries who saw the absence of skilled medical care in the area. Initially LAMB provided mobile clinics and health care teaching. The hospital opened in 1983. LAMB continues to be a Christian based activity of World Mission Prayer League, aiming to serve God by serving the poorest.
LAMB started treating TB patients in 1985. The method of case finding is identification of suspects among patients who present themselves with symptoms suspected of TB at a health facility, either on their own initiative or referred by another health facility, community health workers or non-medical persons such as community volunteers, religious leaders, etc. Sputum microscopy is done to diagnose TB among suspect cases at the Upazilla Health Complex. DOTS providers at community level supervise daily drug intake. The TB field worker supplies drugs to DOTS providers and supervises them as well.

LAMB TB Control Program is working in 4 Upazillas. Parbatipur (one pourosova & one union), Chirirbandar and Khansama upazilla under Dinajpur district and Saidpur upazilla under Nilphamari districts covering approximately 842,627 people.

10.7 LEPRA Bangladesh

The British Leprosy Relief Association (LEPRA) Bangladesh is a medical development charity based in the United Kingdom. It works to restore hope, health and dignity to those affected by leprosy, TB, malaria, lymphatic filariasis, leishmaniasis and HIV/AIDS. LEPRA has been working in ten countries since 1924.

LEPRA Bangladesh remains in action on health development to support and strengthen the government health system in Bangladesh. Its activities officially started since September 2000. The main aims of its programme is to minimize public health problems due to leprosy, tuberculosis and lymphatic filariasis in the northern districts of the country, as well as strengthening of the formal health system and community-based health services to sustain the activities related to mentioned diseases. The NGO is supporting TB control activities in three districts: Natore, Pabna and Sirajganj.

10.8 NATAB

The National Anti-tuberculosis Association of Bangladesh (NATAB) is one of the oldest TB organizations for TB control. NATAB was established in 1948 in Sylhet as an extension of the Assam Bengal TB Association of British India, then East Pakistan TB Association during Pakistan era. NATAB primarily provided support for TB patients when TB services were non-existent in the then East Pakistan. Through the natural process of metamorphosis, NATAB took the present day identity of a major TB organization.

NATAB is the constituent member of The Union (International Union against TB and Lung Disease) and in 2010 NATAB was elected as the Chairman of south East Asian Region of The Union. NATAB has one (1) central executive committee, sixty four (64) district committees and thus thousands of volunteers from all walks of socio-economic strata makes the base of NATAB.

In 2004, NATAB signed the memorandum of understanding with the Ministry of Health and Family Welfare and BRAC and became a partner of the National TB Control program funded by GFATM. At present, NATAB is working as a civil society advocacy agency to identify different groups by vocation, profession, religion, ethnicity and other possible classification and to turn the variations into strength.

Each quarter, NATAB organizes district level advocacy program in all 64 districts of the country with civil society members. At the same time, NATAB also organizes sub-district level advocacy program in 64 sub-districts. In 2012 (January – December), at district level, a total of 235 advocacy meetings were held under GFATM funded program. A total of 8926 participants were attended these meetings.
Also at Upazila level, a total of 203 advocacy meetings were held. A total of 6660 participants attended these meetings. Besides, NATAB organized 22 Divisional Level advocacy workshops where 1293 participants attended.

Like other years, NATAB participated in World TB Day 2012, at national level with NTP & partner NGOs at central level. At peripheral level, in all 64 districts NATAB's every committee celebrated this day.

With the exception of 2011, since 2005 NATAB has been arranging national tuberculosis conference each year that has become a very revered event for the TB workers where specialists, general physicians, health workers, NATAB volunteers and Media persons engage in the mutual learning process in the daylong event. Such national conference was organized in February 2012.

10.9 PIME Sisters

In 1986, the catholic congregation of the PIME Sisters began their activities for the prevention and cure of Hansen Disease. In the year 2001, when NTP started DOTS implementation in Khulna City Corporation, the PIME Sisters' leprosy network was made available for TB control activities also. The PIME Sisters run twelve DOT centres in Khulna city including the jail. They have a small referral hospital for both TB and leprosy and in this hospital a there is a central laboratory. They conduct field activities in slum areas as well as other parts of Khulna city.

They are regularly conducting advocacy meetings for private medical practitioners, pharmacist, religious leaders, teacher and other community leaders. in slum, bazar etc.

10.10 SEED

The Society for Empowerment, Education and Development (SEED) is a non-governmental, non-profit, and voluntary organisation. Over the last decade, SEED has emerged as a large, independent, and credible research organisation in the health and population sector in Bangladesh. SEED'S work focuses in four areas: **quality health care to the poor; capacity**

development; technical assistance; and research and development. Health remains an integral component of SEED'S activities, especially for women and the poor. In addition, SEED is now actively collaborating with the government (DGHS and NTP) to develop innovative programmes to improve effectiveness of community-based health service delivery

SEED has been a pioneer in developing a sustainable Public-Private Partnership (PPP) model to engage Private Medical Practitioners (PMPs) into the TB control programme, in collaboration with the Bangladesh National TB Control Programme (NTP) and the Nuffield Centre for International Health and Development (NCIHD), University of Leeds, UK.

The PPP in TB control programme, which was piloted in Dhaka, has been scaled up in two other major cities: Chittagong and Sylhet, with plans to expand to other urban areas in Bangladesh. SEED has also forged successful partnership with the NTP, NGOs and the Bangladesh Garments Manufacturers and Exporters Association (BGMEA) in implementing TB workplace project in the selected garments factories in Dhaka and Gazipur areas.

Recently, the NTP and SEED has agreed to renew the MOU for another six years to continue with the PPP-TB, TB workplace, and child-TB activities.

10.11 Rangpur-Dinajpur Rural Service

Rangpur-Dinajpur Rural Service (RDRS) Bangladesh, a leading development NGO, has been working in the northwest region of Bangladesh for over three decades. It was formally established in 1972 as the Bangladesh field Programme of Lutheran World Federation/Department for World Service (LWF/DWS), Geneva to provide relief, rehabilitation and development assistance to the poor. At the same time, there was a shift in the focus of RDRS development endeavors so that community-level organization and groups, women, and micro-finance and skills training for livelihood activities gained in importance. The RDRS Covers 57 Upazilas or sub-district of 11 Districts (Panchagarh, Thakurgaon, Dinajpur, Nilphamari, Rangpur, Gaibandha, Lalmonirhat, Kurigram & Jamalpur-are in the north-west & Hobiganj and Moulvibazar in the north-east).

The importance of proper nutrition, clean water, latrines and family planning are among the issues we discuss with our clients and among the wider community to raise living standards. In the Community Health Programme, we also provide preventive and curative care to supplements health, leprosy and TB, STD and HIV/AIDS and eye care.

From 1996, RDRS as a collaborating partner of the National Tuberculosis and Leprosy Control program took the responsibility for the care of TB patients in 5 Upazilas of Lalmonirhat and 9 Upazilas of Kurigram District through 47 clinics.

10.12 Salvation Army

The Salvation Army Urban Health and Development Project is part of the organization's integrated Community Health Development Project, Mirpur. In 1972 a mobile Medical Relief Team was established. The development programme was added to the health programmes in 1980. Agreements were signed with The Leprosy Mission in 1992 and in 2001 to conduct leprosy activities. The Salvation Army was signatory of the MoU between NTP and the Leprosy-TB Coordinating Committee and was made responsible for supporting TB control activities in Mirpur, Dhaka. The project area is mostly inhabited by Bihari (Urdu speaking) refugees living in unhygienic slum conditions with scarcity of water supply. The Salvation Army's integrated approach of services delivery along with leprosy and TB control is striving hard to uplift the quality of life to the people.

10.13 Smiling Sun Franchise Programme (SSFP)

The Smiling Sun Franchise Program is a project funded by United States Agency for International Development (USAID). It is intended to complement the wide network of the health care facilities set up by Government of Bangladesh restoring to an innovative approach to health care franchising. SSFP is committed to improve the quality of life of all Bangladeshis by providing superior, friendly and affordable health services in a sustainable manner. To achieve relevant health outcomes, SSFP is jointly working with partnering NGOs to convert the existing network into a viable social health system.

SSFP is contributing with the NTP to combat TB in Bangladesh through Smiling Sun Clinics (SSC). Eight SSFP NGOs/franchisees are providing DOTS in 04 city corporations namely Dhaka, Rajshahi, Khulna and Chittagong. The NGOs are Niskriti, PSTC, Bamaneh, CWFD, Swanirvar, Image, PKS and Tilottama. Around 4.1 million catchments population receiving DOTS through 58 Smiling Sun Clinics; 33 of them have microscopy centers and one with External Quality Assurance (EQA) center.

SSFP has been organizing Advocacy Communication and Social Mobilization (ACSM) activities, providing basic training and need based training for implementing the TB program, especial TB intervention in case of Garment workers, pharmacists, HIV/AIDS workers, religious leaders etc,

10.14 The Leprosy Mission Bangladesh

The Leprosy Mission Bangladesh (TLMB) is part of The Leprosy Mission International, a Christian service organization founded in 1874. TLM started working in Bangladesh in June 1991 initially for leprosy and since 1994 also for TB. TLM is supporting to the National Leprosy Elimination Programme through working in Dhaka, Chittagong, Chittagong Hill Tracts, Gaibandha, Jaypurhat, Rangpur, Nilphamari, Thakurgaon and Panchagarh districts. TLM is supporting NTP in TB control implementation in ten upazilas of Thakurgaon and Panchagarh districts. This international NGO is strengthening the health system by integrating its Leprosy & TB control services in Government Health facilities. In addition, TLM foster networking between the Government service providers and community-based supporters including private practitioners, village doctors, local elite, NGO workers, non-graduated private practitioners and cured TB patient.

10.15 Urban Primary Health Care Service Delivery Project (UPHCSDP)

UPHCP
BANGLADESH

Urban Primary Health Care Services Delivery Pro Project, a Public-Private Partnership is an innovative initiative with the goal to improve the health status of the urban population, specially the poor, particularly focusing on women and children, These population segments are usually undeserved by the health care facilities due to many reasons. UPHCSDP is committed to provide all essential health service including Tuberculosis Control Program and reproductive health services to them for improvement of their livelihood. With the aim to contribute to achieving the national goals and targets of the millennium Development Goals (MDGs), the First Urban Primary Health Care Project (UPHCP-I) and Second Urban Primary Health Care Project (UPHCP-II) were initiated in 1998 and 2005 respectively which are milestones in urban health care services. UPHCSD as renamed (3rd phase) started from 01 July 2012 & till 30 July 2017. UPHCSDP has been providing TB Control Services in City Corporations area by 85 DOT centres.

Goal

To improve the health status of the urban population, especially the poor, through improved access to and utilization of efficient, effective and sustainable Primary Health Care (PHC) services.
Under the project, at least 30% of each service will be provided free to the poor.

Objectives

To improve:

- Access to and use of urban PHC services in the project area, with particular focus on extending provision to the poor.
- The quality of urban PHC services in the project area; and
- The cost-effectiveness, efficiency, and institutional and financial sustainability. PHC to meet the needs of the urban poor.

