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 93% and 99.2% respectively as compared to culture method.

NTP, Bangladesh has introduced Xpert/ MTB-Rif in 2012 and is now available in 38 NTP/ GF supported centres, and icddr,b supported machines are available in 7 sites (List given below).

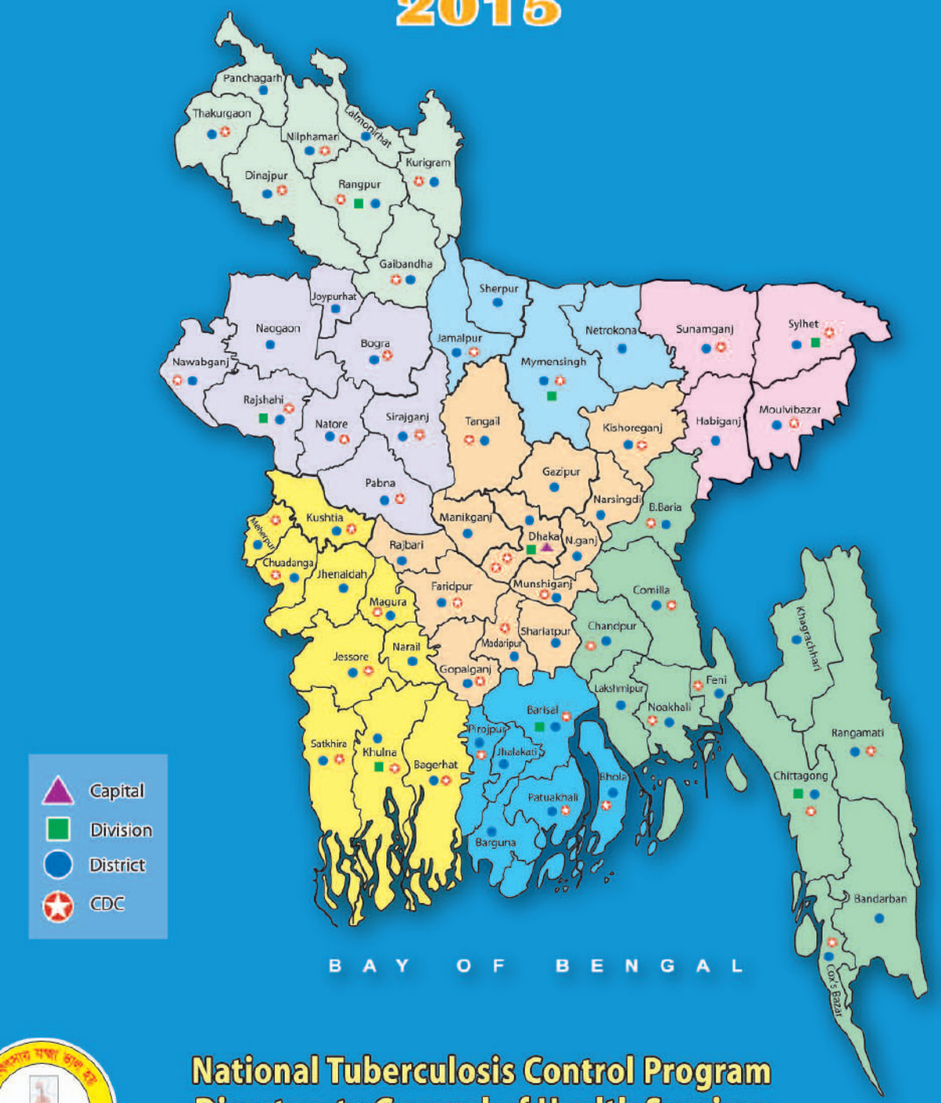
List of GeneXpert Sites (NTP/ GF supported)

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. MTLCP Hospital, (Shambhuganj)
24. BIRDEM hospital
25. Bangabandhu Sheikh Mujib Medical University (BSMMU)
26. CDC B. Baria
27. CDC Gaibandha
28. CDC Thakurgaon
29. CDC Kurigram
30. CDC Kishoreganj
31. CDC Chuadanga
32. CDC Gopalganj
33. CDC Chandpur
34. CDC Satkhira
35. CDC Noakhali
36. CDC Bhola
37. CDC Bandarbon
38. UHC Shremongol

icddr,b supported sites	
Public facilities	**icddr,b facilities**
1. BSMMU	1. Mohakhali TB Screening Centre
2. Sir Salimullah Medical College	2. Dhanmondi TB Screening Centre
3. CDC Shyamoli- 2 machines	3. Golapbagh TB Screening Centre
	4. Icddr,b Mycobacteriology Laboratory

Tuberculosis Control in Bangladesh

Annual Report 2015



National Tuberculosis Control Program
Directorate General of Health Services
Mohakhali, Dhaka

Tuberculosis Control in Bangladesh

Annual Report
2015

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

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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 Notification 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

LPA	Line Probe Assay
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 (NTP) is working with a mission of eliminating TB 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 while its present objective is to achieve universal access to high quality care for all people with TB

The NTP adopted the DOTS strategy and started its field implementation in November 1993. By 2007 the DOTS services were made available throughout the country including the metropolitan cities. Now the NTP is providing tuberculosis-control services all over the country under the Stop TB strategy that is being implemented since 2006.

Since the introduction of DOTS in 1993, remarkable progress in TB control has been made. The program crossed the target of 85% treatment success rate of the new smear-positive cases in 2003 and has been maintaining over 90% since 2005. The program has successfully treated 94 % of new smear-positive cases registered in 2013.

The Case Notification rates per 100 000 population in 2014 were 68 and 122 respectively for new smear-positive and all forms (new and relapse) of TB cases. Number of all types notified TB cases increased in 2014 with a substantial increase of the extra-pulmonary cases, compared to 2013 (37406 vs 33705). Child TB (among new cases) also increased from 5051in 2013 to 6262 in 2014

As of 31 December 2014, countrywide a total of 3702 MD-R TB patients were enrolled for treatment including 946 in 2014. Among the 946 patients in 2014, 716 are under 24-month regimen and rest 230 are under 9- month regimen.

This report covers the activities related to TB control performed in 2014, case finding in 2014 and treatment outcomes of cases registered in 2013.

NTP thankfully acknowledges the support and contributions of all partners including NGO, Development and Donor Agencies.

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 program achieved the initial target of 70 case detection rate of the new smear-positive cases in 2006 and treating successfully 85% of them in 2003 and has been maintaining over 90% since 2005.

The NTP started Programmatic management of drug resistant TB with 24-month regimen in (August) 2008 in NIDCH, Dhaka and by end of 2013 this service has been made available in CDHs Chittagong, Khulna, Sylhet and Pabna. The CDH, Rajshahi has been managing drug resistant TB since May 2005 with 9-month regimen under operational research.

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)

This report covers the activities related to TB control performed in 2014, case finding in 2014 and treatment outcomes of cases registered in 2013. The country's estimated population for 2014 based on the projected population of 2011 census of the Bangladesh Bureau of Statistics (BBS) is 15,67,54,787.

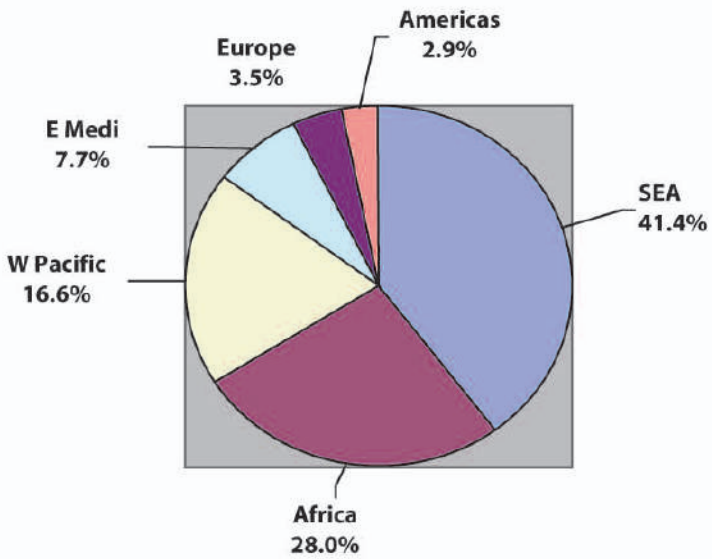
3. Tuberculosis Scenario

3.1 Global TB Scenario

In 2014, an estimated 9.6 (9.1-10) million new TB cases occurred globally and 13 (11-14) million people were suffering from active TB disease. Among the 9.6 million incident cases 3.2 million were women and 1 million were children. An estimated 1.2 million (12%) of the 9.6 million new TB cases were co-infected with HIV. In this year an estimated 1.5 million died from TB (including 400 000 deaths among HIV-positive TB patients). Among the 1.5 million deaths 480 000 were women and 140 000 were children.

The majority of cases worldwide in 2014 were in the South-East Asia (41%), African (28%) and Western Pacific (17%) regions (fig 1). India and China alone accounted for 23% and 10% of total cases, respectively.

Fig. 1. Proportion of estimated incidence of all forms of TB by WHO Region



Source : Global Tuberculosis Control, WHO, 2015

In 2014, about 63% (6.3 million) of the estimated 9.6 million people who developed TB were notified as newly diagnosed cases. Globally (for the TB patient registered in 2013), the treatment success rate was 86% among all new TB cases.

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

[1] According to *"Global Tuberculosis Control, WHO, 2015" 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 o 2015: reduce prevalence of and deaths due to TB by 50% compared with a baseline of 1990 o 2050: eliminate TB as a public health problem (defined as the global incidence of active cases <1 per 1 million population 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% of the world's population this region caries over 41% of the global TB burden. An estimated 4 million new TB cases and 460 000 TB deaths occurred in 2014; and about 5.4 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 23% 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 Scenario*

In Bangladesh, the estimated incidence and prevalence rates for all forms of Tuberculosis in 2014 were 227 and 404 per 100 000 population respectively. An estimated 51 per 100 000 people died of TB in the same year. The estimated incidence rate of HIV positive TB cases increased from 0.26/100,000 in 2013 to 0.36/100,000 in 2014. The proportion of multidrug-resistant tuberculosis (MDR-TB) among new TB cases was 1.4% and that among re-treatment cases was 29%. (Table 1)

Table 1: Estimated population and TB Burden, Bangladesh- 2014

o	Population:	159 million
o	Mortality rate (excluding HIV+ve TB):	51/ (37-68) 100 000 pop
o	Mortality rate (HIV+ve TB only:	0.11 (0.09-0.14)/100 000 pop
o	Prevalence rate (including HIV+ve TB)):	404/ (211-659)/100 000 pop
o	Incidence rate (including HIV+ve TB):	227 (199-257)/100 000 pop
o	Incidence rate (HIV+ve TB only):	0.36/100 000 pop
o	Proportion of new TB cases with MDR-TB	1.4%
o	Proportion of retreatment TB cases with MDR-TB:	29%

**Ref: Global Tuberculosis Report, WHO, 2015*

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

The initial objectives of NTP were:

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

  in order to then

- Halve the TB death and TB prevalence rates towards and to have halted and "begun to reverse the incidence' as stated under target 6.c, Goal 6 of the MDGs set for 2015.

- The present objective is to achieve universal access to quality TB care for all TB patients.

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
- ✓ All Chest Disease Clinics and 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 (GO 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 2014 are as follows:

- Completed TB Epidemiological and Impact Analysis- 2014
- Developed (Revised) National Strategic Plan for National Tuberculosis Control Programme (2015-2020)
- Conducted sixth National TB Program review through Joint Monitoring Mission (JMM)
- Developed and submitted Concept Note for Global Fund TB Grant under NFM
- Number of microscopy lab were increased from 1089 to 1104
- Number of centre with Gene-Expert Machine increased from 12 to 27
- Observed World TB Day 2014 and published Fact Sheet on Tuberculosis (In Bengali)
- NTP made MOU with BKMEA to provide TB control services program in knitting industries
- NTP started implementing WHO-approved rapid diagnostics (WRD), employing molecular techniques for the diagnosis of TB
- In align with WRD, NTP introduced new disease classification, new definitions and new recording/reporting tools from July 2014. (Related circular is attached as Annex-7a)
- Finalized the protocol of National TB prevalence Survey and conducted field testing
- Developed protocol for shorter MDR regimen

4.7. Major Challenges:

- Sustaining the quality DOTS
- Further strengthening laboratory services including expansion of culture and DST
- Further 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.
- Ensuring adequate space and ideal condition for storage of drugs and logistics
- Continuation of 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 notification rate:

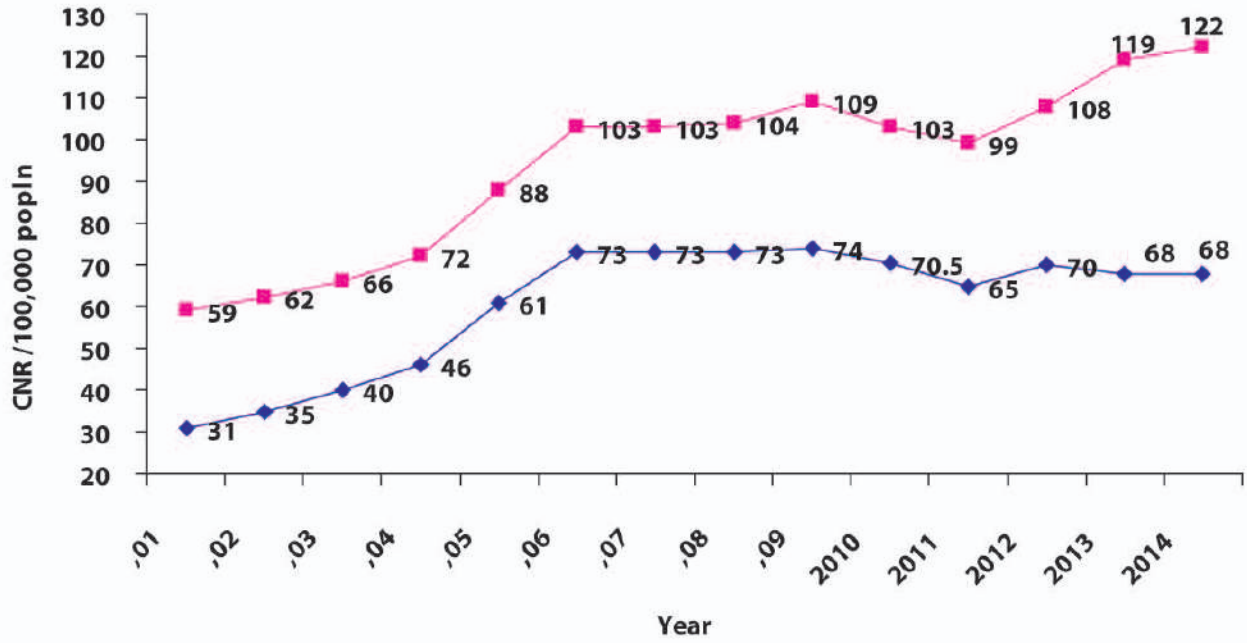
Case Notification rate (CNR) is defined as the number of cases registered and reported to NTP per one hundred thousand population per year.

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 addressing detection of smear negative and child TB cases with special attention to hard to reach areas through social support for ultra-poor group case notification increased to 70/100 000 population during 2012, along with overall increase in notification of all forms of TB cases; from 51/100 000 population in 2001 to 108/100 000 population in 2012. During 2013 the notification of new smear negative cases increased significantly while that of new smear positive cases decreased slightly; as a result though overall CNR increased to 119/ 100 000 population, the CNR of New smear positive cases slightly decreased to 68/100 000 population. However, in 2014 the case notification rate of new smear positive/bacteriologically confirmed cases remains same (68/100 000 population) as 2013 while case notification of smear negative and extra-pulmonary cases increased to reach the notification rate for all forms of TB cases to 122/ 100 000 population in 2014. (Fig 2).

Case detection rate:

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 and relapse TB cases. According to this estimate the number of all forms (new and relapse) TB cases is 224 per100 000 population in 2013 and the case detection rate is about 53%. Considering the same incident rate the CDR for 2104 is over 54%; will be revised after getting Global TB report 2015.

Fig 2. Nation wide case notification rate/100 000 population: NSP and all forms of TB; 2001-14



5.2.1 Nationwide Case Notification

A total of 196797 (191166+ 5631) cases including 5631 combined cases of return after failure, return after default (loss to follow up) and others have been reported to NTP in 2014. So the overall case notification rate excluding those 5 631 cases was (122/ 100 000 population). Among the total 196 797 cases, about 85.1% were reported through the upazilas. Over 54% of the cases were new smear-positive (Bacteriologically conformed) and only 2.1% were relapses. New smear-negative and extra-pulmonary cases were 21.78% and 19.01% respectively. Proportions of extra-pulmonary cases reported through metropolitan cities and CDCs were significantly higher than those through upazilas (Table 2).

Table 2: Case notification by type of reporting unit, 2014

Reporting unit	Pulmonary Bacteriologically Confirmed				Pulmonary Clinically Diagnosed				Extra-Pulmonary				All Retreatment Except relapses		Total	
	New/ Treatment History Unknown		Relapses		New/ Treatment History Unknown		Relapses		New/ Treatment History Unknown		Relapses					
	#	Row %	#	Row %	#	Row %	#	Row %	#	Row %	#	Row %	#	Row %	#	Column %
Upazila	95,716	57.17	2,027	1.21	36,346	21.71	694	0.41	27,854	16.64	161	0.10	4,622	2.76	167,420	85.07
Metro. city	9,585	37.31	871	3.39	5,663	22.04	167	0.65	8,348	32.49	142	0.55	915	3.56	25,691	13.05
CDC	1,438	39.01	91	2.47	851	23.09	2	0.05	1,204	32.66	6	0.16	94	2.55	3,686	1.87
Total	**106,739**	**54.24**	**2,989**	**1.52**	**42,860**	**21.78**	**863**	**0.44**	**37,406**	**19.01**	**309**	**0.16**	**5,631**	**2.86**	**196,797**	**100.00**

Over 39% of the total 196 797 notified cases were female; (M:F=1.55:1). In case of new smear positive/pulmonary bacteriologically confirmed and new smear negative/pulmonary clinically diagnosed cases proportions of female cases were 36% and 37% respectively; where as in case of extra pulmonary cases it was nearly 52% (Table 3).