Funding: Loan& grant:
ADB, DFID, SIDA, UNFPA, GFATM

10. 16 TB CARE II Bangladesh

TB CARE II Bangladesh Project
Advancing Global Health Initiative (GHI) in Bangladesh

The TB CARE II Bangladesh project is implemented by University Research Co., LLC (URC), in partnership with Partners in Health, World Health Organization, Canadian Lung Association, Euro Health Group, and Clinical and Laboratory Standards Institute.TB CARE II Bangladesh project seeks to advance the goals of the Global Health Initiative (GHI) Bangladesh strategy by supporting Government of Bangladesh (GOB) objective to prevent and control TB. Aligned with the GOB's TB strategic plan and the USAID/Bangladesh TB strategy, the project aims to reduce mortality and morbidity due to TB by improving universal access to TB diagnosis and treatment, providing high quality DOTS through all levels, and increasing access to prevention, diagnosis and treatment of Multi Drug Resistant TB (MDR TB). Strengthening health system is the strategic focus of the TB CARE II Bangladesh project. TB CARE II Bangladesh contributes to the areas of science & technology and innovation. Two innovations that have been rolled out are GeneXpert, a new diagnostic technology for rapid diagnosis of MDR TB cases, and community based management of MDR TB cases, which is new approach to managing the challenge of limited national capacity for hospital based treatment facilities. The project is also determined to make a significant contribution to the diagnosis and management of Pediatric TB and TB infection control. The project coordinates with TRAction project to support new research and innovative approaches to TB control which are developed in different high burden settings around the world.

10.17 SIAPS

Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program implemented by Management Sciences for Health (MSH); funded by USAID supports to the MOHFW, DGFP, DDGA and DGHS including other key entities to strengthen the ability of policy makers, health care providers and institutions to improve commodity management, with an emphasis on governance, procurement, institutional capacity building, management information system and other system strengthening initiatives, aimed at ensuring continuous availability of commodities required to support health care delivery and the timely availability of reliable data to support evidence based decision making.

SIAPS have been mandated by USAID under a cooperative agreement to work with NTP to strengthen pharmaceutical management systems for TB. The agreement has been started since 23 Sept 2011 and will be ended on 22 Sept 2016. Regarding e-TB manager, NTP has also signed a MOU with MSH previously. SIAPS is working with NTP with the following two main objectives:

1) Improve TB program performance through strengthening management information systems in collaboration with WHO, URC and other key stakeholders:

2) Provide support to the TB Program to develop a comprehensive supply chain management system to support, forecasting, quantification, supply planning, procurement management and distribution of TB commodities including lab.

10.18The World Health Organization (WHO)

In addition to those partners, WHO has provided technical assistance through three National Professional Officers.

List of Consultants/ Technical Assistants (TA) through WHO is in Table 17:

Table 17: Technical Assistant (TA) Missions for NTP facilitated by WHO Period January- December 2012

Sl. No.	Consultant visited NTP	Purpose/Subject	Date
1	1.Mr. Utkarash Srivastava-MSH 2. Mr Luis Fernando Reciolion-MSH	Implementation of e-TB Manager software	26-28 Feb 2012
2	Dr Myint Thoung-Consultant WHO	GDF Mission to assess the drug management system	25-29 March 2012
3	MUZAFAROVA, Nigorsulton, WHO-SEARO	Procurement and Supply Management System and forecasting of FLD,SLD and Lab reagent	14-19 July 2012
4	Dr. Marijke Becx Bluemink, Independent Consultant, Belgium	Technical assistance to review esisting EQA mechnism and revise the SOP for EQA and National operational guidelines for management of TB as per changed policy	02-22 Octber 2012
5	Dr. Khurshid Alam Hyder, RA(TB), SEARO-WHO, Delhi, India	Technical Assistance on Finalization of National Guidelines for Programatic Management of DR-TB(PMDT)-2nd edition	28 Oct-03 Nov 2102
6	Dr. Ikushi Onazaki, HQ-geneva	Technical Assistance to NTP on preparation of TB repeat prevalence survey	5-7 November 2012
7	Dr. Susumu Hirao,Japan Anti -TB Association)	Technical Assistance to support NTP on preparation of National TB repeat prevalence survey period	4-9 November 2012
8	Dr. Saint Saly (National Centre for TB and Leprosy Control-CENAT), Cambodia	Technical Assistance to support NTP on preparation of National TB repeat prevalence survey period	4-9 November 2012
9	Dr. Michael Rich, GLC Consultant, Geneva	To assess the present status and evaluate the current achievement DR-TB, to assess the situation with procurement and sully management, to provide guidance on MIS and to review C-PMDT	11 Dec-20 Dec 2012

Annex 1

District-wise case notification rate, 2012

SL.	District	Upazila total							CDC							Metro							Total							Grand Total	Population	CNR as per 1,00,000 pop.
		New S +ve	Previously Treated			Smear Neg	EPT	Other	New S +ve	Previously Treated			Smear Neg	EPT	Other	New S +ve	Previously Treated			Smear Neg	EPT	Other	New S +ve	Previously Treated			Smear Neg	EPT	Other			
			Relap	Fail	Def					Relap	Fail	Def					Relap	Fail	Def					Relap	Fail	Def						
1	Barguna	**898**	16	4	0	70	88	25															**898**	16	4		70	88	25	**1101**	932,541	**96.30**
2	Barisal	**2142**	14	2	0	230	297	23	**65**	6	2	5	7	30	0	**268**	3	1	0	9	61	2	**2475**	23	5	5	246	388	25	**3167**	2,411,593	**102.63**
3	Bhola	**1799**	29	4	0	210	202	9	**3**	0	0	0	7	5	0								**1802**	29	4	0	217	207	9	**2268**	1,854,123	**97.19**
4	Jhalakati	**657**	9	2	0	78	112	9															**657**	9	2	0	78	112	9	**867**	708,709	**92.70**
5	Patuakhali	**1646**	28	3	0	138	211	24	**11**	0	0	0	10	13	1								**1657**	28	3	0	148	224	25	**2085**	1,604,063	**103.30**
6	Pirojpur	**1151**	20	2	0	120	149	32	**0**	0	0	0	1	0	0								**1151**	20	2	0	121	149	32	**1475**	1,157,446	**99.44**
	Barisal Div	**8293**	**116**	**17**	**0**	**846**	**1059**	**122**	**79**	**6**	**2**	**5**	**25**	**48**	**1**	**268**	**3**	**1**		**9**	**61**	**2**	**8640**	**125**	**20**	**5**	**880**	**1168**	**125**	**10963**	**8,668,475**	**99.67**
7	Bandarban	**335**	8	3	0	18	26	9															**335**	8	3	0	18	26	9	**399**	414,903	**80.74**
8	Brahmanbaria	**2309**	77	9	7	555	442	118	**6**	1	0	0	17	3	2								**2315**	78	9	7	572	445	120	**3546**	3,003,242	**77.08**
9	Chandpur	**2137**	23	8	1	257	312	20	**17**	0	1	0	32	10	0								**2154**	23	9	1	289	322	20	**2818**	2,529,218	**85.16**
10	Chittagong	**4067**	69	8	4	476	780	120	**9**	0	1	0	7	14	0	**2703**	182	21	17	1384	1572	225	**6779**	251	30	21	1867	2366	345	**11659**	8,024,931	**84.47**
11	Comilla	**3505**	97	12	8	893	893	109	**2**	0	0	0	0	3	0								**3507**	97	12	8	893	896	109	**5522**	5,691,849	**61.61**
12	Coxs Bazar	**1854**	35	6	1	251	283	85	**37**	2	0	5	63	40	1								**1891**	37	6	6	314	323	86	**2663**	2,443,333	**77.39**
13	Feni	**1195**	15	0	0	156	150	33	**3**	0	0	0	6	3	0								**1198**	15	0	0	162	153	33	**1561**	1,518,142	**78.91**
14	Khagrachari	**626**	1	2	0	67	42	5															**626**	1	2	0	67	42	5	**743**	648,883	**96.47**
15	Lakshmipur	**1628**	25	0	0	118	162	28															**1628**	25	0	0	118	162	28	**1961**	1,824,566	**89.23**
16	Noakhali	**2580**	21	7	0	112	270	33	**9**	0	0	0	12	9	0								**2589**	21	7	0	124	279	33	**3053**	3,292,507	**78.63**
17	Rangamati	**486**	11	1	0	57	75	29	**4**	0	0	0	4	14	0								**490**	11	1	0	61	89	29	**681**	630,091	**77.77**
	Chittagong Div	**20722**	**382**	**56**	**21**	**2960**	**3435**	**589**	**87**	**3**	**2**	**5**	**141**	**96**	**3**	**2703**	**182**	**21**	**17**	**1384**	**1572**	**225**	**23512**	**567**	**79**	**43**	**4485**	**5103**	**817**	**34606**	**30,021,666**	**78.32**
18	Dhaka	**2562**	97	18	21	613	955	78	**81**	10	0	0	79	130	1	**6008**	567	69	81	2902	4579	412	**8651**	674	87	102	3594	5664	491	**19263**	12,960,633	**66.75**
19	Faridpur	**589**	19	15	1	168	360	62	**7**	0	0	0	5	10	3								**596**	19	15	1	173	370	65	**1239**	2,005,472	**29.72**
20	Gazipur	**2575**	81	5	2	1206	991	100															**2575**	81	5	2	1206	991	100	**4960**	3,737,872	**68.89**
21	Gopalganj	**522**	16	15	1	93	177	19	**16**	2	2	0	5	8	2								**538**	18	17	1	98	185	21	**878**	1,219,050	**44.13**
22	Jamalpur	**1610**	63	66	16	198	350	68	**94**	1	4	2	22	48	4								**1704**	64	70	18	220	398	72	**2546**	2,404,686	**70.86**
23	Kishoreganj	**2132**	86	41	11	511	720	178	**75**	3	3	2	20	48	7								**2207**	89	44	13	531	768	185	**3837**	3,063,431	**72.04**
24	Madaripur	**521**	20	18	0	105	188	42	**46**	3	0	0	4	7	1								**567**	23	18	0	109	195	43	**955**	1,214,260	**46.70**
25	Manikganj	**1177**	27	4	0	269	244	24															**1177**	27	4	0	269	244	24	**1745**	1,458,923	**80.68**
26	Munshiganj	**1202**	23	1	0	178	297	76	**0**	0	0	0	0	0	0								**1202**	23	1	0	178	297	76	**1777**	1,519,067	**79.13**
27	Mymensingh	**3637**	173	93	7	710	1202	298	**45**	4	0	0	11	37	1								**3682**	177	93	7	721	1239	299	**6218**	5,381,609	**68.42**
28	Narayanganj	**2078**	81	5	0	1281	955	142															**2078**	81	5	0	1281	955	142	**4542**	3,169,282	**65.57**
29	Narsinghdi	**1902**	68	4	0	965	390	48															**1902**	68	4	0	965	390	48	**3377**	2,351,990	**80.87**
30	Netrakona	**1450**	62	45	12	378	484	209															**1450**	62	45	12	378	484	209	**2640**	2,343,524	**61.87**
31	Rajbari	**322**	10	15	1	87	185	27															**322**	10	15	1	87	185	27	**647**	1,101,900	**29.22**
32	Shariatpur	**479**	15	16	1	139	202	42															**479**	15	16	1	139	202	42	**894**	1,209,299	**39.61**
33	Sherpur	**1152**	57	8	2	277	282	87															**1152**	57	8	2	277	282	87	**1865**	1,420,960	**81.07**
34	Tangail	**1783**	74	52	15	513	709	141	**121**	2	1	1	27	44	11								**1904**	76	53	16	540	753	152	**3494**	3,782,980	**50.33**
	Dhaka Div	**25693**	**972**	**421**	**90**	**7691**	**8691**	**1641**	**485**	**25**	**10**	**5**	**173**	**332**	**30**	**6008**	**567**	**69**	**81**	**2902**	**4579**	**412**	**32186**	**1564**	**500**	**176**	**10766**	**13602**	**2083**	**60877**	**50,344,938**	**63.93**

Annex 1

District-wise case notification rate, 2012

SL.	District	Upazila total							CDC							Metro							Total							Grand Total	Population	CNR as per 1,00,000 pop.
		New S +ve	Previously Treated			Smear Neg	EPT	Other	New S +ve	Previously Treated			Smear Neg	EPT	Other	New S +ve	Previously Treated			Smear Neg	EPT	Other	New S +ve	Previously Treated			Smear Neg	EPT	Other			
			Relap	Fail	Def					Relap	Fail	Def					Relap	Fail	Def					Relap	Fail	Def						
35	Bagerhat	**1326**	14	4	0	125	147	7	**17**	2	0	0	6	15	0								**1343**	16	4	0	131	162	7	**1663**	1,526,819	**87.96**
36	Chuadanga	**1098**	25	1	0	47	133	8	**30**	1	0	0	4	27	0								**1128**	26	1	0	51	160	8	**1374**	1,188,186	**94.93**
37	Jessore	**1937**	22	2	0	368	270	9	**68**	3	0	0	21	35	0								**2005**	25	2	0	389	305	9	**2735**	2,908,487	**68.94**
38	Jhenaidah	**1607**	25	3	1	148	167	22															**1607**	25	3	1	148	167	22	**1973**	1,863,510	**86.24**
39	Khulna	**1233**	14	1	0	233	190	16	**3**	1	0	0	9	14	0	**438**	23	9	1	70	199	5	**1674**	38	10	1	312	403	21	**2459**	2,401,668	**69.70**
40	Kushtia	**1811**	19	6	1	240	279	17	**45**	1	0	0	26	38	0								**1856**	20	6	1	266	317	17	**2483**	2,046,245	**90.70**
41	Magura	**663**	5	1	0	67	65	2	**30**	0	0	0	23	25	1								**693**	5	1	0	90	90	3	**882**	965,073	**71.81**
42	Meherpur	**579**	3	0	1	66	79	8	**18**	2	0	0	4	12	0								**597**	5	0	1	70	91	8	**772**	688,317	**86.73**
43	Narail	**612**	6	4	0	55	89	4															**612**	6	4	0	55	89	4	**770**	752,829	**81.29**
44	Satkhira	**1305**	5	4	1	142	132	1	**24**	3	1	0	14	18	0								**1329**	8	5	1	156	150	1	**1650**	2,076,444	**64.00**
	Khulna Div	**12171**	**138**	**26**	**4**	**1491**	**1551**	**94**	**235**	**13**	**1**		**107**	**184**	**1**	**438**	**23**	**9**	**1**	**70**	**199**	**5**	**12844**	**174**	**36**	**5**	**1668**	**1934**	**100**	**16761**	**16,417,579**	**78.23**
45	Bogra	**2666**	44	16	2	292	854	35	**51**	2	0	1	19	18	3								**2717**	46	16	3	311	872	38	**4003**	3,582,021	**75.85**
46	Dinajpur	**2708**	46	3	1	318	350	51	**5**	0	0	0	7	1	0								**2713**	46	3	1	325	351	51	**3490**	3,147,798	**86.19**
47	Gaibandha	**1849**	57	9	6	267	343	47	**22**	0	0	0	11	14	0								**1871**	57	9	6	278	357	47	**2625**	2,498,020	**74.90**
48	Jaipurhat	**907**	17	2	0	115	204	7															**907**	17	2	0	115	204	7	**1252**	957,596	**94.72**
49	Kurigram	**1175**	5	12	1	137	291	7	**41**	3	3	0	118	54	0								**1216**	8	15	1	255	345	7	**1847**	2,181,954	**55.73**
50	Lalmonirhat	**765**	3	6	4	48	133	7															**765**	3	6	4	48	133	7	**966**	1,321,402	**57.89**
51	Naogaon	**972**	44	32	3	226	407	56															**972**	44	32	3	226	407	56	**1740**	2,724,426	**35.68**
52	Natore	**649**	18	0	0	26	219	2	**27**	2	0	0	1	19	0								**676**	20	0	0	27	238	2	**963**	1,795,181	**37.66**
53	Nawabganj	**565**	18	9	6	148	257	31	**62**	4	2	1	42	48	15								**627**	22	11	7	190	305	46	**1208**	1,739,113	**36.05**
54	Nilphamari	**1367**	27	2	2	115	268	10	**0**	0	0	0	0	0	0								**1367**	27	2	2	115	268	10	**1791**	1,936,906	**70.58**
55	Pabna	**1163**	28	9	2	162	368	8	**83**	5	0	3	37	48	9								**1246**	33	9	5	199	416	17	**1925**	2,663,552	**46.78**
56	Panchagarh	**494**	3	7	2	51	86	6															**494**	3	7	2	51	86	6	**649**	1,043,213	**47.35**
57	Rajshahi	**634**	25	19	3	166	317	40	**35**	1	0	0	43	84	0	**178**	15	7	1	82	169	8	**847**	41	26	4	291	570	48	**1827**	2,733,646	**30.98**
58	Rangpur	**2133**	44	7	1	324	555	16	**24**	4	0	1	39	29	3								**2157**	48	7	2	363	584	19	**3180**	3,033,722	**71.10**
59	Sirajganj	**2054**	31	7	1	312	461	16	**227**	15	1	0	35	89	1								**2281**	46	8	1	347	550	17	**3250**	3,265,569	**69.85**
60	Thakurgaon	**714**	19	0	0	91	155	11	**50**	4	0	0	60	33	0								**764**	23	0	0	151	188	11	**1137**	1,464,272	**52.18**
	Rajshahi Div	**20815**	**429**	**140**	**34**	**2798**	**5268**	**350**	**627**	**40**	**6**	**6**	**412**	**437**	**31**	**178**	**15**	**7**	**1**	**82**	**169**	**8**	**21620**	**484**	**153**	**41**	**3292**	**5874**	**389**	**31853**	**36,088,391**	**59.91**
61	Habiganj	**1733**	14	7	0	767	575	13															**1733**	14	7	0	767	575	13	**3109**	2,208,729	**78.46**
62	Moulvibazar	**1327**	16	3	1	497	534	21	**2**	0	0	0	6	6	0								**1329**	16	3	1	503	540	21	**2413**	2,029,053	**65.50**
63	Sunamganj	**2378**	38	1	0	1172	550	178	**10**	0	0	0	12	5	0								**2388**	38	1	0	1184	555	178	**4344**	2,616,871	**91.25**
64	Sylhet	**2000**	30	5	0	629	844	73	**115**	25	0	0	79	86	3	**473**	30	2	0	193	269	25	**2588**	85	7	0	901	1199	101	**4881**	3,673,936	**70.44**
	Sylhet Div	**7438**	**98**	**16**	**1**	**3065**	**2503**	**285**	**127**	**25**	**0**	**0**	**97**	**97**	**3**	**473**	**30**	**2**	**0**	**193**	**269**	**25**	**8038**	**153**	**18**	**1**	**3355**	**2869**	**313**	**14747**	**10,528,590**	**76.34**
	Grand Total :	**95132**	**2135**	**676**	**150**	**18851**	**22507**	**3081**	**1640**	**112**	**21**	**21**	**955**	**1194**	**69**	**10068**	**820**	**109**	**100**	**4640**	**6849**	**677**	**106840**	**3067**	**806**	**271**	**24446**	**30550**	**3827**	**169807**	**152069639**	**70.26**

Annex - 2

District-wise Treatment Results, new smear-positive cases registered in 2011

SL.	District	Absolute numbers								Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.
		Res. Case	Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.							
1	Barguna	**790**	729	3	39	1	2	16	0	92.28%	0.38%	4.94%	0.13%	0.25%	2.03%	0.00%
2	Barisal	**2091**	1896	12	80	7	44	50	2	90.67%	0.57%	3.83%	0.33%	2.10%	2.39%	0.10%
3	Bhola	**1649**	1523	62	39	4	5	14	2	92.36%	3.76%	2.37%	0.24%	0.30%	0.85%	0.12%
4	Jhalakati	**626**	584	2	25	1	4	10	0	93.29%	0.32%	3.99%	0.16%	0.64%	1.60%	0.00%
5	Patuakhali	**1512**	1413	6	57	3	10	23	0	93.45%	0.40%	3.77%	0.20%	0.66%	1.52%	0.00%
6	Pirojpur	**899**	831	13	29	4	6	16	0	92.44%	1.45%	3.23%	0.44%	0.67%	1.78%	0.00%
	Barisal Div	**7567**	**6976**	**98**	**269**	**20**	**71**	**129**	**4**	**92.19%**	**1.30%**	**3.55%**	**0.26%**	**0.94%**	**1.70%**	**0.05%**
7	Bandarban	**320**	304	0	11	4	0	1	0	95.00%	0.00%	3.44%	1.25%	0.00%	0.31%	0.00%
8	Brahmanbaria	**2138**	1946	44	72	8	40	26	2	91.02%	2.06%	3.37%	0.37%	1.87%	1.22%	0.09%
9	Chandpur	**1735**	1610	0	84	6	11	22	2	92.80%	0.00%	4.84%	0.35%	0.63%	1.27%	0.12%
10	Chittagong	**6254**	5709	68	141	33	64	210	29	91.29%	1.09%	2.25%	0.53%	1.02%	3.36%	0.46%
11	Comilla	**3585**	3286	36	162	14	67	18	2	91.66%	1.00%	4.52%	0.39%	1.87%	0.50%	0.06%
12	Coxs Bazar	**1812**	1582	58	113	7	38	7	7	87.31%	3.20%	6.24%	0.39%	2.10%	0.39%	0.39%
13	Feni	**1222**	1147	3	65	0	0	6	1	93.86%	0.25%	5.32%	0.00%	0.00%	0.49%	0.08%
14	Khagrachari	**565**	551	0	13	1	0	0	0	97.52%	0.00%	2.30%	0.18%	0.00%	0.00%	0.00%
15	Lakshmipur	**1540**	1429	0	75	4	14	11	7	92.79%	0.00%	4.87%	0.26%	0.91%	0.71%	0.45%
16	Noakhali	**2548**	2396	2	125	0	2	23	0	94.03%	0.08%	4.91%	0.00%	0.08%	0.90%	0.00%
17	Rangamati	**455**	440	0	9	2	0	4	0	96.70%	0.00%	1.98%	0.44%	0.00%	0.88%	0.00%
	Chittagong Div	**22174**	**20400**	**211**	**870**	**79**	**236**	**328**	**50**	**92.00%**	**0.95%**	**3.92%**	**0.36%**	**1.06%**	**1.48%**	**0.23%**
18	Dhaka	**7497**	6534	196	111	80	170	366	40	87.15%	2.61%	1.48%	1.07%	2.27%	4.88%	0.53%
19	Faridpur	**551**	493	0	18	20	11	9	0	89.47%	0.00%	3.27%	3.63%	2.00%	1.63%	0.00%
20	Gazipur	**2507**	2345	12	41	7	38	64	0	93.54%	0.48%	1.64%	0.28%	1.52%	2.55%	0.00%
21	Gopalganj	**477**	421	0	22	14	11	9	0	88.26%	0.00%	4.61%	2.94%	2.31%	1.89%	0.00%
22	Jamalpur	**1592**	1371	8	46	55	70	42	0	86.12%	0.50%	2.89%	3.45%	4.40%	2.64%	0.00%
23	Kishoreganj	**2136**	1860	29	72	54	61	58	2	87.08%	1.36%	3.37%	2.53%	2.86%	2.72%	0.09%
24	Madaripur	**526**	475	0	22	18	9	2	0	90.30%	0.00%	4.18%	3.42%	1.71%	0.38%	0.00%
25	Manikganj	**1010**	956	1	47	2	3	1	0	94.65%	0.10%	4.65%	0.20%	0.30%	0.10%	0.00%
26	Munshiganj	**1057**	967	12	55	0	3	15	5	91.49%	1.14%	5.20%	0.00%	0.28%	1.42%	0.47%
27	Mymensingh	**3505**	3140	34	131	68	91	40	1	89.59%	0.97%	3.74%	1.94%	2.60%	1.14%	0.03%
28	Narayanganj	**1917**	1811	45	29	2	4	24	2	94.47%	2.35%	1.51%	0.10%	0.21%	1.25%	0.10%
29	Narsinghdi	**1980**	1875	1	67	5	9	23	0	94.70%	0.05%	3.38%	0.25%	0.45%	1.16%	0.00%
30	Netrakona	**1381**	1217	16	47	41	45	15	0	88.12%	1.16%	3.40%	2.97%	3.26%	1.09%	0.00%
31	Rajbari	**323**	286	0	8	14	14	1	0	88.54%	0.00%	2.48%	4.33%	4.33%	0.31%	0.00%
32	Shariatpur	**471**	423	0	15	24	1	8	0	89.81%	0.00%	3.18%	5.10%	0.21%	1.70%	0.00%
33	Sherpur	**1088**	993	1	57	5	21	11	0	91.27%	0.09%	5.24%	0.46%	1.93%	1.01%	0.00%
34	Tangail	**1858**	1664	7	78	44	43	21	1	89.56%	0.38%	4.20%	2.37%	2.31%	1.13%	0.05%
	Dhaka Div	**29876**	**26831**	**362**	**866**	**453**	**604**	**709**	**51**	**89.81%**	**1.21%**	**2.90%**	**1.52%**	**2.02%**	**2.37%**	**0.17%**