Table. 3. Case notification by type of cases and sex, 2014

Type of cases	Male		Female		Total	M/F Ratio
	Number	(%)	Number	(%)		
Pulmonary Bacteriologically Confirmed	68,119	63.82	38,620	36.18	106,739	1.76
Pulmonary Clinically Diagnosed	26,971	62.93	15,889	37.07	42,860	1.70
Extra Pulmonary	17,993	48.10	19,413	51.90	37,406	0.93
Relapses	2,906	69.84	1,255	30.16	4,161	2.32
Treatment after failure	510	73.07	188	26.93	698	2.71
Treatment after loss to follow up	208	79.69	53	20.31	261	3.92
Others	2,959	63.33	1,713	36.67	4,672	1.73
Total	**119,666**	**60.81**	**77,131**	**39.19**	**196,797**	**1.55**

Age sex distribution of new smear positive pulmonary bacteriologically confirmed cases

Among the notified new smear positive/pulmonary bacteriologically confirmed cases the number of male patients was higher in all age groups except in under-15 children, where TB cases among girls are nearly two times higher than that among boys. Over 67 percent of the reported cases belong to 15 - 54 years age group, who are economically most active. This proportion is comparatively higher among females than that among males (77%vs 62%). About 15% of smear positive TB cases belong to age group of over 64 years and in this age group proportion is higher in males than in females (19%vs 8%). The overall male-female ratio in these notified cases is 1.76 and the ratio increases with age. In old people (>64 years), there are over 4 times more men notified than women (Figure 3, 6).

Age sex distribution of new smear negative clinically diagnosed cases

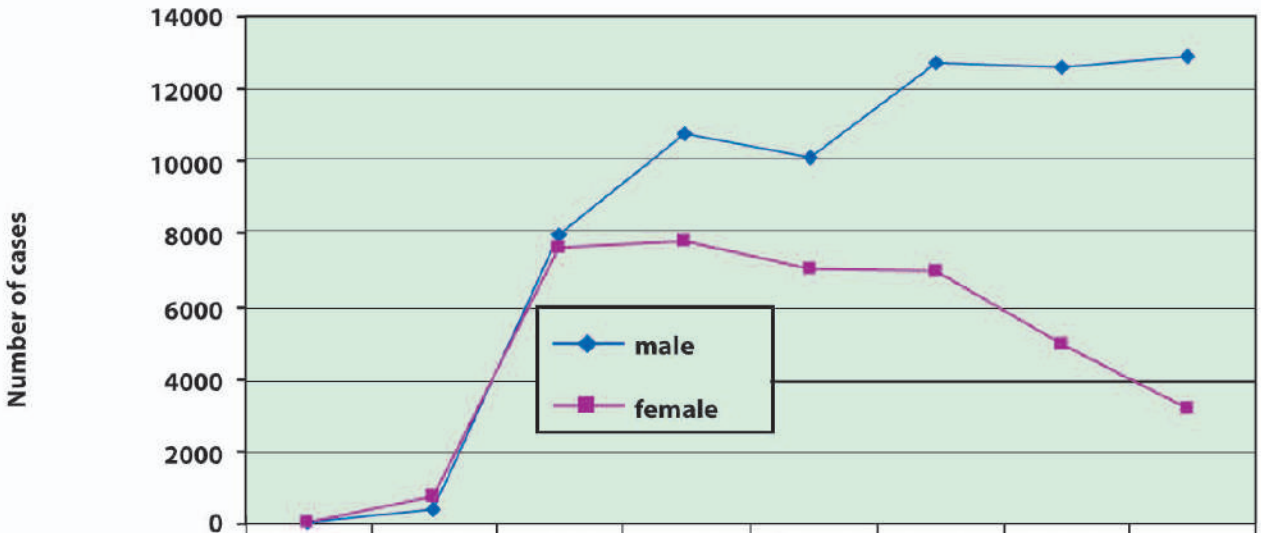
Figures 4 and 6 shows that the number of notified new smear negative cases was almost equal in both sexes up to age 24 years. From 25 years and onwards the number of male cases was higher in all age groups and male-female ratio increases with the age to reach 3.88 in the age group of over 64 years (fig. 4, 6)

Age sex distribution of new extra-pulmonary cases

In the age groups ranging from 5 to 44 years the number of female cases is more than that of male cases. In the age group 45-54 years the reported numbers are almost equal in both the sexes. And in all other age groups the number of male cases is higher than that of female cases. (Fig 5, 6).

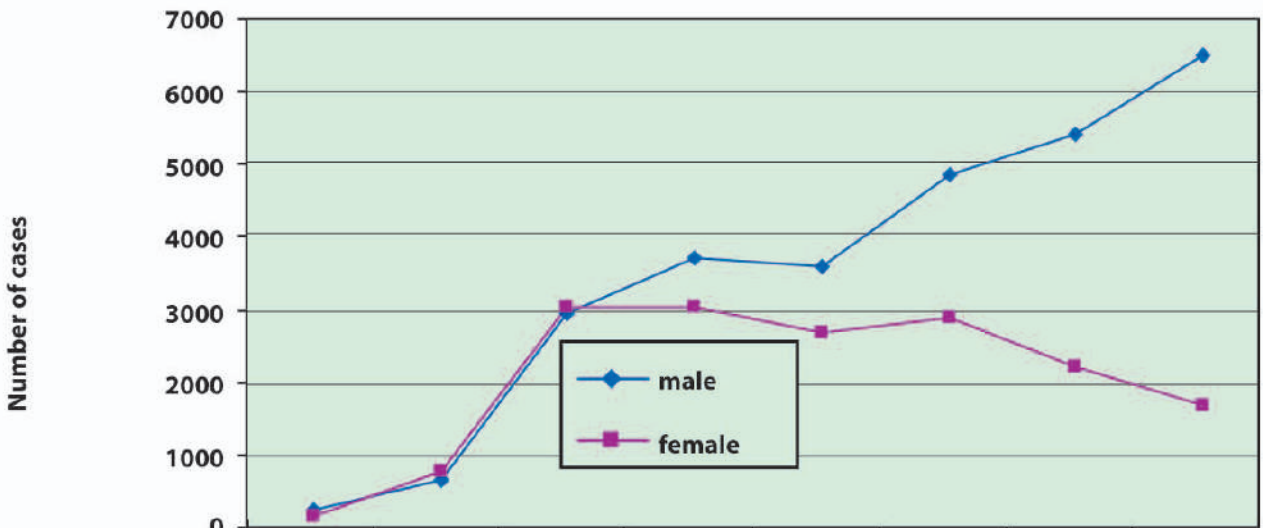
Nationwide case notification trend in absolute number is shown in figure 7.

Fig. 3: Notification of new smear positive/ pulmonary bacteriologically confirmed TB by age and sex, 2014



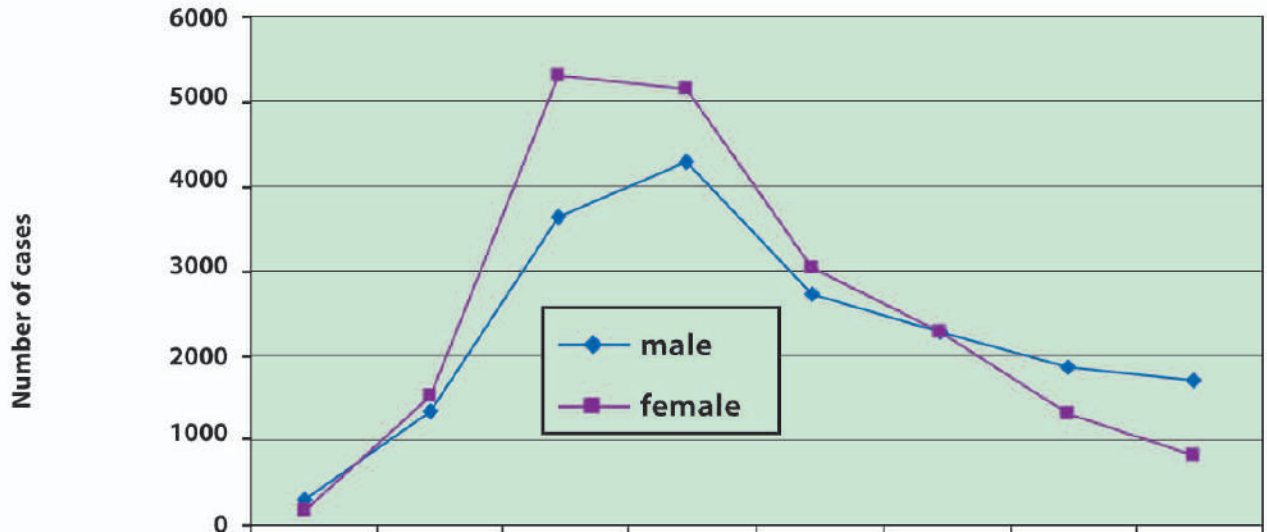
	0-4yr	5-14	15-24	25-34	35-44	45-54	55-64	65+
male	4	378	8059	10858	10198	12835	12757	13036
female	5	733	7682	7861	7096	7022	5017	3198

Fig. 4 Notification of new pulmonary clinically diagnosed TB by age and sex, 2014



	0-4yr	5-14	15-24	25-34	35-44	45-54	55-64	65+
male	229	612	2842	3598	3476	4692	5237	6285
female	156	750	2927	2935	2597	2781	2135	1618

Fig. 5 Notification of new extra- pulmonary TB by age and sex, 2014



	0-4yr	5-14	15-24	25-34	35-44	45-54	55-64	65+
male	333	1337	3564	4220	2693	2268	1847	1711
female	201	1524	5207	5065	3009	2263	1313	831

Fig. 6 Male- Female Notification Ratio by age group: new pulmonary bacteriologically confirmed, new pulmonary clinically diagnosed & new extra-pulmonary TB cases, 2014

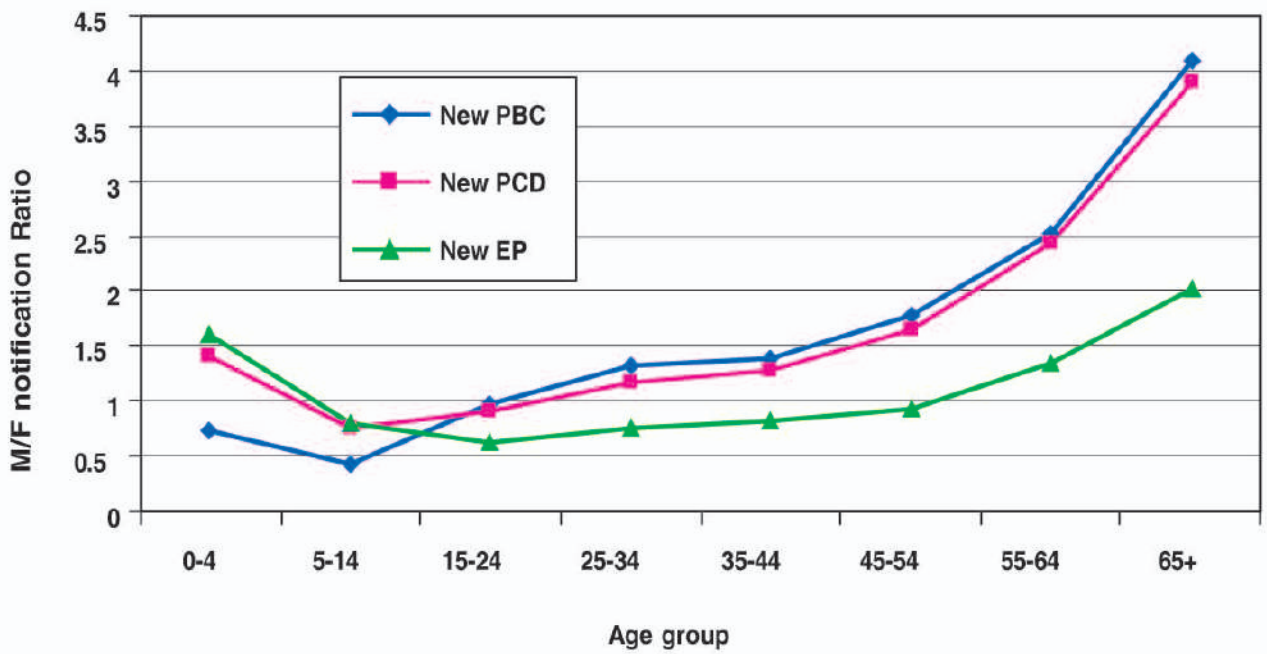
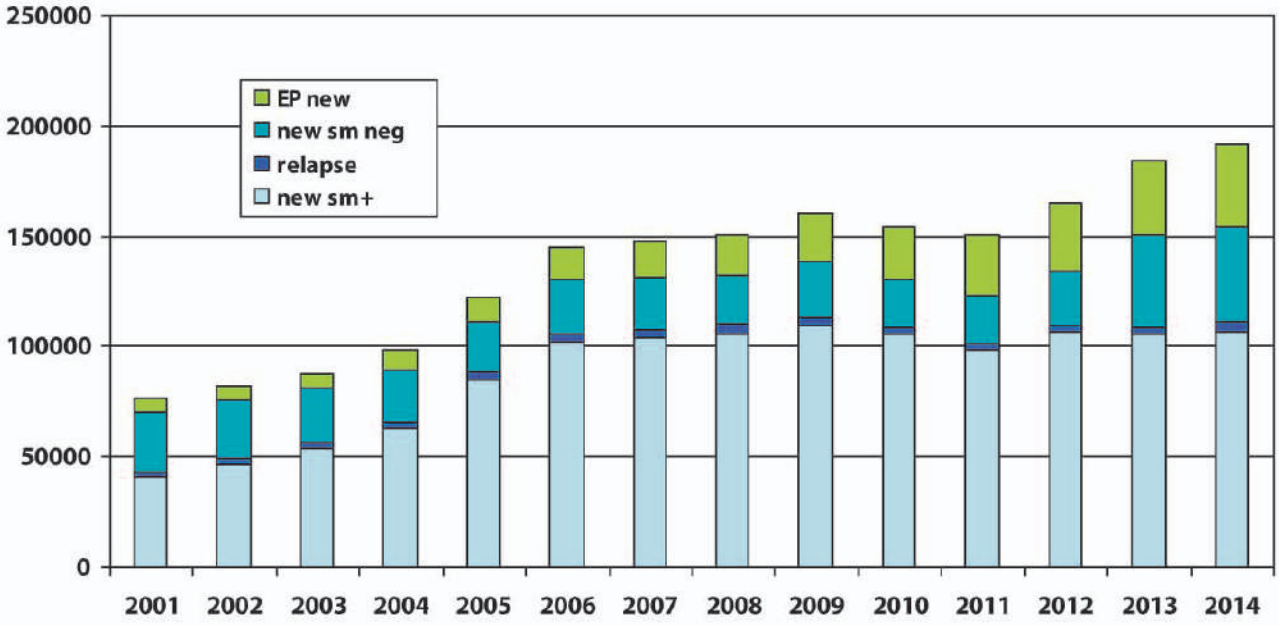


Fig. 7. Nation wide yearly case notification (all forms); absolute number; 2001-2014



5.2.2 Division-wise Case Notification; New Pulmonary Bacteriologically Confirmed Cases

Out of seven divisions, five divisions showed new pulmonary bacteriologically confirmed TB case notification rate (CNR) of more than 70 (72-90) per one hundred thousand population in 2014 while the nationwide CNR was 68 /100 000 population. For all forms of TB cases the nationwide CNR is almost 122/100 000 population, except Rajshahi all the divisions are showing CNR above the national rate; while Sylhet having the highest (154/100 000 population) CNR (Table 4).

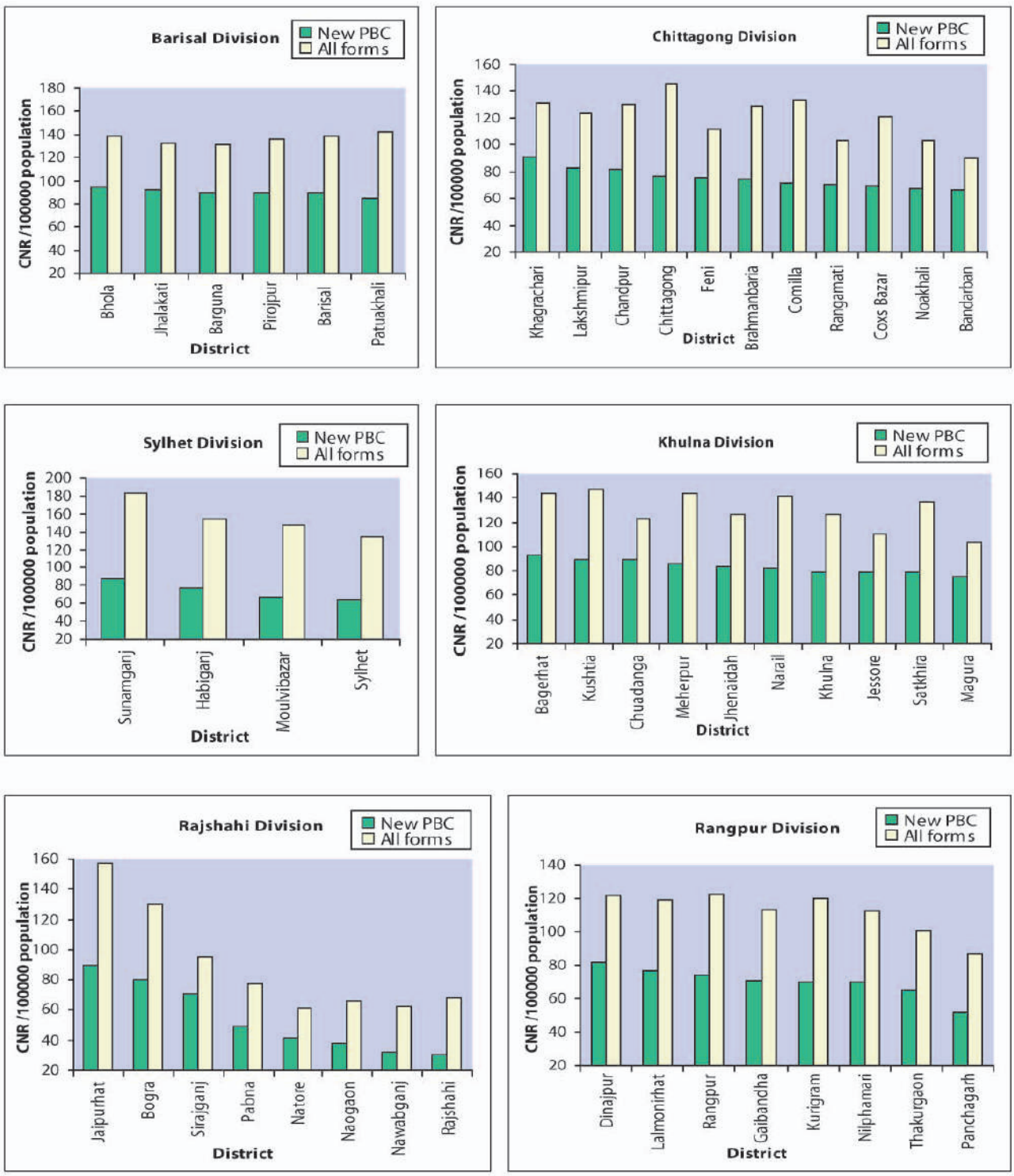
Table 4: Division-wise new pulmonary bacteriologically confirmed (PBC) & all forms of TB cases by type of reporting unit

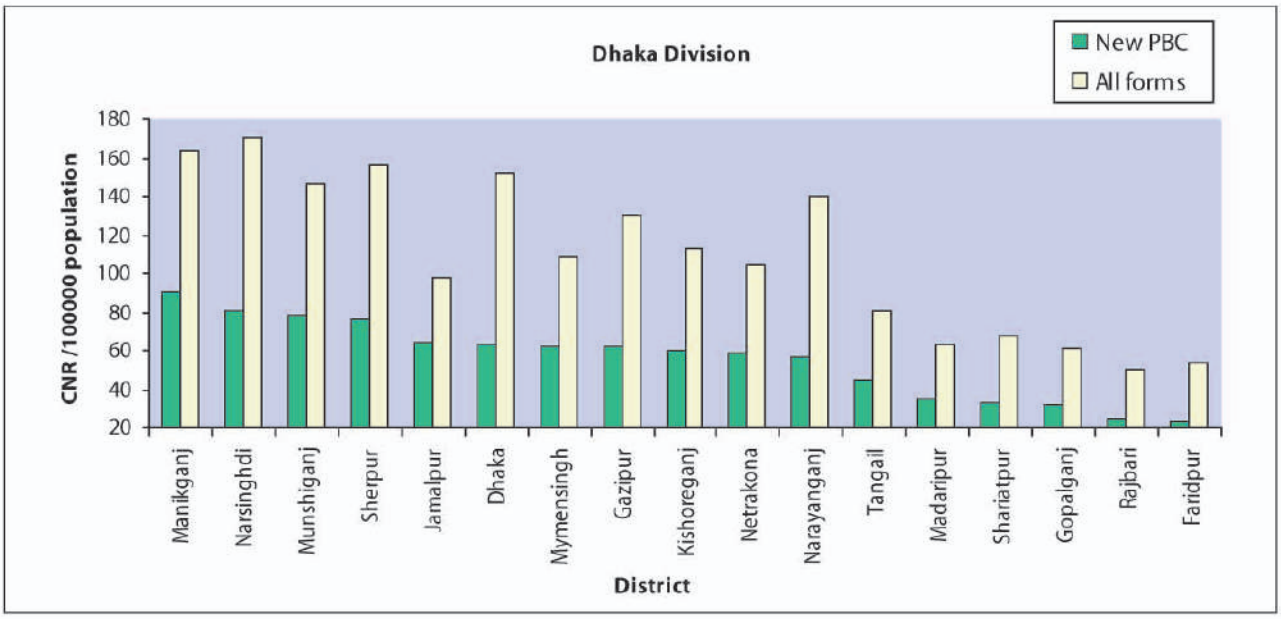
Division	Number of reported cases								Estimated Projected population of 2014	New PBC CNR /100000 population	All forms CNR /100000 population
	Upazila		Metro		CDC		Total				
	New PBC	All forms	New PBC	All forms	New PBC	All forms	New PBC	All forms			
Barisal	7,584	11,484	160	339	55	130	7,799	11,953	8,699,173	89.65	137.40
Chittagong	20,644	33,688	2,338	5,922	79	229	23,061	39,839	31,034,958	74.31	128.37
Dhaka	24,455	46,879	5,966	15,868	454	1,081	30,875	63,828	52,261,706	59.08	122.13
Khulna	13,203	19,995	437	916	218	498	13,858	21,409	16,625,468	83.35	128.77
Rajshahi	10,174	16,210	203	508	401	891	10,778	17,609	19,936,631	54.06	88.32
Rangpur	12,112	18,966	-	-	207	653	12,319	19,619	17,065,012	72.19	114.97
Sylhet	7,544	15,576	481	1,223	24	110	8,049	16,909	11,002,826	73.15	153.68
Total	**95,716**	**162,798**	**9,585**	**24,776**	**1,438**	**3,592**	**106,739**	**191,166**	**156,754,787**	**68.09**	**121.95**

5.2.3 District-wise case notification rates (CNR)

The district wise case notification rates of each division in 2014 are shown in Figure 8 and details of case notification by district are shown in Annex- 1

Fig. 8 District-wise CNR of New Pulmonary Bacteriologically Confirmed (PBC) and all forms of TB cases in 2014





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 (loss to follow up) 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 2013 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 (now it is known as lost to follow up)

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 rates since 2005 (Figure 9). In fact the NTP has successfully treated 99 140 (94.07%) of the 105 390 new smear-positive cases registered in 2013. The default rate was 1.12% while 3.53% of the patients have died during treatment (Figure 10).

Fig. 9: Trends in treatment success rates, 1993-2013 cohorts

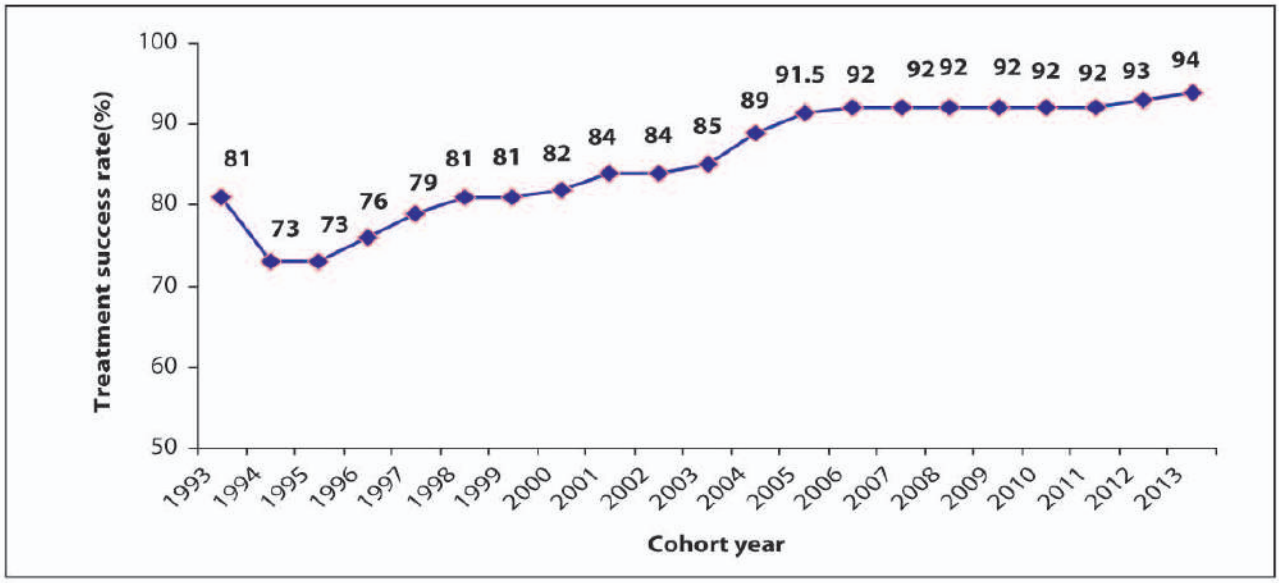
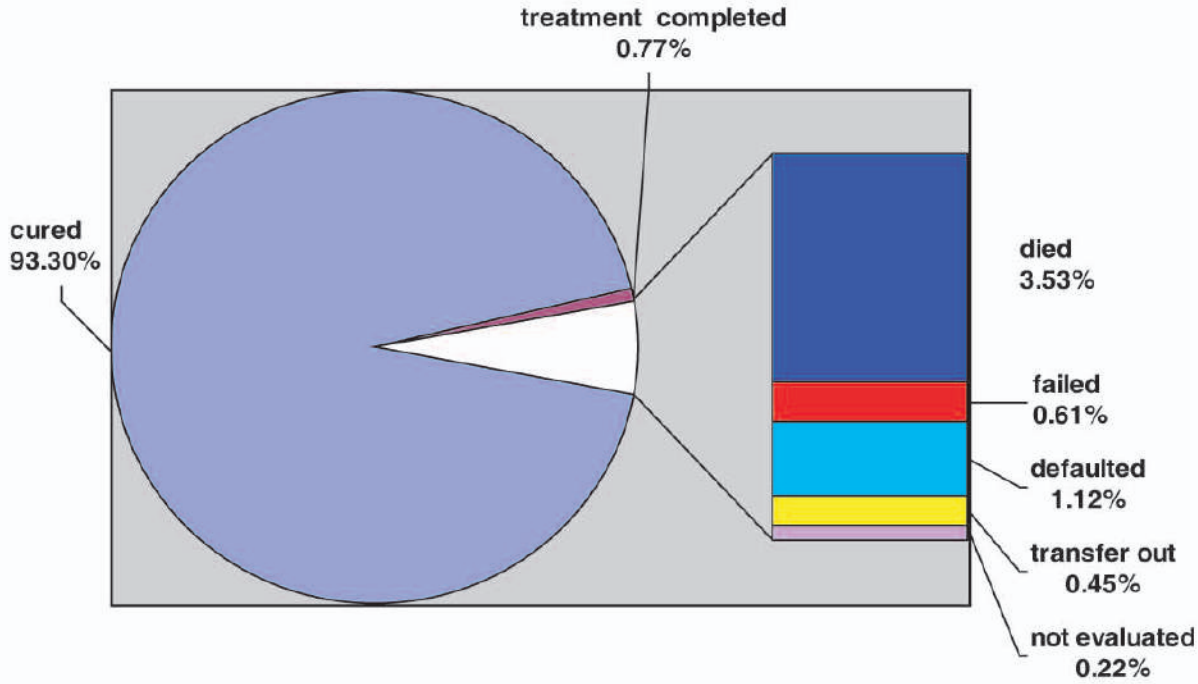


Fig.10: Treatment outcomes of new smear-positive cases registered in 2013

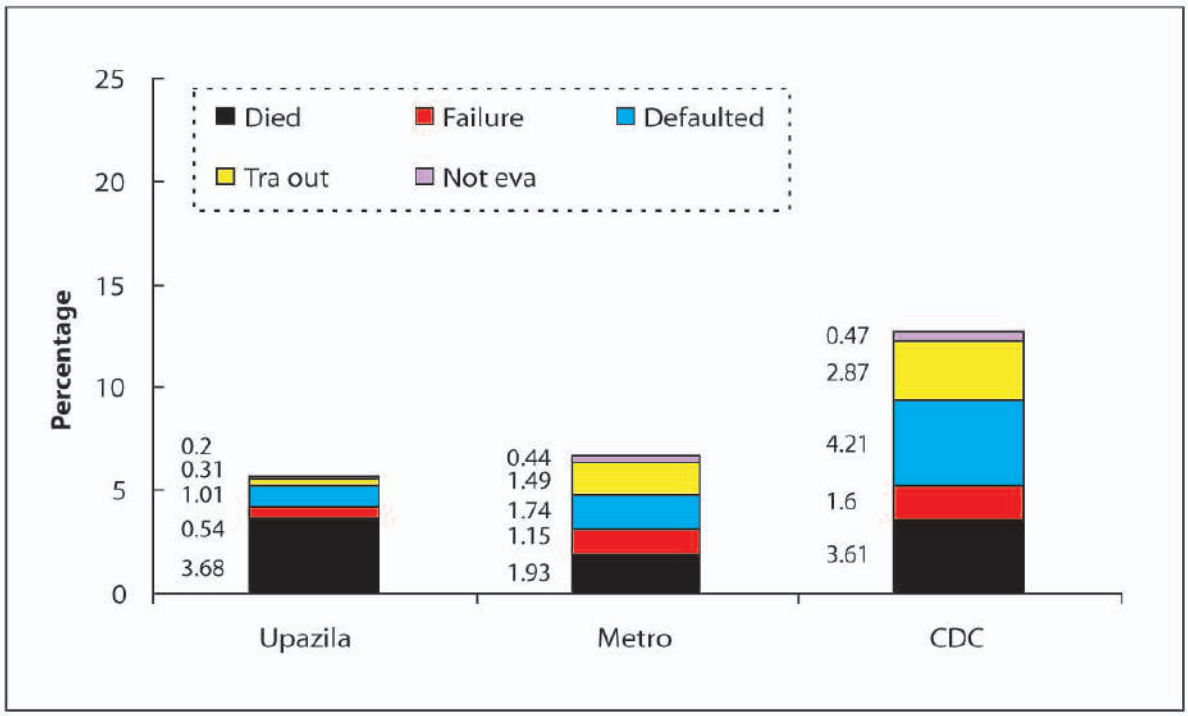


The treatment success rate of new smear positive/Bacteriologically confirmed TB cases is highest (>94%) among the cases registered in upazilas followed by among cases registered in metropolitan cities (93%) and the lowest is among those registered in CDCs (87%); (Table 5). This year the proportion of transferred out cases has been reduced compared to the previous year in metropolitan cities resulting in improving treatment success rate. The proportion of loss to follow up and transferred out cases are higher in CDCs (Figure 11) resulting in lower treatment success rate. 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 attention in urban setting. .

Table 5: Treatment success by type of registration unit (2013 cohort)

Type of registration unit	Number of cases registered	Treated successfully
Upazila	94,607	89,175 (94.26%)
Metropolitan city	9,286	8,659 (93.25%)
CDC	1,497	1,306 (87.24%)
Total country	**105,390**	**99,140 (94.07%)**

Fig. 11: Unfavourable treatment outcomes of new smear positive cases by type of registration unit (2013 cohort)



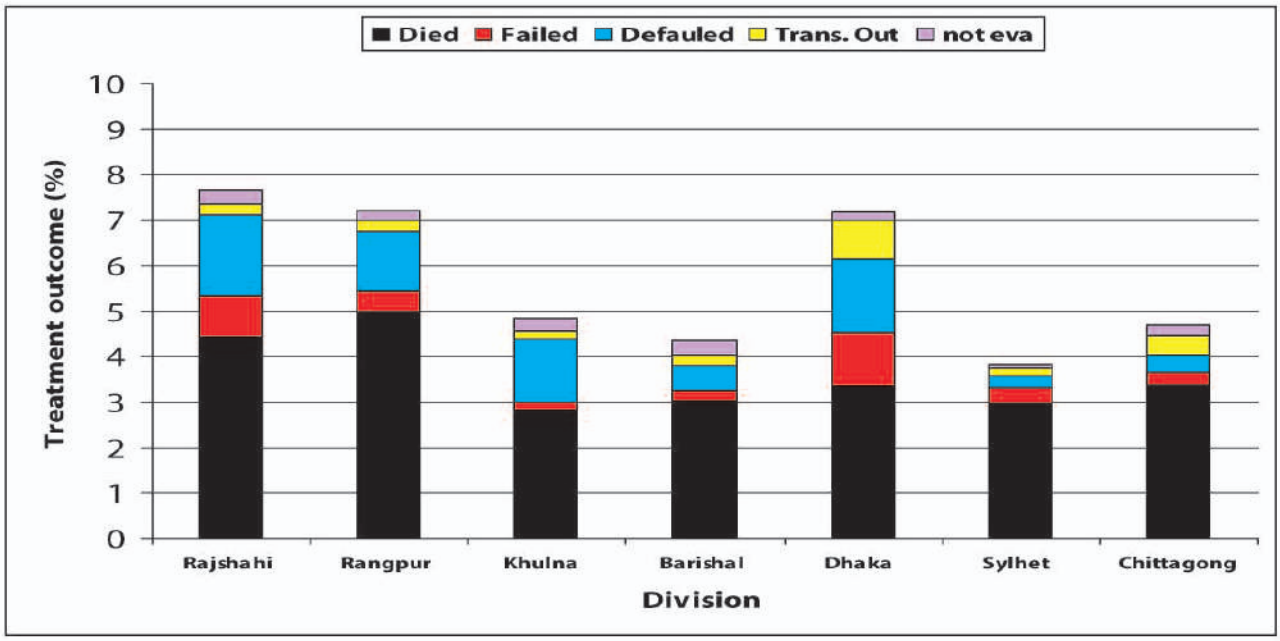
5.3.2 Division-wise Treatment Outcomes

Table 6 shows that all seven divisions have successfully treated more than 92% of the new smear-positive cases registered in 2013 with overall treatment success rate of over 94%. Division wise unfavourable outcomes are shown in fig 12. The patients died in the divisions during TB treatment varied from 2.8% to 5. % while the failure rate varied from 0.17% to 0.88%. The default rate among those patients varied from 0.28% to 1.79%. Data shown in Figure 12 include also metropolitan cities and CDCs.