Annex - 2

District-wise Treatment Results, new smear-positive cases registered in 2011

SL.	District	Absolute numbers								Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.
		Res. Case	Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.							
35	Bagerhat	**1327**	1206	4	66	5	10	35	1	90.88%	0.30%	4.97%	0.38%	0.75%	2.64%	0.08%
36	Chuadanga	**1011**	905	10	38	1	47	10	0	89.52%	0.99%	3.76%	0.10%	4.65%	0.99%	0.00%
37	Jessore	**1760**	1642	10	70	3	19	14	2	93.30%	0.57%	3.98%	0.17%	1.08%	0.80%	0.11%
38	Jhenaidah	**1393**	1290	13	52	1	12	25	0	92.61%	0.93%	3.73%	0.07%	0.86%	1.79%	0.00%
39	Khulna	**1663**	1504	0	78	13	33	35	0	90.44%	0.00%	4.69%	0.78%	1.98%	2.10%	0.00%
40	Kushtia	**1789**	1648	16	78	8	22	11	6	92.12%	0.89%	4.36%	0.45%	1.23%	0.61%	0.34%
41	Magura	**673**	623	2	32	1	13	2	0	92.57%	0.30%	4.75%	0.15%	1.93%	0.30%	0.00%
42	Meherpur	**501**	467	3	25	1	1	4	0	93.21%	0.60%	4.99%	0.20%	0.20%	0.80%	0.00%
43	Narail	**561**	504	1	31	3	17	3	2	89.84%	0.18%	5.53%	0.53%	3.03%	0.53%	0.36%
44	Satkhira	**1083**	977	8	54	6	28	9	1	90.21%	0.74%	4.99%	0.55%	2.59%	0.83%	0.09%
	Khulna Div	**11761**	**10766**	**67**	**524**	**42**	**202**	**148**	**12**	**91.54%**	**0.57%**	**4.46%**	**0.36%**	**1.72%**	**1.26%**	**0.10%**
45	Bogra	**2280**	2002	3	128	16	84	44	3	87.81%	0.13%	5.61%	0.70%	3.68%	1.93%	0.13%
46	Dinajpur	**2604**	2388	14	170	1	21	6	4	91.71%	0.54%	6.53%	0.04%	0.81%	0.23%	0.15%
47	Gaibandha	**1834**	1546	96	107	10	53	18	4	84.30%	5.23%	5.83%	0.55%	2.89%	0.98%	0.22%
48	Jaipurhat	**879**	801	0	52	2	16	5	3	91.13%	0.00%	5.92%	0.23%	1.82%	0.57%	0.34%
49	Kurigram	**1116**	971	14	41	9	41	34	6	87.01%	1.25%	3.67%	0.81%	3.67%	3.05%	0.54%
50	Lalmonirhat	**504**	427	2	25	7	28	14	1	84.72%	0.40%	4.96%	1.39%	5.56%	2.78%	0.20%
51	Naogaon	**979**	874	6	26	38	28	5	2	89.27%	0.61%	2.66%	3.88%	2.86%	0.51%	0.20%
52	Natore	**726**	655	0	30	6	22	13	0	90.22%	0.00%	4.13%	0.83%	3.03%	1.79%	0.00%
53	Nawabganj	**519**	457	8	24	15	13	2	0	88.05%	1.54%	4.62%	2.89%	2.50%	0.39%	0.00%
54	Nilphamari	**1339**	1253	1	58	6	9	10	2	93.58%	0.07%	4.33%	0.45%	0.67%	0.75%	0.15%
55	Pabna	**1084**	987	1	25	21	40	10	0	91.05%	0.09%	2.31%	1.94%	3.69%	0.92%	0.00%
56	Panchagarh	**456**	423	0	23	5	1	1	3	92.76%	0.00%	5.04%	1.10%	0.22%	0.22%	0.66%
57	Rajshahi	**804**	712	11	36	19	17	9	0	88.56%	1.37%	4.48%	2.36%	2.11%	1.12%	0.00%
58	Rangpur	**2101**	1856	10	96	10	62	47	20	88.34%	0.48%	4.57%	0.48%	2.95%	2.24%	0.95%
59	Sirajganj	**2076**	1878	3	84	18	57	36	0	90.46%	0.14%	4.05%	0.87%	2.75%	1.73%	0.00%
60	Thakurgaon	**718**	662	0	31	4	17	2	2	92.20%	0.00%	4.32%	0.56%	2.37%	0.28%	0.28%
	Rajshahi Div	**20019**	**17892**	**169**	**956**	**187**	**509**	**256**	**50**	**89.38%**	**0.84%**	**4.78%**	**0.93%**	**2.54%**	**1.28%**	**0.25%**
61	Habiganj	**1623**	1553	28	34	6	2	0	0	95.69%	1.73%	2.09%	0.37%	0.12%	0.00%	0.00%
62	Moulvibazar	**1155**	1094	0	52	5	3	1	0	94.72%	0.00%	4.50%	0.43%	0.26%	0.09%	0.00%
63	Sunamganj	**2351**	2203	48	84	2	8	6	0	93.70%	2.04%	3.57%	0.09%	0.34%	0.26%	0.00%
64	Sylhet	**2406**	2274	4	82	14	6	22	4	94.51%	0.17%	3.41%	0.58%	0.25%	0.91%	0.17%
	Sylhet Div	**7535**	**7124**	**80**	**252**	**27**	**19**	**29**	**4**	**94.55%**	**1.06%**	**3.34%**	**0.36%**	**0.25%**	**0.38%**	**0.05%**
	Grand Total :	**98932**	**89989**	**987**	**3737**	**808**	**1641**	**1599**	**171**	**90.96%**	**1.00%**	**3.78%**	**0.82%**	**1.66%**	**1.62%**	**0.17%**

Annex 3

Lab report: Year 2012

Quarter	Diagnosis Examinations (Case Finding)							Follow-up Examinations		
	TB suspects tested	AFB positive cases	Suspect positivity rate	Smears tested	Positive smears		Only one sample tested	Smears tested	Positive smears	
					(1+, 2+ & 3+)	Scanty (1-9AFB /100)			(1+, 2+ & 3+)	Scanty (1-9AFB /100)
1st	372298	28183	7.57	1082819	72250	8467	8922	79742	1725	1326
2nd	338548	29536	8.72	983857	76617	7911	7781	85808	2433	1699
3rd	342496	28564	8.34	998405	73851	8651	7325	90150	2731	2067
4th	369568	26961	7.30	1073446	68292	8743	7335	91030	2549	1873
Total	**1422910**	**113244**	7.96	**4138527**	**291010**	**33772**	**31363**	**346730**	**9438**	**6965**

Lab report: Year 2011

Quarter	Diagnosis Examinations (Case Finding)							Follow-up Examinations		
	TB suspects tested	AFB positive cases	Suspect positivity rate	Smears tested	Positive smears		Only one sample tested	Smears tested	Positive smears	
					(1+, 2+ & 3+)	Scanty (1-9AFB /100)			(1+, 2+ & 3+)	Scanty (1-9AFB /100)
1st	336953	25481	7.6	978646	65860	7065	8598	81188	1625	1124
2nd	316775	26717	8.4	918009	70315	6513	8565	83064	2281	1621
3rd	283109	25872	9.1	821167	67337	6662	7423	83292	2403	1664
4th	328392	26675	8.1	953748	68836	7319	7488	84820	2336	1599
Total	**1265229**	**104745**	8.3	**3671570**	**272348**	**27559**	**32074**	**332364**	**8645**	**6008**

Annex- 3

List of EQA Centre: 2012

Division	EQA ID	Location of EQA 1st Control Centre	Organization	Coverage (district)	# of MCs Coverage
Rajshahi	1	CDC Bogra	BRAC	Bogra	25
				Gaibandha	17
	2	CDC Dinajpur	BRAC	Dinajpur	28
				Jaipurhat	8
	3	CDC Rangpur	BRAC	Nilphamari	15
				Rangpur	18
	4	TLMB Thakurgaon	TLMB	Panchagarh	8
				Thakurgaon	10
	5	RDRS Lalmonirhat	RDRS	Kurigram	15
				Lalmonirhat	6
	6	LEPRA Sirajganj	LEPRA	Natore	10
				Pabna	16
				Sirajganj	15
	7	CDH/DF Rajshahi	DF	Naogaon	14
				Nawabganj	7
				Rajshahi	19
Khulna	8	CDC Jessore	BRAC	Jessore	20
				Narail	5
	36	CDC Bagerhat	BRAC	Bagerhat	16
	9	CDC Khulna	BRAC	Khulna	24
	40	CDC Satkhira	BRAC	Satkhira	15
	10	CDC Magura	BRAC	Jhenaidah	12
				Magura	9
	11	CDC Meherpur	BRAC	Chuadanga	9
				Kushtia	12
				Meherpur	6
Barisal	12	CDC Barisal	BRAC	Barisal	25
	38	CDC Bhola	BRAC	Bhola	15
	13	CDC Patuakhali	BRAC	Barguna	8
				Patuakhali	14
	14	CDC Pirojpur	BRAC	Jhalakati	9
				Pirojpur	11
Sylhet	15	CDH Sylhet	BRAC	Sunamganj	15
				Sylhet (urban)	7
	16	HEED Kamlgonj/Moulvibazar	HEED	Sylhet (rural)	15
	17	CDC Moulvibazar	HEED	Habiganj	11
				Moulvibazar	10

Division	EQA ID	Location of EQA 1st Control Centre	Organization	Coverage (district)	# of MCs Coverage
Dhaka	18	BRAC, Dakkinkhan	BRAC	Dhaka (Peri-urban) (Urban)	18
					31
	19	KMSS Pallabi Extention	UPHCSDP	Dhaka-urban, UPHCSDP area	28
	20	CWFD Tejgaon	NHSDP	Dhaka-urban, NHSDP area	20
	21	TB Control & Training Institute	GoB	Dhaka-urban	11
	22	CDC Shyamoli	GoB	Dhaka-urban	
	23	CDC Munshiganj	BRAC	Munshiganj	11
				Narayanganj	14
	24	CDC Mymensingh	BRAC	Gazipur	11
				Manikganj	10
				Sherpur	9
				Mymensingh (urban)	11
	25	DF Mymensingh	DF	Mymensingh (rural)	15
				Kishoregarnj	19
	26	DF Faridpur	DF	Faridpur	12
				Gopalganj	8
				Madaripur	6
				Rajbari	5
				Shariatpur	7
	27	DF Tangail	DF	Jamalpur	15
				Tangail	20
	28	DF Netrakona	DF	Netrakona	12
	29	CDC Brahmanbaria	BRAC	Narsinghdi	12
				Brahmanbaria	15
Chittgong	30	CDC Comilla	BRAC	Comilla	32
	31	CDC Cox's Bazar	BRAC	Cox's Bazar	17
	39	CS Office Bandarban	BRAC	Bandarban	25
	32	CDC Chandpur	BRAC	Chandpur	16
				Lakahmipur	12
	33	CDC Chittgong	BRAC	Chittagong-rural	33
				Chittagong-urban	24
	34	CDC Noakhali	BRAC	Feni	11
				Noakhali	19
	35	CDC Rangamati	BRAC	Rangamati	37
	37	CDC Khagrachari	BRAC	Khagrachari	27
Total					**1072**

TB diagnostic and treatment services affiliated to NTP in metropolitan cities

SL	Ward No.	Agency	Address	Service facility	Remark
Dhaka Metropolitan Area					
1	1 (North)	UPHCSDP-DAM PA 5	Nagar Shastho Kendra, North-east corner of Graveyard, Road 10/AF, Sector 4, Uttara, Dhaka- 1230, Mobile: 01724-048536 / 01823-025061	Microscopy & DOT	
2	1 (North)	UPHCSDP-DAM PA 5	Nagar Shastho Kendra, House # 92, Road # 12, Sector-10 , Uttara, Dhaka-1230, Mobile: 01770-252531 / 01916-653444	DOT	
3	1 (North)	UPHCSDP-DAM PA 5	Nagar Shastho Kendra, 150 Ashkona, Medical Road, Uchartak, Uttara, Dhaka-1230, Mobile: 01717-646624 / 01961-451672	Microscopy & DOT	
4	1 (North)	UPHCSDP-DAM PA 5	Nagar Shastho Kendro, 235-236 Darogabari, Modhdho para Chourasta, Fayadabad, Uttara, Dhaka- 1230, Mobile: 01770-252531 / 01916-653444	DOT	
5	4 (North)	NHSDP-PSTC	Surjer Hashi Clinic, House# A/1, Section-13, Mirpur, Dhaka-1216, Tel: 9005279, Mobile: 01911-220103	Microscopy & DOT	
6	5 (North)	NHSDP-PSTC	Surjer Hashi Clinic, Berybadh Bazar, Lalmatia, Bawniabadh, Block- E, Mirpur-11, Dhaka-1221, Mobile: 01714-240609	Microscopy & DOT	
7	6 (North)	UPHCSDP-KMSS PA 4	Nagar Shastho Kendro, House# 16, Road# 5, Arambagh, Section 7, Mirpur, Dhaka- 1216. Tel: 9009014	DOT	
8	6 (North)	UPHCSDP-KMSS PA 4	Nagar Matri Sadan, House# J-2/A, Pallabi Extension, Mirpur, Dhaka-1216. Tel: 8051905	Microscopy & DOT	
9	7 (North)	UPHCSDP-KMSS PA 4	Nagar Shastho Kendro, House# 14, Avenue-1, Block-A, Section-2, Mirpur, Dhaka-1216, Tel: 8051881	DOT	
10	8 (North)	UPHCSDP-KMSS PA 4	Shahid Commissioner Saidur Rahman Newton Nagar Shastho Kendro, Block- F, Road-6, Section-1, Mirpur, Dhaka-1216, Tel: 9015640	Microscopy & DOT	
11	9 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, City Corporation Building, Golartek (near Shahid Buddijibi Kabarsthan), Mirpur-1, Dhaka, Mobile: 01819-838988	Microscopy & DOT	
12	10 (North)	UPHCSDP-UTPS PA 3	Nagar Shastho Kendro, Neky Barir Tek, Horirampur Road, 2nd Colony, Sector 1, Mirpur, Dhaka-1216, Tel: -8053956	Microscopy & DOT	
13	11 (North)	UPHCSDP-UTPS PA 3	Nagar Shastho Kendro, House# 27, Road# 11, Kallayanpur, Dhaka-1207, Tel: 8054372	DOT	
14	11 (North)	UPHCSDP-UTPS PA 3	Nagar Shastho Kendro, 192/1, Middle Pikepara, Mirpur-1, Dhaka-1216,Tel; 8054019	DOT	
15	12 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, 26/A, Ahammad Nagar (Near Kasem's Shop), Mirpur-1, Dhaka, Mobile: 01712-895371	DOT	
16	13 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, 277/1, Madhya Pierbagh (Near Paka Mosque), Dhaka, Mobile: 01716-094233	Microscopy & DOT	
17	14 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, 674, West Shewrapara, Kacha Bazar Goli, Mirpur, Dhaka, Mobile: 01716-402933	Microscopy & DOT	
18	16 (North)	UPHCSDP-UTPS PA 3	Nagar Shastho Kendro, 386, Munshibari Sarak, Uttar Ibrahimpur, Dhaka-1206, Tel: 8751425	DOT	
19	16 (North)	UPHCSDP-UTPS PA 3	Nagar Shastho Kendro, 575/2, Uttar Kafrul, Dhaka Cantonment, Dhaka -1206 Tel: 7850883	Microscopy & DOT	
20	17 (North)	UPHCSDP-DAM PA 5	Nagar Shastho Kendro, Ka-131/4, Kazi Bari Moszed Road, Kuril, Dhaka, Mobile: 01736-282540	Microscopy & DOT	
21	20 (North)	UPHCSDP-Nari Maitree PA 1	Nagar Shastho Kendro, GA/16/1, Amtola, Mohakhali, Dhaka-1212, Tel: 8831132	Microscopy & DOT	
22	21 (North)	UPHCSDP-Nari Maitree PA 1	Nagar Shastho Kendro, 171 Badda, Dhaka-1206, Tel: 7850883	Microscopy & DOT	
23	22 (North)	NHSDP-PSTC	Surjer Hashi Clinic, Plot-5, Block-B, Main Road, Aftab Nogar, Dhaka-1219, Tel: 9860471, Mobile: 01687-299483	Microscopy & DOT	
24	23 (North)	NHSDP-PSTC	Surjer Hashi Clinic, B/346, Khilgaon, Taltola, Dhaka-1219, Tel: 7251169, Mobile: 01729-705179	DOT	
25	25 (North)	NHSDP-Bamaneh	Smiling Sun Clinic, House- 466/1 Shahinbagh, Nakhalpara, Tejgaon, Dhaka-1215	DOT	
26	27 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, 52/2, West Raja Bazar, Indira Road, Farmgate, Near Ronoda Farmacy, Dhaka, Mobile: 01716-527301	Microscopy & DOT	
27	28 (North)	UPHCSDP-Nari Maitree PA 2	Nagar Shastho Kendro, 68, West Agargaon (Near Dhaka Election Commission), Ground floor, Dhaka-1207, Ph.-8155932	DOT	
28	29 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, ADB Clinic Building, Block- F Babar Road, Chader Hat Khaler Math, Johurimohalla, Dhaka, Mobile: 01190-799294	Microscopy & DOT	
29	30 (North)	NHSDP-Swanirvar	Surjer Hashi Clinic, House# 324, Road# 3, Baitul Aman Housing Society, Near Adabor, Mohammadpur, Mobile: 01725-248990	DOT	
30	31 (North)	UPHCSDP-Nari Maitree PA 2	Nagar Shastho Kendro, 65-V, Noorjahan Road, Mohammadpur, Dhaka-1207, Tel: 9144107	DOT	
31	31 (North)	UPHCSDP-Nari Maitree PA 2	Nagar Shastho Kendro, 778 (besides water tank), Salimullah Road, Mohammadpur, Dhaka-1207, Tel:8125773	Microscopy & DOT	
32	32 (North)	UPHCSDP-Nari Maitree PA 2	Nagar Shastho Kendro, 6/28, Humayun Road (Near Zenava Camp), Ground floor, Mohammadpur, Dhaka-1207, Tel: -9144591	DOT	
33	34 (North)	UPHCSDP-Nari Maitree PA 2	Nagar Shastho Kendro, 116/1, Poolpar (Battala), Rayer Bazar, Mohammadpur, Dhaka-1207, Tel: 9138215	Microscopy & DOT	
34	34 (North)	UPHCSDP-Nari Maitree PA 2	Nagar Shastho Kendro, Pal Somitir Market, Sultangonj, Rayer Bazar, Mohammadpur, Dhaka-1207, Tel: 9143916	DOT	