Table 6: Division-wise treatment success rate of new smear-positive cases registered in 2013

Division	Number of case registered	Cured	Treatment completed	Successfully treated
Rajshahi	10,400	9,568 92.00%	34 0.33%	9,602 92.33%
Rangpur	11,806	10,916 92.46%	40 0.34%	10,956 92.80%
Khulna	13,454	12,663 94.12%	138 1.03%	12,801 95.15%
Barisal	8,357	7,887 94.38%	108 1.29%	7,995 95.67%
Dhaka	30,996	28,440 91.75%	328 1.06%	28,768 92.81%
Sylhet	7,895	7,551 95.64%	42 0.53%	7,593 96.17%
Chittagong	22,482	21,306 94.77%	119 0.53%	21,425 95.30%
Total country	**105,390**	**98,331 93.30%**	**809 0.77%**	**99,140 94.07%**

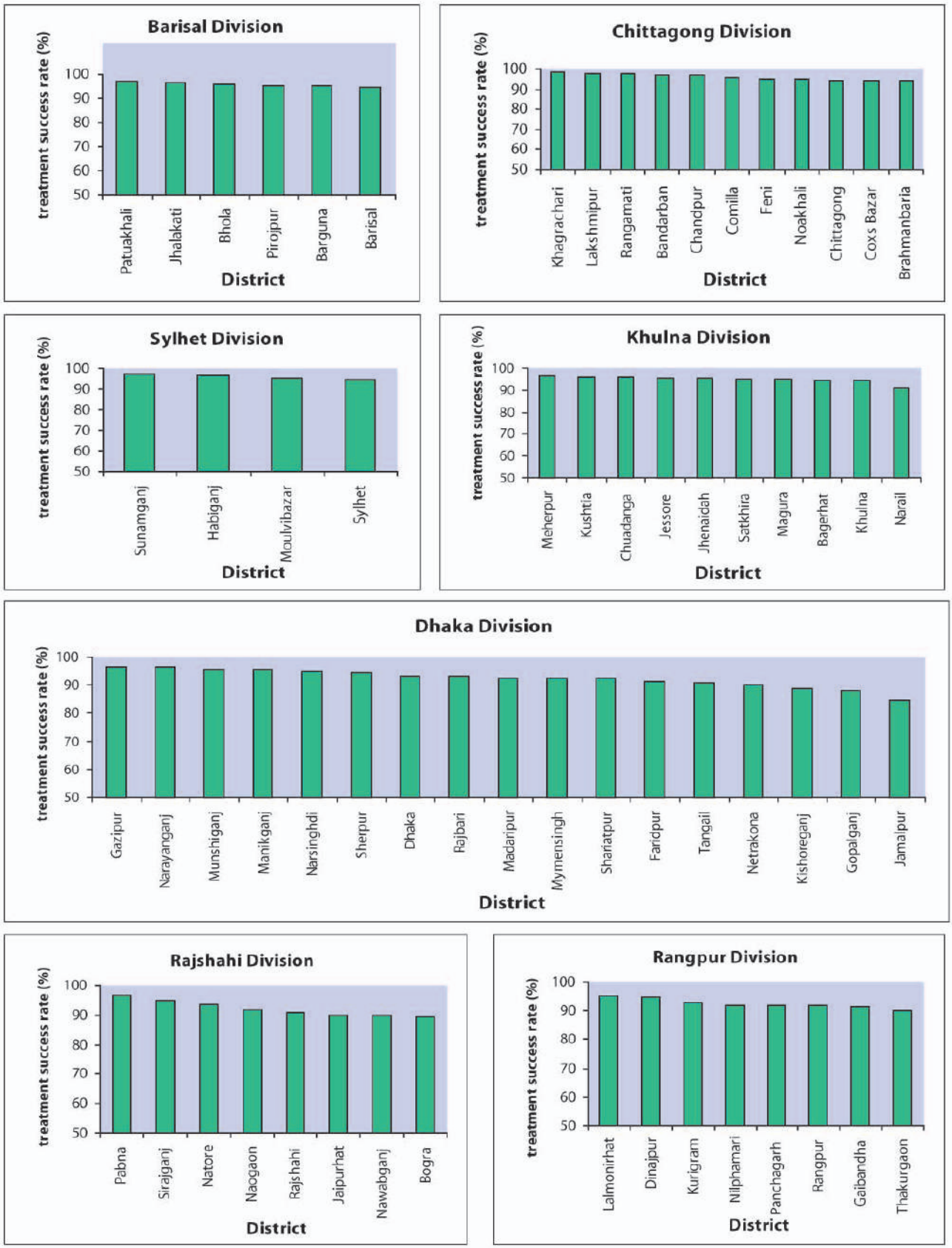
Fig. 12: Unfavourable outcomes of new smear-positive cases by division, 2013 cohort



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 2013 are shown in Figure 13. Almost all the districts (except 4) are showing > 90% treatment success rates.

Fig.13 District-wise treatment success rates of new smear-positive cases for each division; 2013 cohort



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

In 2013 a total of 2 858 relapse, 42 221 smear-negative and 33 608 extra-pulmonary TB cases were registered. The treatment success rate of relapse cases was 85.41%, and treatment completion rates of smear negative and extra-pulmonary cases were 92.29% and 90.3%, respectively. During the course of treatment 162 (5.67%) relapse, 2 181 (5.17%) smear negative and 1 337 (3.98%) extra-pulmonary cases had died; over all death rate of these three categories was 4.68%.

6. Drug Resistant TB

Drug Resistant TB (DR-TB) poses a significant threat to control of TB worldwide. Globally, an estimated 3.3% of new cases and 20.0% of previously treated cases have MDR-TB. In 2014, there were an estimated 480,000 new MDR-TB cases and approximately 190 000 deaths from MDR-TB worldwide, (Ref: WHO Global TB report 2015).

NTP Bangladesh has conducted countries first nationwide drug resistance survey in 2010-2011. According to this survey 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 assumption the estimated total numbers of MDR-TB cases in 2011 to 2014 in the country are shown in Table-7.

Table 7. Annual estimated number of MDR-TB cases in Bangladesh (2011-2014)

Year	Among new PTB cases	Among retreated (including Pulmonary relapse) TB cases	Total
2011	1700	2100	3800
2012	1850	2300	4150
2013	2071	2425	4496
2014	2094	2703	4797

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). 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 2014 a total of 1748 confirmed MDR-TB patients including 447 in 2014 have been enrolled. As a part of Programmatic Management of Drug resistant TB (PMDT) plan NTP established one Regional TB Reference Laboratory (RTRL) at chest disease hospital (CDH), Chittagong in 2011 and also managing MDR-TB patients from that year. In 2013 NTP has also started managing MDR-TB in CDH of Pabna and Khulna.

The MDR TB patients are also managed in the CDH of Rajshahi division and in three other hospitals of Damien Foundation at Jalchatra under Tangail District, Onontopur under Netrokona District and Shambhuganj under Mymensingh District 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 2014 a total of 1393 patients including 230 in 2014 have been enrolled. A regional TB reference laboratory (RTRL) has been established in the CDH, Rajshahi in May 2008.
Details of MDR-TB patients' enrollment by the CDHs is shown in Table 8.

Suspect criteria for MDR-TB (Presumptive DR-TB cases):

- 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 HIV infected patients
- Others: Any Smear Negative or EP TB patients clinically not improving in spite of proper treatment.

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

Table 8 Summary, MDR TB Enrolment for Treatment

Year	GLC approved 20-24 months regimen						Non-GLC (DF) including CDH, Rajshahi	Grand Total
	NIDCH	CDH, CTG	CDH, Pabna	CDH, Khulna	CDH, Sylhet	Total		
2005 May-2007							(67+69+106) = 242	242
2008	107					107	129	236
2009	179					179	181	360
2010	183					183	154	337
2011	212	41				253	137	390
2012	290	86				376	129	505
2013	330	120	31	14		495	191	686
2014	447	123	31	61	54	716	230	946
Total	**1748**	**370**	**62**	**75**	**54**	**2309**	**1393**	**3702**

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. Initially hospital duration was 6-8 months and rest period patients were treated in the community. From 2012 management modality has been modified with initial hospitalization for 2-3 months followed by community management for the rest period. At the end of the treatment, the patients are evaluated with regard to treatment outcomes.

The overall trend of treatment success rates of MDR-TB patients is increasing. The treatment outcomes of the patients enrolled during 2008- 2012 under 24 months regimen are shown in Table 9.

Table 9: Treatment Outcomes MDR TB, NIDCH, 2008 - 2012 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 36 months
2011	253	240	153	15	4	34	34	0	63.75	6.25	1.7	14.2	14.2	0	70.00	After 36 months
2012	376	372	236	35	3	50	42	5	63.4	9.4	0.8	13.4	11.3	1.3	72.85	After 30 months

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	Still on treatment	Treatment Success	
2008	29	129	103	0	3	12	6	5	79.84	0	2.3	9.3	4.65	3.876	79.84	after 1 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 1 year
2010	154	154	25	2	2	17	8	0	81.17	1.3	1.3	11	5.19	0	82.47	after 1 year
2011	137	137	102	0	9	22	4	0	74.45	0	6.6	16.1	2.92	0	74.45	after 1 year
2012	129	129	91	2	2	18	16	0	70.54	1.55	1.55	13.95	12.4	0	72.09	after 1 year
2013	191	191	152	1	4	8	23	3	79.59	0.52	2.09	4.19	12.04	1.57	80.1	after 1 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 2014, sputum microscopy under NTP was performed in 1104 (in 2013 it was 1089) laboratories across the country and sputum samples from a total of 16 99 798 presumptive TB cases were tested for AFB, out of which 113 081 were sputum smear positive (positivity rate 6.65%). As follow up of treatment a total number of 373 806 sputum slides were tested; out which 4.0% were found positive. (Detailed lab report for the year 2014 is shown in Annex -3)

In 2014 number of EQA lab remain same as of 2013 i.e., 40. All 1104 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 quality assurance sampling method was 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 64 081 slides were rechecked. This sample contained approximately the same distribution as the pool from where they were selected i.e. 4 029 (6.29%) positive, 789 (1.23%) scanty and 59 263 (92.48%) negative. In comparison to the year 2013, microscopy quality has been improved in 2014. For comparison the error rates (%) found in 2013 are also shown the same table below (Table: 11)

Table 11: Result of blinded rechecking of AFB smears

Type of error	Number (2014)	Rate (2014)	Rate (2013)
Total False positive by MCs	34	0.71%	1.16%
High false positive	15	0.31%	0.58%
Low/scanty false positive	19	0.39%	0.58%
Total False negative by MCs	294	0.50%	0.41%
High false negative	167	0.28%	0.29%
Low/scanty false negative	127	0.21%	0.12%
Quantification error (QE) by MCs	152	3.15%	2.70%

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. GeneXpert machines are used for detection of MTB and RR TB and it services assist NTP in two ways: (i) diagnosis and follow up of drug resistant forms of TB and (ii) Monitoring drug resistant trends through periodically conducting drug resistant surveys. LPA was introduced through Expand TB project at NTRL under NTP. By December 2014 this project was phased out and related activities were handed over to NTP.

Table: 12. Performance of GeneXpert Mcachines in detecting DR-TB

Year	Number of GenXpert Installed (Cumulative)	Presumptive-DR TB Tested	RR TB Diagnosed
2012	12	1733	388 (22.4%)
2013	26	11852	811 (6.8%)
2014	39	43360	994 (2.3%)

Table: 13. Performance through LPA in detecting DR-TB

Year	Presumptive-TB Tested	Drug Sensitive TB	Resistant TB		
			HR	R	H
2012	705	220	213	18	32
2013	869	265	180	43	49
2014	320	154	48	12	21

Liquid culture also started in 2013 for culture and first line DST at NTRL. In 2013 a total 3150 samples were inoculated and 410 (13%) MTB were isolated, and in 2014, 214 (8.2%) MTB were isolated from 2599 samples.

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. Renovation and installation of instrument in Khulna RTRL are almost completed in 2014. (This RTRL was formally inaugurated on June 30 2015).

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 according to new policy, HIV infected persons with symptoms/signs of TB should be referred for GeneXpert test. Support of X-Ray and other diagnostic methods may also 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: HIV among Diagnosed TB Patients in 2012-2014

Category of TB Patients	2012		2013		2014	
	# tested for hib before or during TB treatment	# found HIV positive before or during TB treatment	# tested for hib before or during TB treatment	# found HIV positive before or during TB treatment	# tested for hib before or during TB treatment	# found HIV positive before or during TB treatment
New pulmonary bacteriologically confirmed	944	6	621	0	330	1
New pulmonary clinically diagnosed	238	2	211	2	111	2
New Extra-pulmonary	347	0	298	2	150	4
All re-treatment	122	1	53	0	38	-
MDR	147	0	175	1	140	0
Total	**1798**	**9**	**1358**	**5**	**769**	**7**

Table:15 : TB among PLWHA in 2012-2014

Year	# of PLWHA tested for AFB	# of PLWHA found AFB positive	Remarks
2012	433	15	From Ashar Alo Society only
2013	681	23	From Ashar Alo Society, PIME SISTER and KMSS only
2014	746	7	From Ashar Alo Society and PIME SISTER only

9. Training Courses And Workshop

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-government entities to determine training content, develop materials, identify health staff to be trained, ensure training course implementation, follow up and maintenance of training. Tables 16 and 17 give an overview of the activities related to training and workshop/ meeting on TB control performed by NTP from January to December 2014. Besides these, 76 monitoring meetings in each quarter were organized at 64 districts.

Table 16: Tuberculosis training activities-2014

Course	Duration (Days)	Category of participants	Funding Source and No. of Participants		
			GFATM	GOB	USAID
Training of Lab. staff on culture and DST	14	Microbiologists & Medical Technologists (Lab)	6		
Training & refresher training on LED microscopy	14	Medical Technologists (Lab)	24		234
TB management training of newly recruited Medical Officers	6	Medical Officer (GO) and Clinic Manager from NGOs	411		
Training on X-Ray, EP, PMDT, IC, TB/HIV for Medical doctors	5	Medical Officer (GO) and Clinic Manager from NGOs	256		
Training of Doctors on diagnosis of Child TB	3	Medical doctors from District, Upazilla & Medical Colleges	102		
Training of Doctors on PAL	3	Medical doctors from CDCs & UHCs	15		
Conduct training course for mid-level staff on PMDT, IC, TB/HIV	3	MA, Pharmacists, TLCA from District & Upazilla	510		
Train / retrain central, divisional and distric level staff on data entry and management	3	Statisticians, Program Organizers & TLCAs from District & sub-district	74		236

TOT for community clinic heath care provider	3	Medical doctors from CDCs, District & UHCs	57		
Training of Paramedics on PAL	2	Paramedics	150		
Conduct orientation and training for field workers	1	GO- HI, AHI, HA,TLCA, NGO- Counselor, Senior service promoter and Service promoter	3000		
Conduct training on TB care for Community Health Care Provider	1	Community Health Care Provider (CHCP)	5470		
Conduct orientation with private hospitals in Metro	1	Doctors of Private Hospitals	249		
Orientation at Medical College & Hospital	1	Doctors from Medical college & Hospital	150		
Ambulatory Management of MDR-TB	1	UH&FPO, MO, Consultant CDC, Field workers GO - NGO	920		
Orientation of Graduate Private Practitioners	1	Private Practitioners	555		
Orientation for community clinic management group	1	Members of community clinic management group	102000		
Train and retrain HIV counselor and other staff to identify and refer TB suspects	1	HIV Counselors & other staff	90		
Training on QuanTB and prepare stock status report	3	NTP Manager, NGO Partners			18 21
Basic Training for TB LMIS	2	NTP Manager, TLCA, NGO Staff			
TOT on e-TB Manager	3	NTP Managers, TLCA, Staff from NGO partners			23
Basic training on e-TB Manager	2	Government TLCA, Government Statistcian and NGO TB staff from UHCs			374

Table:17 Workshop and Meeting related to TB control-2014

Subject	Duration (Days)	Participants Category	No. of participants by funding source		
			GFATM	GOB	USAID
Workshop with Professional Associations	1	Members of Professional Associations	520		
Meeting to establish linkages between TB and HIV NGOs	1	Managers, Officers, NGO personals involved TB/HIV activities	39		
Workshop with civil surgeons, chest consultants, MOs	1	civil surgeons, chest consultants, MOs	68		
Workshop to revise TB/HIV guidelines	1	Managers,Officers, NGO personals involved TB/HIV activities	14		
Advocacy workshops for trade union leaders	1	Trade Union Leaders	90		
Conduct workshop with staff of military, port, railway hospitals and academic institutions	1	staff of military, port, railway hospitals and academic institutions	330		
Six monthly coordination meeting	1	GO-NGO personals involved TB control program	15		

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 partner agencies, listed in alphabetical order.

10. 1 Ashar Alo Society (AAS):

Ashar Alo Society is a community based registered organization working for support, care and treatment, empowerment and greater involvement of people living with HIV/AIDS in Bangladesh. It started as a pioneer self help group with 10 PLHIV in 1998. In 2000, Ashar Alo Society was formally established as a formal entity of PLHIV under the umbrella of Advocacy Program, CCDB. In 2001 AAS got regional recognition, received fund from UNDP Regional HIV and Development program. Then Ashar Alo Society started working as the first independent organization of PLHIV in Bangladesh since 1st January 2002 with the assistance of FHI IMPACT.

Bangladesh is a low HIV prevalent country with high-risk situation. PLHIV is also facing different kind of stigma and discrimination. Besides care and treatment service, Ashar Alo Society (AAS) is involved in other activities such as: Voluntary Counseling and Testing (VCT), Help line services, Provide information and counseling for positive living, Impart training and Counseling for affected family members, Provide life skills training for PLHIV, Provide treatment for different Opportunistic infections (OIs) , Antiretroviral therapy, TB screening & treatment, organize Social Day for sharing among positive members, arrange vocational training, advocacy, networking and various communication activities to remove stigma and discrimination.

AAS provides treatment, care & support to around seventeen hundreds PLHIV in Bangladesh through its service center in Dhaka, Chittagong and Sylhet and from these centers it covers almost whole Bangladesh. Total number of registered members (PLHIV) is 1726 till May 31, 2014. Of them in Dhaka: 816, Sylhet: 585 and Chittagong: 325, Total male: 1080, female: 542, children: 90 and TG (Hijra): 14.

Since 2005 AAS has Tripartite MoU with NTP and NASP about TB and HIV co infection management. AAS collects TB medicine and distribute to Dhaka, Sylhet, Chittagong, and other two organizations (CAAP & MAB) and collect report from them and after compiling the report send to NTP. AAS provides quarterly national data of TB and HIV co infection to NTP.

AAS also received funding from GFATM Round -8 since August 2010 to establish peripheral lab in Dhaka, Sylhet and Chittagong and ACSM activities with different NGOs in Dhaka and continuing GFATM Round 10 grant.

10.2 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 Principal Recipient (PR) for TB grant leading the NGO consortium in Bangladesh. A Memorandum of Understanding (MoU) was signed between the Tuberculosis Control Program (NTP) and BRAC, in 1994 for rural areas and in 2001 for urban areas.

Under the stewardship of NTP, currently BRAC covers 297 sub-districts (upazilla) of 42 districts with a population of 93 million, including Chittagong hill tracts, 41 prisons, 31 academic institutions, 406 peripheral laboratories, 2 port authority hospitals, EPZ (Chittagong, Karnafully, Comilla) and 7 city corporations. BRAC started its TB control activity in 1984 with its innovative community based approach which is operated by the Shasthya Shebikas (SS).

Shasthya Shebikas play the pivotal role of connecting individuals with TB control services during household visits and health forums. Each shebika 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 or nearby 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. 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 focuses on community-level education and engagement through orientation programme, mass media campaign and community mobilization. ACSM activities are regular part of this TB project that make the community aware and reduce stigma regarding TB. The organization involve different stakeholders of the community like cured TB patients, local opinion and religious leaders, girls' guides and scouts, other NGO workers, village doctors, pharmacists, and graduate private practitioners to engage them in efforts to identify patients, ensure treatment adherence. BRAC is conducting different types of advocacy workshops, round-table discussions, conferences and talk shows on TV with policy makers, media personnel, implementers and civil society representatives to enhance awareness and knowledge about TB. Information on TB also disseminates through radio, TV and articles and report in both print and electronic media. Street drama and folk songs are organized in remote areas by local popular entertainment group. These activities have shown marked involvement and responses from the community members regarding TB control and have led to increased referral of presumptive and thereby better adherence to treatment.

BRAC is providing diagnostic support to poor presumptive specially smear negative, extra pulmonary, child TB and MDR-TB. Moreover nutritional support is given to MDR-TB and TB-HIV co-infected patients.

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 TB Control Programme. (Annex-6)

10.3 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 oragization now covers 14 districts (111 upazilas) of which 13 districts (102 upazilas) are for combined TB and leprosy control. The organization has set up 150 combined TB-Leprosy centres including 5 in medical colleges and 1 in workplace (DEPZ). Besides, 3 daily & 7 intermittent centres are engaged in leprosy service only.

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 590 national staffs including 8 doctors are engaged with DF in providing service in Bangladesh. A total of 24,480 TB, including 230 MDR TB and 384 new leprosy cases were detected and treated by the organization during 2014. The organization conducts several operational researches which contribute in the national and international policy decision making. The shortest 9-month Bangladesh regimen for MDR TB, which is being tested now by many other countries, was developed by Damien Foundation Bangladesh.

Orientation of Women Group

Village Doctor Training

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.

The centre has established a comprehensive programme of research, with particular strengths in infectious disease and vaccinology, reproductive health, neonatal and child health, malnutrition and food security, and other areas. Its scientific workforce comprising of nearly 200 scientifically trained staff is organized into ten Centres focusing on key health issues.

Tuberculosis, an important health problem in Bangladesh remained a focused area of research in icddr,b. icddr,b respects and values all national guidelines and policies and maintains a very highly esteemed partnership with NTP.

The current research focus areas are: Improving TB situation in selected urban areas of Bangladesh, effect of nutrition education and micronutrient supplementation on the biochemical and immunological markers and quality of life of pulmonary TB patients, documentation of DOTS delivery strategies in selected urban clinics in Dhaka city, scaling up management of childhood tuberculosis in Bangladesh, strategies to increase TB case detection by addressing the inequities in TB service utilization and reducing delays in TB diagnosis in rural Bangladesh, scaling up screening, detection and management of tuberculosis in prisons of Bangladesh, feasibility, usefulness and cost effectiveness of GeneXpert in MDR-TB surveillance, pulmonary and extra-pulmonary case detection in selected regional and specialized hospitals, identification of risk factors of TB and its transmission, operational research-a sustainable social enterprise model for increased tuberculosis case detection and treatment in the private sector using mass screening, X-ray and GeneXpert MTB/RIF scale-up approach in Bangladesh, and surveillance of MDR and XDR Tuberculosis. icddr,b's Mycobacteriology 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.

Additional activities (2014):

icddr,b has established enhanced case-finding activities under an innovative public private mix (PPM) initiative which also includes referral, follow-up and reporting of newly identified cases to the NTP from the private sector. In the private sector, a network of more than 1,000 physicians (general practitioners, medicine and chest specialists) has been established to identify and refer presumptive TB cases at three newly established TB screening centres to screen using true digital radiology integrated with CAD4TB and confirmation by GeneXpert. icddr,b has also initiated research activities to investigate the epidemiology of extra-pulmonary TB in some large hospitals of Dhaka. Another study to look into the external quality assurance of recently rolled out GeneXpert machines all over the country is also underway.

10.6 IOM

IOM - OIM

IOM Bangladesh Providing Migration Health Assessments since 2006

Since its inception in 1951, the International Organization for Migration (IOM) is the only inter-governmental organization with a mandate focussed exclusively on the field of migration. Committed to the principle of orderly and humane migration benefiting society IOM as "The Migration Agency", actively participates in the global debate on the social, economic and political implications of migration in the 21st century.

Bangladesh became a member state of IOM in 1990, following IOM's assistance to Bangladeshi migrants during the Persian Gulf crisis, where IOM repatriated around 63,000 migrant workers to Bangladesh.

Given the high volume of migration in Bangladesh, the health assessment service for migrants is one of the core services provided by IOM in the country. The service focuses on identifying and addressing conditions of public health concern in order to promote safe migration and mitigate the impact of the migrants' disease burden on national health or social services. The program also seeks to address the migrants' specific health needs in order to facilitate integration with the host community.

In Bangladesh, IOM's Migration Health Division (MHD) has been providing health assessment services for prospective migrants since 2005 to assist the United Kingdom Tuberculosis Detection Programme. To this end IOM has three Migration Health Assessment Clinics (MHACs), located in Dhaka, Chittagong, and Sylhet. The IOM clinics are managed by dedicated national and international staff, with high standards and inbuilt quality assurance and quality control system based on globally accepted guidelines. When necessary the clinics also benefit from technical support from Regional/ Headquarter level to maintain the programme integrity.

The services provided by the IOM Clinics include the diagnosis of TB cases through chest x-rays, sputum smears, and culture for AFB as well as the physical examination of the applicants.

IOM Clinics in Dhaka and Sylhet have been designated by the National Tuberculosis control Programme (NTP) as Directly Observed Treatment (DOT) centres in 2010 and 2012 respectively. This means that the clinics refer TB patients to their nearest NTP treatment centers in addition to providing direct treatment for some of the cases. Since 2005, IOM has provided health assessment to more than 200,000 beneficiaries, detected more than 223 TB cases and successfully treated 32 TB patients through the clinics.

Besides NTP approval, MHAC Dhaka has been designated by Centers for Disease Control (CDC), Global Health Australia, and the Regional Medical Office of Canadian High Commission as the only referral center in Bangladesh for TB laboratory workup, TB treatment and follow up and Chest specialist consultation service in Bangladesh. In addition, the IOM clinics are also working as an approved panel sites for the health assessment of Australia, Canada, New Zealand UK and the USA bound visa applicants.

IOM MHD Dhaka has also been working on the health promotion for migrants through a comprehensive rights-based approach, in line with WHO Assembly resolution 61.17 Health of Migrants. With a vision of "healthy migrants in healthy communities", IOM has responded to the specific health needs of migrants and their families throughout the migration cycle to address their health vulnerabilities arouse from a wide range of social determinants of health and to contribute towards the sustainable social and economic development of their origin and destination communities.

TB cases diagnosed and treated in IOM clinics in 2013 and 2014

Year	2013	2014
TB Cases diagnosed	23	26
TB Cases (SM+/Culture +) registered with IOM for treatment (DOT)	12	11
Number of 'treatment completed' among the registered cases	0	-
Number of 'cured' among the registered cases	12	-
Treatment success rate	100%	-

10.7 LAMB Hospital

Lutheran Aid to Medicine in Bangladesh (LAMB) works to improve the health of the poor in North-west Bangladesh for a population of well over 5 million people. The main site is 2 km west of the town of Parbatipur, about 24 km east of the district city of Dinajpur.

LAMB was started in the early 1970s by missionaries of the World Mission Prayer League who saw the absence of skilled medical care in the area. Initially LAMB provided mobile clinics and healthcare teaching. LAMB has grown to include;

- A 150 bed capacity general hospital fully equipped with modern diagnostic facilities and maternal and child health focused. Besides it runs integrated programs that includes obstetric fistula, disability program, club food and cleft lip repair.
- Nursing Institute, where government approved Diploma in Nursing Science and Midwifery course is offered.
- Community Health and Development Program working in Dinajpur, Rangpur and Nilphamari districts in the health field focusing mother and child. The major activities include; Adolescent Reproductive Health, TB Control Program, Disability services, Disaster Risk Reduction, Community Based Organization development, Women And Their Children's Health (WATCH), Reliable Health Services(RHS), Non Communicable Disease(NCD), Women's Healthcare though Community Mobilization(WHCM), Community Managed Health Care (CMHC), Reliable Reproductive Health Service (RRHS). Working in collaboration with Bangladesh Government and PLAN Bangladesh.
- A large health focused Training Center with residential accommodation for trainees offer courses for different levels of community health workers, health volunteers, community midwives, nurses, paramedics from LAMB and other national and international organizations.
- LAMB English-Medium School where are taught by experienced teachers - national and expatriate. They follow the English National Curriculum. O-levels are certified by Cambridge International Examinations through the British Council. The school has a multicultural environment, thus both national and foreign students broaden their understanding and skills, learning from each other.
- MIS-R collects and processes data from the hospital and community areas for research purposes, and for provision of information to management, government and donors.

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 788,529 people.

10.8 LEPRA Bangladesh

Lepra Bangladesh is an UK based medical development organization began its activities in Bangladesh in year 2000, and works directly with the Government Health department through Upazila Health Complexes in four districts; Sirajgonj, Pabna, Bogra and Natore. The main objectives of the program are Control Tuberculosis, and eliminate Leprosy.

Lepra Bangladesh is covering 7691463 populations for TB control program in three districts (Sirajgonj, Pabna, and Natore) and funding support is mainly from GFATM Round 10 with additional support also from USAID TB CARE II and LEPRA Health in Action UK. Government health department of Bangladesh provides logistics support such as anti-TB medicine and laboratory reagents.

10.9 NATAB

National Anti-tuberculosis Association of Bangladesh (NATAB) oldest of the TB organizations that was established in 1948 in Sylhet as an extension of the Assam Bengal TB Association of British India, During Pakistan era it was East Pakistan TB Association. NATAB primarily provided support for TB patients when TB services were non-existent in the then East Pakistan. Under the ever changing demands of times, NATAB took the present day identity of a major TB organization.

NATAB was the constituent member of The Union (International Union against TB and Lung Disease). In 2010 NATAB was elected as the Chairman of south East Asian Region of The Union. NATAB continued and maintained this honorable position with utmost commitment and sincere service till 2014.

To execute and conduct the field level activities nationwide, at national level NATAB has one (1) central executive committee, sixty four (64) district committees and thus thousands of volunteers from all walks of socio-economic strata and civil society groups that 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. Since then, NATAB has been 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 meetings in all 64 districts of the country with civil society members. At the same time, NATAB also organizes upazila (sub-district) level advocacy meetings in 64 upazilas. NATAB celebrated the World TB Day 2014 with NTP & partner NGOs at central level. At peripheral level, in 54 districts NATAB's concerned district committee celebrated this day through colorful rallies, discussions, meetings etc. with the help of project field staffs, and local govt. health sector staffs.

Since 2005, NATAB has been conducting "Annual Conference on TB" 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. The last such annual conference was held on 14 March, 2013. In 2014, "The 2nd Conference of The Union South-East Asia Region (SEAR 2014)" was organized by NATAB and successfully completed at the Hotel Pan Pacific Sonargaon Dhaka, Bangladesh. The conference duration was 9 - 12 March, 2014.

ACSM activities of NATAB in the year 2014 (January - December) :At a glance

- 7634 participants were oriented and aware through 256 District Advocacy Meetings at District Level.
- 6374 participants were oriented and aware through 256 Upazila Advocacy Meetings at Sub- district Level.
- 1375 civil society members were covered in 25 Advocacy Workshops at divisional level.
- The 2nd Conference of The Union South-East Asia Region (SEAR 2014) was attended by 556 delegates from 12 countries.
- One journal "FIGHT TB 2014" was published.
- World TB Day 2014 was celebrated in 54 districts with a total of 6490 participants attending therein.

10.10 NGO Health Service Delivery Project (NHSDP)

The NGO Health Service Delivery Project is an USAID and DFID funded project implemented by Pathfinder International in Bangladesh. The NHSDP supports the delivery of primary health care by providing Essential Service Package (ESP) through nationwide 'Smiling Sun' or 'Surjer Hashi' (SH) network of 26 national NGOs, 330 static clinics, 9550 satellite clinics and 6666 community service providers (CSPs). NHSDP has approximately 22.2 million service contacts, in 64 districts of Bangladesh through SH NGO network. The project is designed to complement the Government of Bangladesh's (GOB) efforts to maximize the reach to poor and underserved populations in the country with quality health services at low or no cost.

NHSDP contributes to National Tuberculosis Control Program through Surjer Hashi clinics in Dhaka, Chittagong, Rajshahi and Khulna City Corporations. Eight SH NGOs- Bamaneh, CWFD, PSTC, Swanirvar Bangladesh, Image, Nishkriti, PKS and Tilottoma implements DOTS through 58 SH clinics, 33 of which have microscopy centers and one with External Quality Assurance (EQA) services.

In addition to diagnosing TB and MDR TB cases and ensuring treatment under directly observed treatment, SH network NGOs organize Advocacy, Communication and Social Mobilization (ACSM) activities, implements DOTS in workplace and industries, engage graduate and non graduate private practitioners for referral and diagnosis and treatment, work with cured TB patients and empower community by engaging community, opinion and religious leaders, teachers and HIV/AIDS workers. To Intensifying smear negative, child TB and EPTB cases and improving quality DOTs services, NGOs also provide social support to TB patients and their families.

10.11 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 DOTS 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.

10.12 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 (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.

10.13 Salvation Army

The Salvation Army Urban Health and Development Project is a part of the organization- 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 a 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.

10.14 SIAPS

USAID FROM THE AMERICAN PEOPLE

SIAPS Systems for Improved Access to Pharmaceuticals and Services

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, DGDA 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 healthcare 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 system of Tuberculosis. The agreement has been started since 23 September, 2011 and will be ended on 22 September, 2016. Regarding e-TB Manager, NTP has also signed an 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.

Activities of SIAPS in 2014

Training on QuanTB and prepare stock status report
Basic Training for TB LMIS
TOT Training on e-TB Manager
Basic e-TB Manager Training
Workshop on POM of MOHFW and e-TB Manager and SOP for TB supply Chain Management. (Divisional and District Health Authorities from all 7 Divisions)
Workshop on routine reporting requirements of DR TB for NTP
Participated and Sponsored in the 2nd South-East Asia Region Conference (SEAR 2014) at Hotel Pan Pacific (Symposium)

10. 15 TB CARE II Bangladesh

USAID FROM THE AMERICAN PEOPLE | TB CARE II BANGLADESH

URC

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

TB CARE II Bangladesh project seeks to advance the goals of the USAID Global Health Initiative (GHI) 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). 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.