SL	Ward No.	Agency	Address	Service facility	Remark
35	35 (North)	UPHCSDP-Nari Maitree PA 1	Nagar Shastho Kendro, 599, Baro Moghbazar, Dhaka-1217, Tel: 8360756	Microscopy & DOT	
36	36 (North)	UPHCSDP-Nari Maitree PA 1	Nagar Shastho Kendro, 594/A, Modhubagh, Moghbazar, Dhaka-1217, Tel: 8360482	DOT	
37	36 (North)	UPHCSDP-Nari Maitree PA 1	Nagar Matri Sadan, Nayatola Green Way Road, (near Nayatola Park), Boro Moghbazar, Dhaka-1217, Tel: 9355277	Microscopy & DOT	
38	1 (South)	UPHCSDP-PSTC PA 5	Nagar Shastho Kendro, House# 308/3, Block A, Tilpapara, Khilgaon, Dhaka-1219, Tel:-7218369	Microscopy & DOT	
39	2 (South)	UPHCSDP-PSTC PA 5	Nagar Shastho Kendro, House# 325, South Goran, Dhaka-1219, Tel:-7219959	DOT	
40	2 (South)	NHSDP-CWFD	Surjer Hashi Clinic, House# 1, Road# 9, Block D, Section-12, Pallabi, Mobile: 01190-697342	Microscopy & DOT	
41	3 (South)	UPHCSDP-PSTC PA 5	Nagar Shastho Kendro, House# 33/1, Meradia Main Road, Meradia, Khilgaon, Dhaka-1219, Tel:-7218392	DOT	
42	4 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 43, Madhya Bashabo, Dhaka-1214, Tel:-7210608, Mobile: 01816-210953	DOT	
43	5 (South)	UPHCSDP-PSTC PA 4	Nagar Shastho Kendro, 122/2 (near Kamalapur Boddho Mandir), Ahmedbagh, Dhaka. Tel:-7274420	Microscopy & DOT	Microscopy is not functioning
44	6 (South)	UPHCSDP-PSTC PA 4	Nagar Shastho Kendro, 45/1-F, North Mugda, (Jheelpar), Dhaka, Tel: 7272018	Microscopy & DOT	
45	7 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 63, Maniknagar, Dhaka-1203, Tel: 7542914, Mobile: 01818-987884	DOT	
46	8 (South)	UPHCSDP-PSTC PA 4	Nagar Shastho Kendro, 122/1, South Kamlapur, Dhaka, Tel: 9354822	DOT	
47	9 (South)	UPHCSDP-PSTC PA 4	Nagar Shastho Kendro, 135, Arambagh (1st floor), Dhaka, Tel: 7194562	DOT	
48	10 (South)	UPHCSDP-PSTC PA 4	Nagar Shastho Kendro, 17, Baitul Mamur Jame Mosjid Market (2nd floor), AGB Colony, Motijheel, Dhaka, Tel: 9360532	DOT	
49	11 (South)	UPHCSDP-PSTC PA 4	Nagar Shastho Kendro, Bagicha (near Bagicha Mosjid), North Shahjahanpur, Dhaka, Tel:-9354823,	Microscopy & DOT	
50	12 (South)	UPHCSDP-PSTC PA 5	Nagar Shastho Kendro, House# 462 Gulbagh (near new Gulbagh mosque), Malibagh Dhaka-1217, Tel:-8357462	Microscopy & DOT	
51	13 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 124, Pir Saheber Goli, Shantinagar, Dhaka-1217, Tel:-8362162, Mobile: 01738-245478	DOT	
52	14 (South)	NHSDP-CWFD	Surjer Hashi Clinic, 113 Gozmohal, Hazaribagh , Rayerbazar. Tel: 8611886, Mobile: 01731-909951	Microscopy & DOT	
53	15 (South)	NHSDP-CWFD	Surjer Hashi Clinic, 640 Manikdi Bazar, Dhaka Cantonment, Mobile:01715-283036	Microscopy & DOT	
54	16 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 233/A, Free School Street, Kathalbagan, Dhaka-1205, Tel: 9669896, Mobile: 01913-842800	DOT	
55	17 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 183, Green Road, Dhaka-1205, Tel: 9134091, Mobile: 01716-787405	Microscopy & DOT	
56	18 (South)	NHSDP-CWFD	Surjer Hashi Clinic, Palash Villa, Ga-19 Shahjadpur, Gulshan, Mobile: 01719-052262	Microscopy & DOT	
57	19 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 30, Shahid Sangbadik Selina Parveen Sarak (Old 103, New Circular Road), Dhaka-1217, Tel: 9351472	Microscopy & DOT	
58	22 (South)	UPHCSDP-BAPSA	Nagar Matri Sadan,Hazaribagh Park, Near Commissioner's Office, Hazaribagh, Dhaka-1205, Mobile: 01966-120850	Microscopy & DOT	
59	22 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Behind Hazaribagh Boro Mosque, Kalunagar, Dhaka-1205, Tel: 9667279, Mobile: 01914-734486	DOT	
60	23 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Azimpur (Near new graveyard), Dhaka-1205, Tel: 9664324, Mobile: 01734-860344	DOT	
61	23 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Nawabganj Bazar, BNP Club, Dhaka-1205, Mobile: 01912-707535	DOT	
62	24 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Shaheed Nagar Community Center, Shaheed Nagar, Lalbagh, Dhaka-1211, Mobile: 01916-030986	DOT	
63	24 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Boubazar**,** Beside Baribadh, Shaheed Nagar, Lalbag, Dhaka-1211, Mobile: 01924-872623	Microscopy & DOT	
64	24 (South)	NHSDP-CWFD	Surjer Hashi Clinic, Abir Manjil, 23/4 F, Kunipara (Happy Homes Ltd.), Tejgaon Mobile: 01716-249249	Microscopy & DOT	
65	25 & 26 (South)	NHSDP-CWFD	Surjer Hashi Clinic, 36, Sheikh Shaheb Bazar, Lalbagh Road, Tel: 8618533	Microscopy & DOT	
66	27 & 28 (South0	UPHCSDP-BAPSA	Nagar Shastho Kendro, Beside of Bakshi Bazar, Alia Madrasa, Bakshi Bazar, Dhaka-1211, Tel: 8622092, Mobile: 01743-298280	DOT	
67	29 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Opposite to power supply office, beside Islambagh community center, Lalbagh, Dhaka-1211, Mobile: 01915-796921	DOT	
68	29 (South)	UPHCSDP-BAPSA	Nagar Shastho Kendro, Chadnighat, Islambagh, Lalbagh, Dhaka-1211, Mobile: 01731-625978	Microscopy & DOT	
69	30 (South)	UPHCSDP-KMSS PA 2	Nagar Shastho Kendro, 47 Nalgola, Imamganj, Dhaka, Tel: 7320567	Microscopy & DOT	
70	31 (South)	UPHCSDP-KMSS PA 2	Nagar Shastho Kendro, 15 Moulavi Bazar Community Center, Becharam Deori, Dhaka, Tel: 7311705	DOT	
71	32 & 33 (South)	UPHCSDP-KMSS PA 2	Nagar Shastho Kendro, 26 Majed Sarder Road, Dhaka, Mobile: 01742-862596	Microscopy & DOT	
72	34 (South)	UPHCSDP-KMSS PA 2	Nagar Shastho Kendro, 25/1 Aga Sadek Road, Dhaka, Mobile: 01680-101968	DOT	

SL	Ward No.	Agency	Address	Service facility	Remark
73	35 & 36 (South)	UPHCSDP-KMSS PA 2	Nagar Shastho Kendro 11, Hazi Moinuddin Road, Malitoal (South point of North-South Road), Dhaka, Tel: 9554702	DOT	
74	37 & 43 (South)	UPHCSDP-KMSS PA 2	Nagar Shastho Kendro, Lalkhuti, Farasgonj, Dhaka, Mobile: 01711-357349	Microscopy & DOT	
75	38 & 41 (South)	NHSDP-CWFD	Surjer Hashi Clinic, 4, Joy Kali Mandir Road, Wari Tel: 7123463	Microscopy & DOT	
76	39 (South)	NHSDP-PSTC	Surjer Hashi Clinic, 12 K.M.Das Lane,Tikatuli, Dhaka-1203, Mobile: 01967-920461	DOT	
77	40 (South)	NHSDP-CWFD	Surjer Hashi Clinic, 45, Doyagonj More, Doyagonj, Mobile: 01556-305871	Microscopy & DOT	
78	42 & 44 (South)	NHSDP-CWFD	Surjer Hashi Clinic, 33, Begumgonj Lane, Begumgonj, Mobile: 01913-399545	DOT	
79	45 (South)	NHSDP-CWFD	Surjer Hashi Clinic , 114/1, Distillery Road (Dhupkhola Math), Gandaria, Tel: 7448272	Microscopy & DOT	
80	46 (South)	UPHCSDP-PSTC PA 1	Nagar Shastho Kendro, 87, Keshob Benarjee Road, Loharpool, Sutrapur, Dhaka-1204, Tel:7418002	DOT	
81	47 (South)	UPHCSDP-PSTC PA 1	Nagar Shastho Kendro, Balur Math, Shahid Nagar, Gandaria, Dhaka-1204, Tel: 7448003	Microscopy & DOT	
82	48 (South)	NHSDP-PSTC	Surjer Hashi Clinic, Jatrabari (Nrth corner park) City corporation building, Dhaka-1203, Tel: 75462235, Mobile: 01718-085599	DOT	
83	49 (South)	NHSDP-PSTC	Surjer Hashi Clinic, Ground floor of Dhalpur Maternity, Dhalpur, Dhaka-1203, Tel: 7544061, Mobile: 01771-027378	Microscopy & DOT	
84	49 (South)	FOB	Saidabad Clinic, Saidabad, Ph: 7546402	Microscopy & DOT	
85	50 (South)	UPHCSDP-PSTC PA 1	Nagar Shastho Kendro, 178/3 South Jatrabari, Jaula Para, Jatrabari, Dhaka-1204, Tel: 7548661	DOT	
86	51 (South)	UPHCSDP-PSTC PA 1	Nagar Shastho Kendro, 160/1/B West Dholaipar, Jatrabari, Dhaka-1204, Tel: 7445794	Microscopy & DOT	
87	52 (South)	UPHCSDP-PSTC PA 1	Nagar Shastho Kendro, R.K. Chowdhury Hospital, WASA Road, New Jurain, Dhaka-1204, Tel:7447986	DOT	
88	53 (South)	NHSDP-CWFD	Surjer Hashi Clinic, College Road , East Jurain, Tel: 7440293	Microscopy & DOT	
89	54 (South)	UPHCSDP-PSTC PA 1	Nagar Shastho Kendro, Korimullaghbagh, Postogola, Dhaka, Tel: 7447998	Microscopy & DOT	
90	Peri-urban	GoB	Government Outdoor Dispensary, Kamrangirchar	DOT	
91	Peri-urban	BRAC	House 7,Road 16,Sector 10, Uttara (near Kamarpara bus stand)	DOT	
92	Peri-urban	BRAC	House 3, Road 7, Uttarkhan Capital Housing Society, Uttara	DOT	
93	Peri-urban	BRAC	Near Dakkhin Khan Bazaar, Dakkhin Khan, Uttara	Microscopy & DOT	
94	Peri-urban	BRAC	29/A/B, 2nd Colony, Sector 1, Mirpur	Microscopy & DOT	
95	Peri-urban	BRAC	206/A/1 Old Kachukhet, Cantonment	DOT	
96	Peri-urban	BRAC	150/2 Kuril Bisho Road, Kazi Bari Mosque Lane, Jagonnathpur	Microscopy & DOT	
97	Peri-urban	BRAC	House # 89/2/1, Hasenuddin Road, (Puraton Thana Road), North Badda	Microscopy & DOT	
98	Peri-urban	BRAC	31/C, Road -4 Bonosri Project, Block-C, Goran, Madartek	Microscopy & DOT	
99	Peri-urban	BRAC	27, Zigatola, Near Bitol Mohram Mosjid, Dhanmondi	DOT	
100	Peri-urban	BRAC	36 Badda Nagar (near Hazaribagh Park), Bhagolpur	Microscopy & DOT	
101	Peri-urban	BRAC	House 77, Ashrafabad (Near thana), Kamrangirchar	Microscopy & DOT	
102	Peri-urban	BRAC	622, Khan Manjil, Chairmanbari, (Near WAPDA Mosque), Rasulpur	DOT	
103	Peri-urban	BRAC	60,South Basaboo, (Beside Health Aid Hospital & Bhoodho Mondir), Atish Dipankar Road, Sabujbagh	DOT	
104	Peri-urban	BRAC	16/B/01 Dino Nath Sen Road (Near Sadhana Owshadhaloy), Gandaria, Sutrapur	DOT	
105	Peri-urban	BRAC	76/2/A/5 Bibi Bagicha, North Jatrabari	DOT	
106	Peri-urban	BRAC	Muradpur (Near Muradpur Bus Stand), Shampur.	Microscopy & DOT	
107	Peri-urban	BRAC	Shimultali Lane, (Nast of police fari), near Konapara Bus Stand, Matuail, Demra	Microscopy & DOT	
108	DOTS Corner	GoB	NIDCH, Mohakhali	Microscopy & DOT	
109	DOTS Corner	GoB	Chest Diseases Clinic, Shyamoli, Ph.-9111892	Microscopy & DOT	
110	DOTS Corner	GoB	TB Control and Training Institute, Chankharpool, Tel: 9560334	Microscopy & DOT	
111	DOTS Corner	GoB	DOTS Corner, Dhaka Community Hospital, 190/1, Baro Moghbazar, Wireless Rail Gate, Ph.-9351190-1, 8314887	Microscopy & DOT	
112	DOTS Corner	GoB	DOTS Corner, Isolation Ward, Medical Unit, Combined Military Hospital, Cantonment	Microscopy & DOT	
113	DOTS Corner	GoB	Dhaka Central Jail Hospital, Nazimuddin Road	Microscopy & DOT	
114	DOTS Corner	GoB	DOTS Corner, Police Hospital, Razarbagh Police Line	Microscopy & DOT	To be checked
115	DOTS Corner	BRAC	Shaheed Monsur Ali Medical College Hospital, Sector #11, Road # 10, Uttara, Dhaka (TB DOTS Corner, Room#16, Outdoor)	Microscopy & DOT	
116	DOTS Corner	BRAC	Women medical college and Hospital, Sector-01, Road # 8,9 Plot-04, Uttara, Dhaka .	Microscopy & DOT	