Strengthening health system is the strategic focus of the TB CARE II Bangladesh project. The project has made significant progress in increasing access to diagnosis and treatment of MDR TB in the last two years. In 2012, the project introduced GeneXpert MTBRIF which has now become the first line diagnostic tool for detection of MTB RIF cases. The tests is also used for detection of smear negative cases. Over the last two, the GeneXpert test has enabled NTP to more than double the detection of MTBRIF and significantly increased detection of smear negative cases. The project has also initiated an m-Reporting system that enables immediate communication of the test results through mobile phone text messages.

The community based model introduced by the project for treatment of MDR-TB patients was a major breakthrough in increasing access to treatment. MDR TB patients are now transferred to community for treatment after hospital stay for about 2 months. The treatment has been decentralized with upazila-based Outpatient DR TB Teams trained to provide clinical support to patients being treated at home.

The strategy has eliminated the backlog of patients waiting for enrollment to treatment and significantly reduced delay in treatment initiation. m-Health and m-DRDoc are two other new innovative ICT-based interventions started by the project. Most of the cPMDT patients are enrolled in to mHealth which allows real time monitoring of daily DOT administered by the DR TB DOT providers. The recently started m-DRDoc allows remote consultation of MDR-TB patients with physicians at chest disease hospitals.

Through local NGOs, the project supports a grants program aims at complementing the Global Fund supported community TB activities to increase access to and quality of TB services at the community level. Currently, the project has been supporting 13 local NGOs which have contributed to detection of thousands of additional TB cases, mostly smear negative and EPTB. The project also developed a partnership with the Diabetic Association of Bangladesh which has resulted in to manifold increase in detection of TB among diabetes patients through BIRDEM hospital and other affiliated outdoor diabetic facilities at the district level.

10.16 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.

10.17 Urban Primary Health Care Service Delivery Project (UPHCSDP)

UPHCP
BANGLADESH

Urban Primary Health Care Services Delivery Project supported by Development Partners and executed by the Local Government Division of the Ministry of Local Government, Rural Development and Co-Operatives is implemented by the Health Departments of the six City corporations (CCs) and five municipalities. Urban PHC system comprises both Primary Health Care Centre (PHCC) and Comprehensive Reproductive Health Care Center (CRHCC). UPHCSDP is a new innovation of providing basic health care services to urban population. Project delivers a package of preventive, primitive, and curative health care services to the poor in all the six city corporations of Dhakas, Chittagong, Khulna, Rajshahi, Sylhet, Barisal and five municipalities of Gopalgonj, Comilla, Sirajgonj, Kushtia, Tongi and Gazipur. The project continues to contract out PHC services to nongovernmental organizations (NGOs) through partnership agreements and on average yearly 1 core clients receive services

The specific project objectives are to improve: (i) access to and use of urban PHC services in the project area, with a particular focus on extending provision to the poorest, (ii) the quality of urban PHC services in the project area, and (iii) the cost effectiveness, efficiency, and institutional and financial sustainability of PHC to meet the needs of the urban poor. The overall goal is

- 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.

TB Control activities

As an essential part of ESP service under communicable disease TB Control services started in UPHCP are in 2004 with support from own resources. From 2005 GFATM 3rd round, then 5th round & 8th round, lastly 10th round supported Human resource supply, also drug, training logistics in addition to large GOB support through other staff & information. Presently UPHCSDP has been implementing in 13 area of urban city like Dhaka , Rajshahi , and Khulna through 13 NGO's .The NGO's are Population Services and Training Centre(PSTC), Khulna Mukti Seba Sangastha (KMSS), Association for Prevention of Septic Abortion of Bangladesh(BAPSA), Nari Maitree, Unity Through Population Services (UTPS), Dhaka Ahsania Misson (DAM) and Resources Integration Centre (RIC) cover 3.4 Million population.

10.18 The World Health Organization (WHO)

World Health Organization
Country Office for Bangladesh

WHO collaborative activities for TB Control Programme in 2014

WHO is providing support to increase efforts for detection of TB cases; diagnostics and laboratory strengthening; maintain high cure rates; improve the quality of the control services and strengthen major critical components of the service delivery system; address the issues of drug resistance; setting up norms and standards; assisting to take evidenced based policy decisions; mobilizing partnerships for TB control; and supporting research, monitoring and development.

Major activities performed in 2014 with the technical support of WHO were:

I. **Epidemiological and impact analysis:** An epidemiological and impact analysis was carried out from 01-15 March 2014 to assess current national TB surveillance and vital registration systems with particular attention to their capacity to measure the level of and trends in TB disease burden. A comprehensive report was submitted to NTP addressing a) whether TB control interventions have contributed to changing the course of the TB epidemic; b) whether the burden of disease is different in specific geographical areas, subpopulations or sectors that warrant increased attention; and c) investments needed to improve evidence about trends in disease burden in future.

II. **Joint Monitoring mission (JMM):** NTP, with support of WHO, has conducted the sixth National TB Programme Review from 30 March to 10 April 2014, which is is routinely done in every there years. However, the 6th JMM was a pre-reqiusite for the development of "concept note" under GFATM's NFM. : A detailed report with challenges as well as recommendations to face those challenges was prepared..

III. **Revision of National Strategic Plan (NSP):** The NSP was revised covering the period 2015-2020 in line with WHO's post 2015 "End TB Strategy" with costing by an external technical assistant through WHO.

IV. **Development and submission of a concept note under NFM for 2015-17:** NTP developed a concept note for the period of July 2015 to December 2017 with external technical support from WHO that aims at addressing the problems that Bangladesh is currently facing, including the cost as per revised NSP 2015-2020. NTP successfully submitted the concept note on 12 June 2014.

V. **National Tuberculosis Prevalence Survey, Bangladesh 2014-15:** Bangladesh decided to conduct a national TB prevalence survey to determine the prevalence of bacteriologically-confirmed pulmonary TB caused by Mycobacterium tuberculosis (TB bacilli) and ways to enhance/improve TB control. The recommended international standard method is followed. The Institute of Epidemiology, Disease Control and Research (IEDCR), in collaboration with the National Tuberculosis Reference Laboratory (NTRL) and with technical support from WHO, the Supranational Reference Laboratory (SRL), Antwerp, Belgium, CDC Atlanta and RIT Japan agreed to carry out the survey.

Major accomplishments during the reporting period: a) Protocol finalized and draft SOP developed with technical support from WHO, RIT Japan and CDC Atlanta; b) exchange visit to Indonesia; c) technical service agreement (TSA) approved; d) recording and reporting forms and cards developed; e) Procurement of major equipment completed; f) Table top exercise conducted to incorporate feedback into the SOPs; g) recruitment of staff completed and have been appointed; and h) field testing conducted using all survey procedures before piloting.

VI. Development/Revision and printing of Guidelines and Policy documents:

The following guidelines were printed after revision and endorsement by NTP:

a) Revised national guidelines and operational manual for TB control (5th edition)

b) National guideline for Programmatic Management of Drug Resistant TB (PMDT) (2nd edition)

c) Expansion Plan for Programmatic Management of Drug Resistant TB

d) TB Infection Control (TB-IC) guidelines for field level health care workers in Bangla

e) Report of the 6th Joint Monitoring mission 30 March -10 April 2014

VII. External technical assistance to support NTP on different components of Stop TB Strategy:

a) **Global Drug Facility (GDF) Monitoring Mission:** The purposes of GDF mission was medicine data review, verification and quantification of FLMs and SLMs.

Deliverable: The mission report was submitted with recommendations on inventory management, bar-code labelling, e-TB manager and Quan-TB, quantification and forecasting for 2014-15, coordination with partners and GDF and procurement & supply management system.

b) **Preparation for the finalization of the protocol for shorter MDR-TB regimen:** Technical support provided to NTP for the finalization of the draft protocol for shorter regimen for the management of drug resistant TB and completion of required documents needed for implementation and endorsement.

Deliverable: The draft document has been submitted to NTP for endorsement.

c) **Regional Green Light Committee (rGLC) mission:** The sixth rGLC monitoring mission was held from 23-27 November 2014 by MO GTB, WHO HQ

Deliverable: the mission concentrated on the outcome of the recent NFM concept note application, the transition from TBCARE II to Challenge TB in 2015, and their implications on the planned expansion of PMDT.

VIII. Capacity Building:

a) **Scale up e-TB Manager for electronic registration of TB Data:** WHO supported NTP to pilot TB data registration of individual patients in six selected sites using "e-TB Manager" software. WHO provided technical support to field level participants for 15 days on basic computer skills to run the software.

b) **TOT for PMDT:** WHO conducted TOT to support the implementation and scaling up of community based PMDT programme, following the revised guidelines.

c) **"Orientation of childhood TB for paediatricians and senior level doctors in different medical colleges":** WHO provided resource persons to a one-day orientation on childhood TB organized by TB CAREII for senior level doctors of different medical colleges.

d) **PSM:** WHO recruited a short-term international staff to strengthen the PSM system to and develop the management capacity of the staff of the PSM unit of NTP.

e) **TB laboratory services:** WHO provided technical support for the development of a manual on laboratory biosafety and organization of laboratory biosafety training, external quality assessment (EQA) workshops and training on LED microscopy.

f) **TB/HIV:** WHO provided technical support to the organization of a stakeholder meeting on the revision of the existing TB/HIV guideline and to establishment of effective referral mechanisms for management of TB-HIV co-infection.

IX. International trainings/workshops/meetings: WHO supported the participation of Government and partner NGOs in different international trainings/workshops/meetings to improve the management capacity for the implementation of TB control activities at country level

X. Monitoring and Evaluation:

a) **Monitoring implementation of TB activities in the field:** WHO technical staff regularly monitored field activities and provided technical support and on-site training during those field visits to ensure quality of services in different areas of the Stop TB strategy

TB data and Report: WHO supported the collection, validation and finalization of data to be submitted to donors and supported the preparation and finalization of different donor reports, annual report at national, global and regional level.

District-wise case notification rate, 2014

Annex 1 Contd.

SL.	District	Upazila							Metro							CDC							Total							Grand Total	P. Population	New PBC CNR as per 1,00,000 pop.	All Forms CNR as per 1,00,000 pop.
		Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment	Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment	Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment	Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment				
		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses					
1	Barguna	845	6	236	4	143	1	24															845	6	236	4	143	1	24	1259	941,913	89.71	131.12
2	Barisal	1953	17	536	3	397	3	64	160	1	55	0	122	1	13	31	2	16	0	24	0	1	2144	20	607	3	543	4	78	3399	2,405,331	89.14	138.07
3	Bhola	1759	25	548	15	221	1	23								7	0	1	0	9	0	0	1766	25	549	15	230	1	23	2609	1,869,763	94.45	138.31
4	Jhalakati	647	4	155	4	125	2	7															647	4	155	4	125	2	7	944	705,304	91.60	132.66
5	Patuakhali	1346	17	653	6	235	2	85								17	1	8	0	14	0	2	1363	18	661	6	249	2	87	2386	1,619,860	84.14	141.93
6	Pirojpur	1034	19	328	5	188	1	73								0	0	0	0	0	0	0	1034	19	328	5	188	1	73	1648	1,157,910	89.30	136.02
	Barisal Div	**7584**	**88**	**2456**	**37**	**1309**	**10**	**276**	**160**	**1**	**55**	**0**	**122**	**1**	**13**	**55**	**3**	**25**	**0**	**47**	**0**	**3**	**7799**	**92**	**2536**	**37**	**1478**	**11**	**292**	**12245**	**8,699,173**	**89.65**	**137.40**
7	Bandarban	292	3	55	1	44	0	13															292	3	55	1	44	0	13	408	437,399	66.76	90.31
8	Brahmanbaria	2311	77	1093	26	469	8	122								4	0	3	0	6	0	0	2315	77	1096	26	475	8	122	4119	3,105,865	74.54	128.69
9	Chandpur	2069	27	785	0	388	0	67								27	1	23	1	13	0	1	2096	28	808	1	401	0	68	3402	2,560,264	81.87	130.22
10	Chittagong	3956	65	867	39	1105	11	177	2338	177	1468	53	1856	30	298	7	0	5	0	12	0	2	6301	242	2340	92	2973	41	477	12466	8,252,805	76.35	145.27
11	Comilla	4196	71	2329	17	1226	8	180								0	0	0	0	0	0	0	4196	71	2329	17	1226	8	180	8027	5,874,584	71.43	133.58
12	Cox's Bazar	1754	39	837	25	366	3	109								27	2	21	0	33	0	6	1781	41	858	25	399	3	115	3222	2,571,176	69.27	120.84
13	Feni	1171	11	334	6	216	4	25								3	0	3	0	4	0	0	1174	11	337	6	220	4	25	1777	1,563,125	75.11	112.08
14	Khagrachari	612	5	213	2	49	0	34															612	5	213	2	49	0	34	915	669,180	91.46	131.65
15	Lakshmipur	1553	16	479	5	273	0	61															1553	16	479	5	273	0	61	2387	1,879,380	82.63	123.76
16	Noakhali	2286	40	711	35	464	4	75								0	0	0	0	0	0	0	2286	40	711	35	464	4	75	3615	3,417,295	66.90	103.59
17	Rangamati	444	6	114	0	72	1	29								11	0	13	0	10	0	0	455	6	127	0	82	1	29	700	650,320	69.97	103.18
	Chittagong Div	**20644**	**360**	**7817**	**156**	**4672**	**39**	**892**	**2338**	**177**	**1468**	**53**	**1856**	**30**	**298**	**79**	**3**	**68**	**1**	**78**	**0**	**9**	**23061**	**540**	**9353**	**210**	**6606**	**69**	**1199**	**41038**	**31,034,958**	**74.31**	**128.37**
18	Dhaka	2713	96	834	3	1249	3	196	5966	635	3573	101	5490	103	526	83	5	75	0	171	0	1	8762	736	4482	104	6910	106	723	21823	13,894,826	63.06	151.86
19	Faridpur	463	32	202	1	359	1	57								13	0	4	0	10	0	0	476	32	206	1	369	1	57	1142	2,039,449	23.34	53.20
20	Gazipur	2562	88	1496	10	1259	7	146															2562	88	1496	10	1259	7	146	5568	4,148,374	61.76	130.70
21	Gopalganj	375	16	153	0	163	0	28								15	1	6	0	14	0	0	390	17	159	0	177	0	28	771	1,220,514	31.95	60.88
22	Jamalpur	1454	51	223	2	474	0	136								108	2	27	0	51	0	19	1562	53	250	2	525	0	155	2547	2,444,937	63.89	97.83
23	Kishoreganj	1838	112	690	2	761	0	259								56	5	32	0	56	0	8	1894	117	722	2	817	0	267	3819	3,134,079	60.43	113.33
24	Madaripur	401	8	135	0	176	1	40								28	1	0	0	16	0	0	429	9	135	0	192	1	40	806	1,218,396	35.21	62.87
25	Manikganj	1335	20	721	22	323	1	18															1335	20	721	22	323	1	18	2440	1,482,453	90.05	163.38
26	Munshiganj	1215	19	584	10	443	1	65								0	0	0	0	0	0	0	1215	19	584	10	443	1	65	2337	1,552,857	78.24	146.31
27	Mymensingh	3380	169	855	78	1398	18	397								63	2	14	0	47	1	0	3443	171	869	78	1445	19	397	6422	5,521,156	62.36	109.13
28	Narayanganj	1928	72	1560	16	1121	3	213															1928	72	1560	16	1121	3	213	4913	3,368,626	57.23	139.52
29	Narsinghdi	1968	63	1572	23	502	1	102															1968	63	1572	23	502	1	102	4231	2,427,985	81.05	170.06
30	Netrakona	1416	74	448	13	541	2	271															1416	74	448	13	541	2	271	2765	2,397,090	59.07	104.04
31	Rajbari	275	14	104	1	170	2	37															275	14	104	1	170	2	37	603	1,123,485	24.48	50.38
32	Shariatpur	405	19	157	0	250	0	49															405	19	157	0	250	0	49	880	1,225,122	33.06	67.83
33	Sherpur	1094	36	632	52	420	8	131															1094	36	632	52	420	8	131	2373	1,437,827	76.09	155.93
34	Tangail	1633	50	470	2	755	2	201								88	3	26	0	58	0	9	1721	53	496	2	813	2	210	3297	3,851,690	44.68	80.15
	Dhaka Div	**24455**	**939**	**10836**	**235**	**10364**	**50**	**2346**	**5966**	**635**	**3573**	**101**	**5490**	**103**	**526**	**454**	**19**	**184**	**0**	**423**	**1**	**37**	**30875**	**1593**	**14593**	**336**	**16277**	**154**	**2909**	**66737**	**52,261,706**	**59.08**	**122.13**