SL	Ward No.	Agency	Address	Service facility	Remark
			(TB DOTS Corner, Room#132, Gynae Outdoor)		
117	DOTS Corner	BRAC	East West Medical College Hospital, Taltola, Ashulia Road, Turag, Dhaka, Room # 26, Outdoor)	Microscopy & DOT	
118	DOTS Corner	BRAC	Shaheed Sharowardi Hospital, Dhaka (TB DOTS Corner, Room-20, Block -2, Outdoor)	DOT	
119	DOTS Corner	BRAC	Shishu Hspital, Dhaka	Microscopy & DOT	
120	DOTS Corner	BRAC	Bangladesh Medical College Hospital, Dhanmondi, Dhaka-1209. (TB DOTS Corner, Room# 118, Outdoor)	DOT	
121	DOTS Corner	BRAC	Dhaka Medical College Hospital, Dhaka (TB DOTS Corner, Room# 10, Outdoor)	Microscopy & DOT	
122	DOTS Corner	BRAC	Bangabandhu Sheikh Mujib Medical University, Shahbagh, Dhaka-1100. (TB DOTS Corner, C-block, Outdoor)	Microscopy & DOT	
123	DOTS Corner	BRAC	BIRDEM Hospital, Shahbagh, Dhaka-1000. (TB DOTS Corner, Near Room# 127, Medicine Outdoor)	Microscopy & DOT	
124	DOTS Corner	BRAC	Sir Salimullah Medical College Hospital, Dhaka. (TB DOTS Corner, Room# 120, Medicine Outdoor)	Microscopy & DOT	
125	DOTS Corner	BRAC	Dhaka National Medical College Hospital, 53/2 Janson Road, Dhaka. (TB DOTS Corner, Room# 130, Outdoor)	Microscopy & DOT	
126	DOTS corner	BRAC	Institute of Child and Maternal Health, (ICMH), Matuail, Dhaka. (TB DOTS Corner, Near Record Room, Outdoor)	Microscopy & DOT	
127	DOTS Corner	Gonoshasthya Kendra	DOTS Corner, Gonoshasthaya Nagar Hospital, House 14E, Road 6, Dhanmondi R/A, Ph.-8617208, 9673507	Microscopy & DOT	
128	DOTS Corner	Salvation Army	House 35-37, Avenue 2, Block A, Section 11, Mirpur	Microscopy & DOT	
129		IOM	Prescription Point Ltd, House # 105, Road # 12, Block E, Banani, Dhaka 1213, Tel: 9897222, 8833389, 9892518 (Ext. 159).	Microscopy & DOT	
130		BGMEA	30/B, Malibagh, Chowdhurypara, Dhaka, Tel: 8311124	Microscopy & DOT	
131		BGMEA	Plot # 5, Road # 5, Milkvita Road, Mirpur-7, Dhaka, Mobile: 01712-677667	Microscopy & DOT	
132		BGMEA	Plot # 6, Block # K/A, P.I.S.C.I Culture, Housing & Family Cooperative Society, Shamoli, Dhaka, Tel: 9120832	Microscopy & DOT	
133		BGMEA	Saru Kunja, House # 64, Block # G, Niketan Eastern Housing Ltd., Gulshan-1, Dhaka, Tel: 9858549	Microscopy & DOT	
134		BGMEA	House # 217/6,7,8, Bisswo Road, North Jurain, Natun Rasta, Shampur, Dhaka, Tel: 7443827, Mobile: 01744-342791	Microscopy & DOT	
135		BGMEA	House # 16/A, Road # 16, Sector # 4, Uttara, Dhaka, Tel: 8950208	Microscopy & DOT	
136		CPHD	65/D, Zigatala, Dhaka-1209.	Microscopy & DOT	

SL	Ward No.	Agency	Address	Service facility	Remark
Chittagong Metropolitan Area					
1	1	NHSDP -Image	Kashem Mansion (1st floor) Hathazari Road, Aman Bazar, South Pahartali, Phone # 031-2581799	DOT	
2	2	NHSDP -Image	16 Baizid Bostami R/A, Jalalabad, Phone # 031-681906, 2581726	Microscopy & DOT	
3	2	GoB	Government Urban Dispensary, Shersha Colony, Jalalabad	DOT	
4	3	CCC	City Corporation dispensary, Panchlaish	DOT	
5	3	GoB	Government Urban Dispensary, Rowfabad, Panchlaish	DOT	
6	4	GoB	Government Urban Dispensary, Gausul Azam, Chandgaon	DOT	
7	4	NHSDP -Image	Marium Vila, Mouluvi Pukur Par, Chandgaon, Phone # 031-672552	Microscopy & DOT	
8	5	BRAC	DOTS Centre, Kalurghat I/A, Hazi Dulamiah Road, Nazumiah Hat, Mohara	DOT	
9	8	BRAC	DOTS Corner, Chittagong Medical College Hospital	Microscopy & DOT	
10	8	NATAB	NATAB Bhaban, 62 Katalganj, Panchlaish	Microscopy & DOT	
11	9	GoB	Government Urban Dispensary, North Pahartoli , Colonelhat	DOT	
12	9	GoB	Government Urban Dispensary, North Pahartoli, Ferozshah	DOT	
13	9	NHSDP-Nishkrity	Rafique Chowdhury Bhaban, New Monsurabad, Pahartoli	Microscopy & DOT	
14	10	BRAC	DOTS Centre, Fouzdarhat I/A	DOT	
15	10	NHSDP -Image	Bashar Champa Bhaban, Hazrat AmanUllah road, North Kattali, Pahartali, Phone # 031-2770943	DOT	
16	11	GoB	Government Urban Dispensary, Halishar, South Kattali	DOT	
17	11	CCC	Chadu chowdhury Primary Health Care Centre, Chadu Chowdhury Road, Custom Academy, South Kattali	DOT	
18	12	CCC	City Corporation dispensary (CCD), Saraipara	DOT	
19	13	MAMATA	380/A, Flora Pass Road, Ambagan, Pahartoli, Chittagong, Mobile: 01711-903395	DOT	
20	13	NHSDP -Image	Saleh Mansion, 22/A Zakir hossain Road, East Nasirabad, Phone # 031-615125.	Microscopy & DOT	
21	14	CCC	City Corporation dispensary (CCD), Lalkhan Bazar	DOT	
22	14	MAMATA	Nagar Matree Shadan, Salam Building, 61, Chandmari Road, Lalkhan Bazar, Chittagong, Phone: 031-625804	Microscopy & DOT	
23	14	BRAC	DOTS Corner, Railway Hospital	Microscopy & DOT	
24	15	MAMATA	27 Betari Goli, Bagmoniram, Chittagong, Mobile: 01711-903395	DOT	
25	16	CCC	City Corporation dispensary (CCD), Ward Commissioner's Office, Chawkbazar	DOT	
26	17	NHSDP-Nishkrity	Rahman Manson, Rahattarpool, West Bakalia	Microscopy & DOT	
27	17	GoB	Government Urban Dispensary, West Bakalia, Panchlaish	DOT	
28	18	CCC	City Corporation dispensary, Ward Commissioner's Office, Kala Meah Bazar, East Bakalia	DOT	
29	19	CCC	City Corporation dispensary, Nurul Islam Maternity Hospital, South Bakalia	DOT	
30	20	CCC	City Corporation dispensary, Ward Commissioner's Office, Dewan Bazar	DOT	
31	21	NHSDP-Nishkrity	129, Jamal Khan by lane (north side of DC Hill)	Microscopy & DOT	
32	22	MAMATA	Amin Mansion, Plot No-582/605, Batali Road, Enayet Bazar, Chittagong, Mobile: 01817-757939	DOT	
33	23	CCC	City Corporation dispensary, Ward Commissioner's Office, Dewanhat, Uttar Pathantoly	DOT	
34	24	NHSDP-Nishkrity	217, North Agrabad (Mollapara more), Rongipara	DOT	
35	24	MAMATA	Panwala Para, Haddi Companir Moor, North Agrabad, Chittagong, Mobile: 01913-618282	DOT	
36	26	GoB	Government Urban Dispensary, Agrabad (Masjid Colony), North Halishahar	DOT	
37	27	CCC	City Corporation Dispensary, South Agrabad (Doublemooring)	DOT	
38	27	GoB	Skin & V.D. Hospital, South Agrabad	Microscopy & DOT	
39	27	BRAC	DOTS Corner, Ma O Shishu General Hospital	Microscopy & DOT	
40	28	BRAC	DOTS Centre, Ward Commissioner's Office, Pathantoly	DOT	
41	29	CCC	City Corporation dispensary, Ward Commissioner's Office, West Madarbari	Microscopy & DOT	
42	29	MAMATA	81, Mogoltoli By Lane # 1, West Madarbari, Chittagong, Phone # 031-2514481	Microscopy & DOT	
43	30	CCC	City Corporation dispensary, Younus mia, Ward Commissioner's Office, East Madarbari	DOT	
44	31	BRAC	Khelaghor Ashor, Alkaran	DOT	
45	32	GoB	Chest Disease Clinic, Andarkilla	Microscopy & DOT	
46	33	CCC	City Corporation dispensary, Ward Commissioner's Office, Firingee Bazar	DOT	
47	33	NHSDP-Nishkrity	62/63, Poet Kazi Nazrul Islam Road, Firingee Bazar, Kotowali	DOT	
48	34	BRAC	DOTS Centre, Patharghata	DOT	
49	35	BRAC	DOTS Centre, Jail Hospital, Government Urban Dispensary, Baxirhat	Microscopy & DOT	
50	37	NHSDP-Nishkrity	Borapole, North Middle Halishahar	DOT	
51	40	BRAC	DOTS Corner, CEPZ Hospital, South Halishahar	Microscopy & DOT	
52	39	BRAC	DOTS Corner, Port Hospital, South Halishahar	Microscopy & DOT	