District-wise case notification rate, 2014

Annex 1

SL.	District	Upazila							Metro							CDC							Total							Grand Total	P. Population	New PBC CNR as per 1,00,000 pop.	All Forms CNR as per 1,00,000 pop.
		Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment	Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment	Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment	Pulmonary Bacteriologically Confirmed		Pulmonary Clinically Diagnosed		Extra-Pulmonary		All Retreatment				
		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses		New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses	New/ Treatment History Unknown	Relapses					
35	Bagerhat	1399	24	535	0	178	0	68								12	1	13	0	10	0	2	1411	25	548	0	188	0	70	2242	1,512,534	93.29	143.60
36	Chuadanga	1054	14	171	2	174	3	5								37	5	4	0	33	1	0	1091	19	175	2	207	4	5	1503	1,215,345	89.77	123.26
37	Jessore	2282	17	545	9	276	1	18								78	8	14	0	39	0	3	2360	25	559	9	315	1	21	3290	2,973,777	79.36	109.93
38	Jhenaidah	1596	8	571	1	224	0	71															1596	8	571	1	224	0	71	2471	1,906,105	83.73	125.91
39	Khulna	1459	10	404	1	208	1	23	437	19	136	2	320	2	13	2	0	1	0	7	0	0	1898	29	541	3	535	3	36	3045	2,389,690	79.42	125.92
40	Kushtia	1844	19	709	8	413	0	29								36	1	13	0	40	0	0	1880	20	722	8	453	0	29	3112	2,092,179	89.86	147.36
41	Magura	717	2	132	0	96	0	8								31	2	10	0	26	0	2	748	4	142	0	122	0	10	1026	985,548	75.87	103.05
42	Meherpur	591	1	265	7	111	1	3								13	0	4	0	17	0	0	604	1	269	7	128	1	3	1013	702,503	85.98	143.77
43	Narail	621	10	342	8	89	0	24															621	10	342	8	89	0	24	1094	757,663	81.96	141.22
44	Satkhira	1640	6	986	0	210	0	30								9	0	17	0	14	0	1	1649	6	1003	0	224	0	31	2913	2,102,352	78.44	137.08
	Khulna Div	**13203**	**111**	**4660**	**36**	**1979**	**6**	**279**	**437**	**19**	**136**	**2**	**320**	**2**	**13**	**218**	**17**	**76**	**0**	**186**	**1**	**8**	**13858**	**147**	**4872**	**38**	**2485**	**9**	**300**	**21709**	**16,625,468**	**83.35**	**128.77**
45	Bogra	2911	32	726	3	1021	6	54								41	2	18	1	12	1	4	2952	34	744	4	1033	7	58	4832	3,669,030	80.46	130.12
46	Jaipurhat	869	9	406	1	243	3	19															869	9	406	1	243	3	19	1550	972,068	89.40	157.50
47	Naogaon	1046	41	254	5	474	4	85															1046	41	254	5	474	4	85	1909	2,770,029	37.76	65.85
48	Natore	730	14	41	0	279	1	8								33	1	1	0	24	0	1	763	15	42	0	303	1	9	1133	1,836,581	41.54	61.20
49	Nawabganj	499	23	158	1	256	2	40								80	7	46	0	47	1	9	579	30	204	1	303	3	49	1169	1,789,927	32.35	62.57
50	Pabna	1284	38	165	2	462	5	26								63	5	24	0	68	1	6	1347	43	189	2	530	6	32	2149	2,743,023	49.11	77.18
51	Rajshahi	602	22	157	5	426	3	45	203	7	101	2	193	2	31	46	6	29	0	109	0	0	851	35	287	7	728	5	76	1989	2,802,848	30.36	68.25
52	Sirajganj	2233	36	175	0	534	3	11								138	7	25	0	54	1	2	2371	43	200	0	588	4	13	3219	3,356,954	70.63	95.50
	Rajshahi Div	**10174**	**215**	**2082**	**17**	**3695**	**27**	**288**	**203**	**7**	**101**	**2**	**193**	**2**	**31**	**401**	**28**	**143**	**1**	**314**	**4**	**22**	**10778**	**250**	**2326**	**20**	**4202**	**33**	**341**	**17950**	**19,936,631**	**54.06**	**88.32**
53	Dinajpur	2630	23	563	9	670	3	43								4	0	7	0	3	0	0	2634	23	570	9	673	3	43	3955	3,225,549	81.66	121.28
54	Gaibandha	1733	26	530	1	435	0	72								77	0	41	0	45	0	0	1810	26	571	1	480	0	72	2960	2,551,544	70.94	113.19
55	Kurigram	1521	11	459	0	426	0	22								56	4	207	0	16	0	3	1577	15	666	0	442	0	25	2725	2,245,259	70.24	120.25
56	Lalmonirhat	1037	3	355	0	218	0	5															1037	3	355	0	218	0	5	1618	1,354,311	76.57	119.10
57	Nilphamari	1401	16	432	6	384	1	14								0	0	0	0	0	0	0	1401	16	432	6	384	1	14	2254	1,997,092	70.15	112.16
58	Panchagarh	558	8	172	4	189	1	9															558	8	172	4	189	1	9	941	1,078,213	51.75	86.44
59	Rangpur	2294	43	735	3	680	0	40								25	12	7	0	16	0	3	2319	55	742	3	696	0	43	3858	3,109,899	74.57	122.67
60	Thakurgaon	938	20	173	4	251	0	27								45	2	56	0	30	0	9	983	22	229	4	281	0	36	1555	1,504,045	65.36	100.99
	Rangpur Div	**12112**	**150**	**3419**	**27**	**3253**	**5**	**232**								**207**	**18**	**318**	**0**	**110**	**0**	**15**	**12319**	**168**	**3737**	**27**	**3363**	**5**	**247**	**19866**	**17,065,012**	**72.19**	**114.97**
61	Habiganj	1752	33	1167	20	573	6	25															1752	33	1167	20	573	6	25	3576	2,286,032	76.64	155.33
62	Moulvibazar	1420	32	1022	59	577	3	21								0	0	3	0	0	0	0	1420	32	1025	59	577	3	21	3137	2,100,487	67.60	148.35
63	Sunamganj	2374	49	1908	89	574	3	204								3	0	9	0	3	0	0	2377	49	1917	89	577	3	204	5216	2,724,758	87.24	183.94
64	Sylhet	1998	50	979	18	858	12	59	481	32	330	9	367	4	34	21	3	25	0	43	0	0	2500	85	1334	27	1268	16	93	5323	3,897,220	64.15	134.20
	Sylhet Div	**7544**	**164**	**5076**	**186**	**2582**	**24**	**309**	**481**	**32**	**330**	**9**	**367**	**4**	**34**	**24**	**3**	**37**	**0**	**46**	**0**	**0**	**8049**	**199**	**5443**	**195**	**2995**	**28**	**343**	**17252**	**11,002,826**	**73.15**	**153.68**
	Grand Total :	**95716**	**2027**	**36346**	**694**	**27854**	**161**	**4622**	**9585**	**871**	**5663**	**167**	**8348**	**142**	**915**	**1438**	**91**	**851**	**2**	**1204**	**6**	**94**	**106739**	**2989**	**42860**	**863**	**37406**	**309**	**5631**	**196797**	**156,754,787**	**68.09**	**121.95**

District-wise Treatment Results, new smear-positive cases registered in 2013

Annex 2
Contd.

SL	District	Absolute numbers								Percentage						
		Res. Case	Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.	Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.
1	Barguna	893	849	0	35	3	4	0	2	95.07%	0.00%	3.92%	0.34%	0.45%	0.00%	0.22%
2	Barisal	2249	2109	16	64	4	28	16	12	93.78%	0.71%	2.85%	0.18%	1.24%	0.71%	0.53%
3	Bhola	1850	1743	36	59	2	3	3	4	94.22%	1.95%	3.19%	0.11%	0.16%	0.16%	0.22%
4	Jhalakati	672	631	18	15	2	1	0	5	93.90%	2.68%	2.23%	0.30%	0.15%	0.00%	0.74%
5	Patuakhali	1647	1574	21	41	5	3	2	1	95.57%	1.28%	2.49%	0.30%	0.18%	0.12%	0.06%
6	Pirojpur	1046	981	17	39	2	6	0	1	93.79%	1.63%	3.73%	0.19%	0.57%	0.00%	0.10%
	Barisal Div	**8357**	**7887**	**108**	**253**	**18**	**45**	**21**	**25**	**94.38%**	**1.29%**	**3.03%**	**0.22%**	**0.54%**	**0.25%**	**0.30%**
7	Bandarban	302	292	2	6	1	1	0	0	96.69%	0.66%	1.99%	0.33%	0.33%	0.00%	0.00%
8	Brahmanbaria	2192	2052	8	94	3	15	18	2	93.61%	0.36%	4.29%	0.14%	0.68%	0.82%	0.09%
9	Chandpur	2042	1979	0	55	2	0	6	0	96.91%	0.00%	2.69%	0.10%	0.00%	0.29%	0.00%
10	Chittagong	6449	6052	36	198	37	41	53	32	93.84%	0.56%	3.07%	0.57%	0.64%	0.82%	0.50%
11	Comilla	3614	3433	19	118	10	15	10	9	94.99%	0.53%	3.27%	0.28%	0.42%	0.28%	0.25%
12	Coxs Bazar	1883	1732	41	93	4	8	2	3	91.98%	2.18%	4.94%	0.21%	0.42%	0.11%	0.16%
13	Feni	1175	1113	5	56	1	0	0	0	94.72%	0.43%	4.77%	0.09%	0.00%	0.00%	0.00%
14	Khagrachari	566	558	0	6	1	0	1	0	98.59%	0.00%	1.06%	0.18%	0.00%	0.18%	0.00%
15	Lakshmipur	1598	1560	5	28	1	1	1	2	97.62%	0.31%	1.75%	0.06%	0.06%	0.06%	0.13%
16	Noakhali	2227	2112	3	98	7	2	5	0	94.84%	0.13%	4.40%	0.31%	0.09%	0.22%	0.00%
17	Rangamati	434	423	0	6	1	0	3	1	97.47%	0.00%	1.38%	0.23%	0.00%	0.69%	0.23%
	Chittagong Div	**22482**	**21306**	**119**	**758**	**68**	**83**	**99**	**49**	**94.77%**	**0.53%**	**3.37%**	**0.30%**	**0.37%**	**0.44%**	**0.22%**
18	Dhaka	8327	7618	152	159	83	155	124	36	91.49%	1.83%	1.91%	1.00%	1.86%	1.49%	0.43%
19	Faridpur	552	504	0	28	10	10	0	0	91.30%	0.00%	5.07%	1.81%	1.81%	0.00%	0.00%
20	Gazipur	2367	2279	6	54	0	17	3	8	96.28%	0.25%	2.28%	0.00%	0.72%	0.13%	0.34%
21	Gopalganj	460	405	0	19	12	22	2	0	88.04%	0.00%	4.13%	2.61%	4.78%	0.43%	0.00%
22	Jamalpur	1548	1290	16	77	49	75	41	0	83.33%	1.03%	4.97%	3.17%	4.84%	2.65%	0.00%
23	Kishoreganj	2070	1794	42	91	51	50	42	0	86.67%	2.03%	4.40%	2.46%	2.42%	2.03%	0.00%
24	Madaripur	485	448	1	23	8	5	0	0	92.37%	0.21%	4.74%	1.65%	1.03%	0.00%	0.00%
25	Manikganj	1320	1260	0	54	2	3	1	0	95.45%	0.00%	4.09%	0.15%	0.23%	0.08%	0.00%
26	Munshiganj	1259	1180	24	38	4	11	1	1	93.73%	1.91%	3.02%	0.32%	0.87%	0.08%	0.08%
27	Mymensingh	3447	3147	41	129	52	63	15	0	91.30%	1.19%	3.74%	1.51%	1.83%	0.44%	0.00%
28	Narayanganj	1941	1860	12	40	10	4	13	2	95.83%	0.62%	2.06%	0.52%	0.21%	0.67%	0.10%
29	Narsinghdi	2077	1966	6	91	1	11	0	2	94.66%	0.29%	4.38%	0.05%	0.53%	0.00%	0.10%
30	Netrakona	1457	1291	19	62	42	35	8	0	88.61%	1.30%	4.26%	2.88%	2.40%	0.55%	0.00%
31	Rajbari	303	282	0	7	4	9	1	0	93.07%	0.00%	2.31%	1.32%	2.97%	0.33%	0.00%
32	Shariatpur	415	383	0	13	12	6	1	0	92.29%	0.00%	3.13%	2.89%	1.45%	0.24%	0.00%
33	Sherpur	1208	1141	0	55	6	3	0	3	94.45%	0.00%	4.55%	0.50%	0.25%	0.00%	0.25%
34	Tangail	1760	1592	9	98	18	26	16	1	90.45%	0.51%	5.57%	1.02%	1.48%	0.91%	0.06%
	Dhaka Div	**30996**	**28440**	**328**	**1038**	**364**	**505**	**268**	**53**	**91.75%**	**1.06%**	**3.35%**	**1.17%**	**1.63%**	**0.86%**	**0.17%**

District-wise Treatment Results, new smear-positive cases registered in 2013

Annex 2

SL	District	Absolute numbers								Percentage						
		Res. Case	Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.	Cured	T. Com	Died	Fail	Def.	T. Out	Not Eva.
35	Bagerhat	1328	1244	11	42	4	16	5	6	93.67%	0.83%	3.16%	0.30%	1.20%	0.38%	0.45%
36	Chuadanga	1106	1041	18	31	0	14	1	1	94.12%	1.63%	2.80%	0.00%	1.27%	0.09%	0.09%
37	Jessore	2159	2039	27	57	3	23	5	5	94.44%	1.25%	2.64%	0.14%	1.07%	0.23%	0.23%
38	Jhenaidah	1621	1549	1	37	1	27	0	6	95.56%	0.06%	2.28%	0.06%	1.67%	0.00%	0.37%
39	Khulna	1782	1669	15	45	9	37	3	4	93.66%	0.84%	2.53%	0.51%	2.08%	0.17%	0.22%
40	Kushtia	1976	1850	45	53	2	19	5	2	93.62%	2.28%	2.68%	0.10%	0.96%	0.25%	0.10%
41	Magura	716	677	2	25	1	10	1	0	94.55%	0.28%	3.49%	0.14%	1.40%	0.14%	0.00%
42	Meherpur	619	598	0	18	1	1	1	0	96.61%	0.00%	2.91%	0.16%	0.16%	0.16%	0.00%
43	Narail	616	554	7	20	1	23	2	9	89.94%	1.14%	3.25%	0.16%	3.73%	0.32%	1.46%
44	Satkhira	1531	1442	12	51	2	16	0	8	94.19%	0.78%	3.33%	0.13%	1.05%	0.00%	0.52%
	Khulna Div	**13454**	**12663**	**138**	**379**	**24**	**186**	**23**	**41**	**94.12%**	**1.03%**	**2.82%**	**0.18%**	**1.38%**	**0.17%**	**0.30%**
45	Bogra	2821	2517	9	175	12	81	5	22	89.22%	0.32%	6.20%	0.43%	2.87%	0.18%	0.78%
46	Jaipurhat	884	793	3	38	1	32	10	7	89.71%	0.34%	4.30%	0.11%	3.62%	1.13%	0.79%
47	Naogaon	1094	998	6	45	24	18	3	0	91.22%	0.55%	4.11%	2.19%	1.65%	0.27%	0.00%
48	Natore	720	675	0	30	3	11	1	0	93.75%	0.00%	4.17%	0.42%	1.53%	0.14%	0.00%
49	Nawabganj	527	468	6	27	13	12	0	1	88.80%	1.14%	5.12%	2.47%	2.28%	0.00%	0.19%
50	Pabna	1310	1266	0	33	5	3	0	3	96.64%	0.00%	2.52%	0.38%	0.23%	0.00%	0.23%
51	Rajshahi	820	736	10	35	17	16	5	1	89.76%	1.22%	4.27%	2.07%	1.95%	0.61%	0.12%
52	Sirajganj	2224	2115	0	79	16	13	1	0	95.10%	0.00%	3.55%	0.72%	0.58%	0.04%	0.00%
	Rajshahi Div	**10400**	**9568**	**34**	**462**	**91**	**186**	**25**	**34**	**92.00%**	**0.33%**	**4.44%**	**0.88%**	**1.79%**	**0.24%**	**0.33%**
53	Dinajpur	2728	2584	3	130	2	6	0	3	94.72%	0.11%	4.77%	0.07%	0.22%	0.00%	0.11%
54	Gaibandha	1621	1463	21	89	12	29	0	7	90.25%	1.30%	5.49%	0.74%	1.79%	0.00%	0.43%
55	Kurigram	1541	1424	7	82	9	16	1	2	92.41%	0.45%	5.32%	0.58%	1.04%	0.06%	0.13%
56	Lalmonirhat	993	945	0	41	6	1	0	0	95.17%	0.00%	4.13%	0.60%	0.10%	0.00%	0.00%
57	Nilphamari	1380	1272	0	74	5	20	0	9	92.17%	0.00%	5.36%	0.36%	1.45%	0.00%	0.65%
58	Panchagarh	561	511	6	29	5	6	4	0	91.09%	1.07%	5.17%	0.89%	1.07%	0.71%	0.00%
59	Rangpur	2033	1865	1	87	7	54	17	2	91.74%	0.05%	4.28%	0.34%	2.66%	0.84%	0.10%
60	Thakurgaon	949	852	2	58	6	21	7	3	89.78%	0.21%	6.11%	0.63%	2.21%	0.74%	0.32%
	Rangpur Div	**11806**	**10916**	**40**	**590**	**52**	**153**	**29**	**26**	**92.46%**	**0.34%**	**5.00%**	**0.44%**	**1.30%**	**0.25%**	**0.22%**
61	Habiganj	1762	1698	11	41	7	1	2	2	96.37%	0.62%	2.33%	0.40%	0.06%	0.11%	0.11%
62	Moulvibazar	1327	1260	2	61	4	0	0	0	94.95%	0.15%	4.60%	0.30%	0.00%	0.00%	0.00%
63	Sunamganj	2358	2271	26	47	2	8	1	3	96.31%	1.10%	1.99%	0.08%	0.34%	0.04%	0.13%
64	Sylhet	2448	2322	3	86	12	13	11	1	94.85%	0.12%	3.51%	0.49%	0.53%	0.45%	0.04%
	Sylhet Div	**7895**	**7551**	**42**	**235**	**25**	**22**	**14**	**6**	**95.64%**	**0.53%**	**2.98%**	**0.32%**	**0.28%**	**0.18%**	**0.08%**
	Grand Total:	**105390**	**98331**	**809**	**3715**	**642**	**1180**	**479**	**234**	**93.30%**	**0.77%**	**3.53%**	**0.61%**	**1.12%**	**0.45%**	**0.22%**

Lab report: Year 2014

Annex- 3

Quarter	Diagnosis Examinations (Case Finding)						Follow-up Examinations			
	Presumptive TB tested	AFB positive cases	Positivity Rate among presumptive	Smears tested	Positive smears		Smears tested	Positive smears		Positivity Rate
					(1+, 2+ & 3+)	Scanty		(1+, 2+ & 3+)	Scanty	
1st	436551	27567	6.31	1271690	68394	10574	91308	1516	1930	3.77
2nd	410762	28004	6.82	1194552	70110	10018	91882	1749	2094	4.18
3rd	414075	29268	7.07	824861	48981	8478	95039	1707	1912	3.81
4th	438410	28242	6.44	868379	46098	8690	95577	1838	2161	4.18
Total	**1699798**	**113081**	**6.65**	**4159482**	**233583**	**37760**	**373806**	**6810**	**8097**	**3.99**

Annex- 4

Contd.