SL	Ward No.	Agency	Address	Service facility	Remark
53	39	GoB	Government Urban Dispensary, Seamen Hostel, South Halishahar	DOT	
54	39	MAMATA	Mamata Clinic, Baitush Sharaf Bhaban, Taltala, Bandartila, South Halishahar,Chittagong, Phone: 031-740476, Mobile: 01920-470753	Microscopy & DOT	
55	40	Youngone Ltd.	Youngone Ltd. Hospital, CEPZ, North Patenga	Microscopy & DOT	
56		BRAC	DOTS Corner, Chest Disease Hospital, Fauzderhat	Microscopy & DOT	
57		BRAC	DOTS Centre, Karnaphuli I/A	DOT	
58		GoB	DOTS Corner, CMH Cantonment	Microscopy & DOT	
59		GoB	DOTS Corner, CMH BNS Patenga	Microscopy & DOT	
60		GoB	Government urban Dispensary, Marine Academy	DOT	
61		BRAC	DOTS Corner, KEPZ Hospital	Microscopy & DOT	
62		BGMEA	BGMEA Hospital, Saltgola Rail Crossing, Seamens Hostel Gate, South Halishahar, Bandar, Chittagong, Tel: 031-740814, Mobile: 01813-277530	Microscopy & DOT	
Khulna Metropolitan Area					
1	01	NSHDP-PKS	Maheshwarpasha,Daulatpur. UPHCP Bhaban, Khulna	DOT	
2	02	NSHDP -PKS	TB Hospital Road, Mirerdanga. UPHCP Bhaban, Khulna	DOT	
3	02	BRAC	DOTS Center for Industrial Center. Khulna. (Located at BRAC office at Fulbarigate area)	Microscopy & DOT	
4	03	PIME Sisters	PIME Sisters DALIT. 37/1, Kedarnath Road, Ralligate, Maheshwarpasha, Daulatpur. Khulna	DOT	
5	04	NSHDP PKS	Deyana,Daulatpur. UPHCP Bhaban, Khulna	DOT	
6	05	PIME Sisters	Muhsin Upa Sasthya Kendra. Daulatpur Bazar. Daulatpur, Khulna.	DOT	
7	06	NSHDP -PKS	02,CrossRoad, Pabla, Daulatpur. UPHCP Bhaban,Khulna	Microscopy & DOT	
8	07	PIME Sisters	Nazirghat urban clinic, Borobari, Khulna	DOT	
9	7	KMSS, KCC	PHCC-5, Uttar Kashipur, Khalishpur, Khulna.	Microscopy & DOT	
10	08	PIME Sisters	Sadar Hospital DOT Corner, Khulna	DOT	
11	8	KMSS, KCC	PHCC-3, Khalishpur New Market Road, Khalishpur, Khulna.	DOT	
12	09	PIME Sisters	Blue Sister DOTS Center, Tootpara zoracall bazar	DOT	
13	9	KMSS, KCC	PHCC-1, Bastuhara (Neer Abu Naser Hospital), Khulna	DOT	
14	10	PIME Sisters	PIME Sisters. Lal Hospital. Khalishpur. Khulna	DOT	
15	10	KMSS, KCC	PHCC-2, Nayabati, Khalishpur, (Neer Worder Land), Khulna.	DOT	
16	11	PIME Sisters	Khanjahan Ali Datobo Health Center, Lobonchara, Khulna	DOT	
17	11	KMSS, KCC	PHCC-3, Khalishpur New Market Road, Khalishpur, Khulna.	DOT	
18	12	NSHDP -PKS	103,Central Block,Eidgah Road Khalishpur.Tel..# 763518. Khulna	Microscopy & DOT	
19	13	PIME Sisters	PIME Sisters. Missionaries of Charity. Duttapara, Khalishpur, Khulna.	DOT	
20	13	KMSS,KCC	PHCC-6, Charerhat, Khalishpur, Khulna.	DOT	
21	14	PIME Sisters	PIME Sisters. Daspara Road, Boyra. Khulna. Tel. # 761782	Microscopy & DOT	
22	14	KMSS, KCC	PHCC-4, Ryer Mohol, Boyra, Khulna.	DOT	
23	15	KMSS,KCC	PHCC-6, Charerhat, Khalishpur, Khulna.	DOT	
24	16	PIME Sisters	Demien Clinic, 9/1 Daspara Road, Bayra, Khulna	DOT	
25	17	BRAC	BRAC DOTS Corner. Khulna Medical College Hospital.	Microscopy & DOT	
26	17	GoB	Chest Clinic , Lower Jessore Road, Khulna,Te # I731105	Microscopy & DOT	
27	18	PIME Sisters	PIME Sisters. KhUDA House. South of Bus Terminal, Sonadanga, Khulna.	DOT	
28	19	NSHDP -PKS	Islamabad (Paipara) Community Center. Infront of Eidgah. UPHCP Bhaban, Khulna	DOT	
29	20	NSHDP -PKS	Shaikhpara Bazar, Shaikhpara UPHCP Bhaban, Khulna	DOT	
30	21	PIME Sisters	Khulna Prison.	DOT	
31	21	PIME Sisters	PIME Sisters. DOTS Corner, 150 Bedded General Hospital, Khulna.	DOT	
32	22	NSHDP -PKS	Mushipara, Custo M Grat, Nuton Bazar, Rupsha	DOT	
33	23	PIME Sisters	Sadar Hospital, Khulna	DOT	
34	24	NSHDP -PKS	Dighirpar, Nirala R/A. Road #.01, UPHCP Bhaban, Khulna	DOT	
35	25, 26	PIME Sisters	Majirghat Arban Dispensary, West Baniya Mor, Sonadanga, Khulna	DOT	
36	26	PIME Sisters	Olirbagan.. Nazirghat Barobari, Nazirghat Road. Khulna	DOT	
37	27	NSHDP -PKS	Islampur Road, Tarer Pukur. UPHCP Bhaban. Khulna	Microscopy & DOT	
38	28	NSHDP -PKS	Surjer Hashi Clinic, Tootpara	DOT	
39	29	NSHDP - PKS	47,South Central Road, Khulna. Tel. # 730024	Microscopy & DOT	
40	30	PIME Sisters	BLUE SISTERS. Sisters Ashram Charles De Foucald. 29/A, East Link Road,Tootpara Khulna	DOT	
41	31	PIME Sisters	PIME Sisters. Taltola Hospital, Tootpara, Khulna.	DOT	
42	31	PIME Sisters	Khan Jahan Ali Charitable Dispensary. Labon Chara Main Road, Khulna	DOT	
Rajshahi Metropolitan Area					
1	1	UPHCSDP-KMSS	Kashiadanga, Rajshahi.	DOT	
2	2, 3	UPHCSDP-KMSS	Tultulipara,Horogram notun para, Rajshahi.	DOT	
3	4, 5, 6	NHSDP-Tilottama	Surjer Hashi Clinic, Bulunpur, Rajshahi Court	Microscopy & DOT	
4	6	GoB	Rajshahi Chest Disease Hospital, Laxmipur	Microscopy & DOT	
5	7	NHSDP-Tilottama	Surjer Hashi Clinic, Shreerampur T-badh, Rajshahi	DOT	

SL	Ward No.	Agency	Address	Service facility	Remark
6	8	Damien Foundation	Rajshahi Jail	DOT	
7	9	GoB	Chest Disease Clinic, Hossenigonj	Microscopy & DOT	
8	10	Damien Foundation	DOTS Corner, Rajshahi Medical College Hospital, Laxmipur	Microscopy & DOT	
9	11	NHSDP-Tilottama	Surjer Hashi Clinic, Hetemkhan, Rajshahi	DOT	
10	12	UPHCSDP-KMSS	Fudkipara, Rajshahi	DOT	
11	13, 20	UPHCSDP-KMSS	Kadirgonj, Close to RCC building, Rajshahi	Microscopy & DOT	
12	14,15	UPHCSDP-KMSS	Sopura Gorostan, Rajshahi	DOT	
13	16	NHSDP-Tilottama	Surjer Hashi Clinic, Koyerdara, Rajshahi	DOT	
14	17,19	NHSDP-Tilottama	Surjer Hashi Clinic, North Naodapara, Bypass More,Naodapara,Rajshahi, Organization's own building	Microscopy & DOT	
15	18,19	UPHCSDP-KMSS	Chotobongram, Rajshahi.	DOT	
16	21,22, 23,24,25	UPHCSDP-PSTC	PHCC-1, Panchoboti, Ghoramara, Boalia, Rajshahi	DOT	
17	26	UPHCSDP-PSTC	PHCC-5, Meherchandi Modddho para, Boalia, Rajshahi.	DOT	
18	27,28	UPHCSDP-PSTC	PHCC-2, Kazla, Motihar, Rajshahi.	Microscopy	
19	29	UPHCSDP-PSTC	PHCC-3, Dashmari, Binodpur, Rajshahi.	DOT	
20	30	UPHCSDP-PSTC	PHCC-4, Notun budhpara, Motihar, Rajshahi	DOT	
Barisal Metropolitan Area					
1	4, 5, 6, 18, 19	GoB	Chest Disease Clinic, Amanatganj	Microscopy & DOT	
2	10,11,12,13, 14,15,16,17, 23,24,25,28	BRAC	DOTS Corner, Sher-e-Bangla Medical College Hospital	Microscopy & DOT	
3	8	BRAC	Barisal Jail	Microscopy & DOT	
4	9, 20, 21, 22	BRAC	General Hospital	Microscopy & DOT	
5	1, 2, 3, 26, 27, 29, 30	BRAC	DOTS Centre, BRAC Sadar Office, Kashipur	Microscopy & DOT	
Sylhet Metropolitan Area					
1	1,2,3,10, 11, 12,13,16,17	BRAC	DOTS Corner, M.A.G. Osmani Medical College Hospital	Microscopy & DOT	
2	4, 5, 6, 7, 8, 9	BRAC	DOTS Corner, Jalalabad Ragib Rabeya Medical College Hospital, Pathantula	Microscopy & DOT	
3	25, 26	BRAC	DOTS Corner, North-East Medical College Hospital, Sekhghat, Telihaor	Microscopy & DOT	
4	14	BRAC	DOTS Corner, Sylhet Prison	Microscopy & DOT	
5	18, 19, 20, 21	GoB	Chest Disease Clinic, Baluchar, Sahi Eidgah	Microscopy & DOT	
6	15, 22, 23, 24, 27	BRAC	DOTS Corner, BRAC Urban Office, Shahjalal Upashahar	Microscopy & DOT	
7		IOM	Medi-Aid Heart Centre, South Dorgah Gate (Near Minar), Dorgah Mohalla, Sylhet 3100	Microscopy & DOT	

Annex-5

List of Sub Recipients working with BRAC:

Sl	Name of the organization	Sl	Name of the organization
1	Damien Foundation	22	PSTC- NHSDP
2	TLMI-B (The Leprosy Mission International - Bangladesh)	23	CWFD (Concerned Women for Family Development)
3	RDRS (Rangpur Dinajpur Rural Services) Bangladesh	24	Tilottama
4	LAMB (Lutheran Aid to Medicine in Bangladesh)	25	PKS Khulna (Paribar Kallayan Samity)
5	LEPRA Bangladesh (The British Leprosy Relief Association)	26	IMAGE
6	HEED Bangladesh (Health Education and Economic Development	27	Nishkriti
7	PIME Sisters-Khulna	28	Swanirvar Bangladesh
8	UPHCSDP (Urban Primary Health Care Service Delivery Project)	29	BAMANEH
9	PSTC DCCS, PA-1	30	TMSS
10	KMSS DCCS PA-2	31	SAJIDA Foundation
11	BAPSA DCCS PA- 3 (Bangladesh Association for Prevention of Septic Abortion)	32	YPSA (Young Power in Social Action)
12	PSTC DCCS PA-4	33	SEDAB (Socio-Economic Development Agency of Bangladesh)
13	PSTC DCCS PA-5	34	LIFE
14	Nari Maitree DCCN PA-1	35	MAMATA
15	Nari Maitree DCCN PA-2	36	VARD (Voluntary Association for Rural Development)
16	UTPS DCCN PA-3 (Unity Through population Service)	37	Ashar Alo Society (AAS)
17	KMSS DCCN PA-4	38	Light House
18	Dhaka Ahsania Mission (DAM)	39	HASAB
19	Christian Services Society	40	BGMEA
20	PSTC RCC PA-2	41	ICDDR,B
21	KMSS KCC PA-1	42	NATAB (National Anti-Tuberculosis Association of Bangladesh)

GeneXpert is a WHO endorsed new technology to diagnose tuberculosis (TB). It is a PCR - based assay which detects TB bacteria (*Mycobacterium Tuberculosis*) and Rifampicin resistance in sputum specimens within 2 hours. The many features of this system, including sample decontamination, hands-free operation, on-board sample processing, and ultrasensitive hemi-nested PCR, enables to create a low-complexity assay with a sensitivity and specificity of 98.2% and 99.2% respectively as compared to culture method.

NTP, Bangladesh has introduced it in 2012 and is now available in 30 institutions

List of GeneXpert Sites	
1. NTRL, Dhaka- 2 machines. 2. CDC Shyamoli. 3. RTRL, Chittagong 4. RTRL Rajshahi 5. CDC Khulna 6. CDC Jessore 7. CDH Sylhet 8. CDC Barisal. 9. Jalchatra, Tangail. 10. Netrokona TB Lab(DF). 11. CDC Pabna. 12. CDC Rangpur 13. CDC Kushtia 14. CDC Bogra 15. CDC Comilla	16. CDH Faridpur 17. CDC Patuakhali 18. CDC Rangamati 19. CDC Chankharpool 20. CDC Sunamgonj 21. CDC Cox'sBazar 22. Gazipur Sadar Hospital 23. Shambhugonj Hospital,Mymensingh(DF) 24. BIRDEM hospital 25. Bangabandhu Sheikh Mujib Medical University (BSMMU) 26. CDC B.Baria 27. icddr,b Mycobacteriology Laboratory 28. Anwer Khan Modern Diagnostic Centre Ltd. 29. Digilab Medical Service Ltd. 30. Sir Salimullah Medical College (SSMC)

This page is to be incorporated in Back Page.