List of EQA Centre: 2014

Division	EQA ID	Location of EQA 1st Control Centre	Organization	Coverage (district)	# of MCs Coverage
Rajshahi	1	CDC Bogra	BRAC	Bogra	28
	2	CDC Dinajpur	BRAC	Jaipurhat	8
	6	LEPRA Sirajganj	LEPRA	Natore	11
				Pabna	16
				Sirajganj	15
	7	CDH/DF Rajshahi	DF	Naogaon	12
				Nawabganj	7
				Rajshahi	19
Rangpur	1	CDC Bogra	BRAC	Gaibandha	19
	2	CDC Dinajpur	BRAC	Dinajpur	28
	3	CDC Rangpur	BRAC	Nilphamari	15
				Rangpur	21
	4	TLMB Thakurgaon	TLMB	Panchagarh	8
				Thakurgaon	10
	5	RDRS Lalmonirhat	RDRS	Kurigram	15
				Lalmonirhat	6
Khulna	8	CDC Jessore	BRAC	Jessore	20
				Narail	6
	36	CDC Bagerhat	BRAC	Bagerhat	17
	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	13
				Meherpur	6
Barisal	12	CDC Barisal	BRAC	Barisal	25
	38	CDC Bhola	BRAC	Bhola	15
	13	CDC Patuakhali	BRAC	Barguna	10
				Patuakhali	15
	14	CDC Pirojpur	BRAC	Jhalakati	9
				Pirojpur	11
Sylhet	15	CDC Sylhet	BRAC	Sunamganj	15
				Sylhet (urban)	8
	16	HEED Kamlgonj/Moulvibazar	HEED	Sylhet (rural)	15
	17	CDC Moulvibazar	HEED	Habiganj	12
				Moulvibazar	12

Annex- 4

List of EQA Centre: 2014

Dhaka	18	BRAC, Dakkinkhan	BRAC	Dhaka (Peri-urban)	19
				(Urban)	32
	19	KMSS Pallabi Extention	UPHCSDP	Dhaka-urban, UPHCSDP area	27
	20	CWFD Tejgao	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	13
				Manikganj	10
				Sherpur	9
				Mymensingh (urban)	11
	25	DF Mymensingh	DF	Mymensingh (rural)	14
				Kishorega rnj	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
Chittagong	29	CDC Brahmanbaria	BRAC	Brahmanbaria	16
	30	CDC Comilla	BRAC	Comilla	33
	31	CDC Cox's Bazar	BRAC	Cox's Bazar	17
	39	CS Office Bandarban	BRAC	Bandarban	25
	32	CDC Chandpur	BRAC	Chandpur	17
				Lakahmipur	12
	33	CDC Chittgong	BRAC	Chittagong-rural	34
				Chittagong-urban	26
	34	CDC Noakhali	BRAC	Feni	11
				Noakhali	20
	35	CDC Rangamati	BRAC	Rangamati	42
	37	CDC Khagrachari	BRAC	Khagrachari	28
Total					**1104**

Annex- 5

Contd.

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-UTPS 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	

Annex- 5

Contd.

SL	Ward No.	Agency	Address	Service facility	Remark
Dhaka Metropolitan Area					
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	
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	

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SL	Ward No.	Agency	Address	Service facility	Remark
Dhaka Metropolitan Area					
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 (South)	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	
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	

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SL	Ward No.	Agency	Address	Service facility	Remark
Dhaka Metropolitan Area					
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	

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SL	Ward No.	Agency	Address	Service facility	Remark
			Dhaka Metropolitan Area		
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	
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 . (TB DOTS Corner, Room#132, Gynae Outdoor)	Microscopy & DOT	
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 Hospital, 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	BRAC	Kurmitola General Hospital, Dhaka Cantonment, Room # 327, 3rd Floor (Out Door)	Microscopy & DOT	
128	DOTS Corner	BRAC	Holy Family Red Crescent Medical College Hospital, Mogbazar, Room # 24, 1st Floor (Out Door)	DOT	
129	DOTS Corner	Gonoshasthya Kendra	DOTS Corner, Gonoshasthaya Nagar Hospital, House 14E, Road 6, Dhanmondi R/A, Ph.-8617208, 9673507	Microscopy & DOT	
130	DOTS Corner	Salvation Army	House 35-37, Avenue 2, Block A, Section 11, Mirpur	Microscopy & DOT	
131		IOM	Prescription Point Ltd, House # 105, Road # 12, Block E, Banani, Dhaka- 1213, Tel: 9897222, 8833389, 9892518 (Ext. 159).	Microscopy & DOT	
132		BGMEA	30/B, Malibagh, Chowdhurypara, Dhaka, Tel: 8311124	Microscopy & DOT	
133		BGMEA	Plot # 5, Road # 5, Milkvita Road, Mirpur-7, Dhaka, Mobile: 01712-677667	Microscopy & DOT	
134		BGMEA	Plot # 6, Block # K/A, P.I.S.C.I Culture, Housing & Family Cooperative Society, Shamoli, Dhaka, Tel: 9120832	Microscopy & DOT	
135		BGMEA	Saru Kunja, House # 64, Block # G, Niketan Eastern Housing Ltd., Gulshan-1, Dhaka, Tel: 9858549	Microscopy & DOT	
136		BGMEA	House # 16/A, Road # 16, Sector # 4, Uttara, Dhaka, Tel: 8950208	Microscopy & DOT	
137		CPHD	65/D, Zigatala, Dhaka-1209.	Microscopy & DOT	
138		icddr,b	TB REACH 3 (PPM initiative) icddr,b, 68 Shaheed Tajuddin Ahmed Sarani, Mohakhali, Dhaka-1212, Mobile: 01779-100100	TB patients reported by this centre are diagnosed and managed by Private Practitioners of Dhaka Metropolitan City	
139		DCC (South)	Dhaka Mohanagar General Hospital, Nayabazar, Dhaka-1100, Tel: 7390860	Microscopy & DOT	

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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	

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SL	Ward No.	Agency	Address	Service facility	Remark
Chittagong Metropolitan Area					
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	
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	

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SL	Ward No.	Agency	Address	Service facility	Remark
Khulna Metropolitan Area					
8	07	PIME Sisters	Nazirghat urban clinic, Borobari, Khulna	DOT	
9	07	KMSS, KCC	PHCC-5, Uttar Kashipur, Khalishpur, Khulna.	Microscopy & DOT	
10	08	PIME Sisters	Sadar Hospital DOT Corner, Khulna	DOT	
11	08	KMSS, KCC	PHCC-3, Khalishpur New Market Road, Khalishpur, Khulna.	DOT	
12	09	PIME Sisters	Blue Sister DOTS Center, Tootpara zoracall bazar	DOT	
13	09	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, Loboncharа, 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	BRACK	BRAC DOTS Corner. Khulna Medical College Hospital.	Microscopy & DOT	
26	17	GoB	Chest Clinic , Lower Jessore Road, Khulna,Te # l731105	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	

Annex- 5

SL	Ward No.	Agency	Address	Service facility	Remark
Rajshahi Metropolitan Area					
1	1	UPHCSDP-RIC	Kashiadanga, Rajshahi.	DOT	
2	2, 3	UPHCSDP-RIC	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	
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-RIC	Fudkipara, Rajshahi	DOT	
11	13, 20	UPHCSDP-RIC	Kadirgonj, Close to RCC building, Rajshahi	Microscopy & DOT	
12	14, 15	UPHCSDP-RIC	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-RIC	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- 6

Name of the SRs under GFATM Round-10 Grant (Total SRs working-42)

Group	Name of the Sub-Recipients	Remarks
LTCC Partners	1. Damien Foundation 2. TLMI-B 3. RDRS Bangladesh 4. LAMB 5. HEED Bangladesh 6. Lepra Bangladesh 7. PIME Sisters	Total SR-7
UPHCSDP and Partners	1. UPHCSDP 2. PSTC DSCC PA-1 3. KMSS DSCC PA-2 4. BAPSA DSCC PA-3 5. PSTC DSCC PA-4 6. PSTC DSCC PA-5 7. Nari Maitree DNCC PA-1 8. Nari Maitree DNCC PA-2 9. UTPS DNCC PA-3 10. KMSS DNCC PA-4 11. Dhaka Ahsania Mission(DAM) DNCC PA-5 12. Resource Integration Centre(RIC) RCC PA-1 13. PSTC RCC PA-2 14. KMSS KCC PA-1	Total SR-14
NHSDP Partners	1. CWFD 2. BAMANEH 3. Swanirvar Bangladesh 4. PSTC-NHSDP 5. Tilottama 6. IMAGE 7. Nishkriti 8. PKS Khulna	Total SR-8
PPM NGOs	1. 1. MAMATA 2. SAJIDA Foundation 3. LIFE 4. TMSS 5. YPSA	Total SR-5 Since July 1, 2015 only MAMATA exists as a SR in NFM. Other 4 SRs in this group were dropped from NFM.
TB-HIV NGOs	1. Ashar Alo Society(AAS) 2. HASAB 3. VARD 4. Light House	Total SR-4 Since July 1, 2015 only AAS exists as a SR in NFM. Other 3 SRs in this group were dropped from NFM.
Others (research, civil society movement, and corporate sector)	1. ICDDR,B 2. NATAB 3. BGMEA 4. BKMEA	Total SR-4

Annex- 7

Contd.

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিচালক, এমবিডিসি ও লাইন ডাইরেক্টর, টিবি-লেপ্রসি এর কার্যালয়
স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা-১২১২।

অফিস স্মারক

স্মারক নংঃ স্বাঃ অধিঃ/এমবিডিসি/বিবিধ-৪/২০১১/১১৬৩ তাং- ২৪/০৬/২০১৪

আনন্দের সাথে জানান যাচ্ছে যে বাংলাদেশ জাতীয় যক্ষ্মা নিয়ন্ত্রন কর্মসূচির পক্ষ থেকে বিশ্বস্বাস্থ্য সংস্থা (WHO) অনুমোদিত নতুন পদ্ধতিতে যক্ষ্মা রোগ নির্ণয়, সংজ্ঞা ও শ্রেণীবিন্যাস সহ কিছু পরিবর্তন নিয়ে পরিবর্ধিত কলেবরে নতুন **"National Guidelines and Operational Manual for Tuberculosis Control-5th Edition"** প্রকাশ করা হয়েছে। উক্ত পরিবর্তনের সাথে সঙ্গতি রেখে রেকর্ডিং ও রিপোর্টিং ফর্মেও কিছু পরিবর্তন আনা হয়েছে।

আগামী ০১/০৭/২০১৪ ইং তারিখ থেকে নতুন গাইডলাইন অনুযায়ী যক্ষ্মা নিয়ন্ত্রন কর্মসূচির কার্যক্রম বাস্তবায়ন করার জন্য সংশ্লিষ্ট সকল সরকারী ও বেসরকারী সংস্থার কর্মকর্তা ও কর্মচারীদের অনুরোধ করা হল।

মাঠ পর্যায়ে নতুন গাইডলাইন অনুযায়ী যক্ষ্মা নিয়ন্ত্রন কার্যক্রম বাস্তবায়নের সুবিধার্থে উল্লেখযোগ্য কিছু পরিবর্তন, সংজ্ঞা ও পরিবর্তিত রেকর্ডিং/রিপোর্টিং ফর্ম এতদসঙ্গে সংযুক্ত করা হল।

কার্যক্রম বাস্তবায়নে কোনোরূপ জিজ্ঞাস্য বা মতামত থাকলে এন.টি.পি প্রধান কার্যালয়ে যোগাযোগ করার জন্য বলা হল। (১৭১১৪০৮৬৭৪), (E-mail : drmdmojib@gmail.com, emdadshan@yahoo.com)

সহযোগীতার জন্য ধন্যবাদ।

ডাঃ মোঃ আশেক হোসেন
পরিচলক, এমবিডিসি ও লাইন ডাইরেক্টর, টিবি-লেপ
স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা-১২১২

অনুলিপি সদয় অবগতির জন্য

১। সচিব, স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা। (দৃঃ আঃ সচিব মহোদয়ের একান্ত সচিব)
২। মহাপরিচালক, স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা-১২১২। (দৃঃ আঃ সহকারী পরিচালক, সমন্বয়)

বিতরণঃ

১. বিভাগীয় পরিচালক, স্বাস্থ্য, (সকল)।
২. উপপরিচালক, এমবিডিসি ও প্রোগ্রাম ম্যানেজার টিবি, স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা-১২১২।
৩. সিভিল সার্জন, (সকল জেলা)।
৪. উপজেলা স্বাস্থ্য ও পঃ পঃ কর্মকর্তা, (সকল)।
৫. ন্যাশনাল প্রোগ্রাম কনসালটেন্ট, এনটিপি।
৬. মেডিকেল সুপারেনটেনডেন্ট, এনআইডিসিএইচ, মহাখালী, ঢাকা।
৭. কো-অর্ডিনেটর, এনটিআরএল, মহাখালী, ঢাকা।
৮. পিএমডিটি কো-অর্ডিনেটর, সকল বিভাগ।
৯. অফিসার ইনচার্জ, টিবি কন্ট্রোল প্রজেক্ট, শ্যামলী।
১০. মেডিকেল সুপারেনটেনডেন্ট, টিবি কন্ট্রোল ও ট্রেনিং ইনস্টিটিউট, ঢাকা।
১১. ডিপিএম, এনটিপি (সকল)।
১২. মেডিকেল অফিসার, এনটিপি, (সকল)।
১৩. বিভাগীয় টিবি এক্সপার্ট, এনটিপি (সকল)।
১৪. টিবি এক্সপার্ট, এনটিপি (সকল)
১৫. এনপিও, (সকল) বিশ্ব স্বাস্থ্য সংস্থা, ঢাকা।
১৬. সহযোগী পরিচালক, এইচএনপিপি, ব্র্যাক। (সকল এস. আর দের অবহিত করার জন্য আপনাকে অনুরোধ করা হল)
১৭. কান্ট্রি ডিরেক্টর, ডেমিয়েন ফাউন্ডেশন, বাংলাদেশ।
১৮. কান্ট্রি ডিরেক্টর, লেপ্রা, বাংলাদেশ
১৯. প্রজেক্ট ডিরেক্টর, ইউপিএইচসিএসডিপি, নগর ভবন, ঢাকা। (দৃঃ আঃ প্রোগ্রাম কনসালটেন্ট, ইউপিএইচসিএসডিপি)
২০. জেনারেল সেক্রেটারী, নাটাব।
২১. কান্ট্রি ডিরেক্টর, ইউআরসি ঢাকা।
২২. কান্ট্রি ডিরেক্টর, এমএসএইচ ঢাকা
২৩. এক্সিকিউটিভ ডিরেক্টর, হীড।
২৪. এক্সিকিউটিভ ডিরেক্টর, পিএসটিসি।
২৫. ডাইরেক্টর সিএইচডিপি, ল্যাম্ব।
২৬. প্রোজেক্ট কো-অর্ডিনেটর, আরডিআরএস, লালমনিরহাট।

Contd.

National Guidelines and Operational Manual for Tuberculosis Control- 5th edition: What is new?

Sample: Sputum samples for AFB Diagnosis will be 2 (Spot and early morning) instead of 3.
Patients with single smear positive (at least with one clear AFB) will be considered as smear positive TB

Table 1. Case definition/terminology:

Sl. No.	New	Old	Remarks
1.	Presumptive TB case: Cough for 3	TB Suspect	less judgmental language
2.	Bacteriologically-confirmed TB case	Combination of Sm+, Culture + and Xpert + (Mtb +ve and RIF sensitive)	To fit with the new diagnostic tools
3.	clinically-diagnosed TB case	Sm negative and EP Cases diagnosed on the basis of X-ray abnormalities and suggestive histology without a laboratory confirmation.	active TB but who does not fulfill the criteria to be considered bacteriologically-confirmed
4.	Treatment after loss to follow-up patients (Reregistered Case)	Treatment after default patients	less judgmental language
5.	Lost to follow-up (treatment outcome)	Defaulter/defaulted	less judgmental language

Why revision of previous case definitions, the categories used to assign outcomes, and the reporting framework for TB are needed?

- NTP has started implementing WHO-approved rapid diagnostics (WRD), employing molecular techniques for the diagnosis of TB, and will gradually replace conventional bacteriology for diagnosis in many settings. WRD results did not always fit with the previous case definitions and treatment outcomes. Patients diagnosed with rifampicin-resistant TB using Xpert MTB/RIF need to be enumerated separately and there was no provision in the previous recording and reporting documents to do so.
- WHO has decided to have less judgmental language, so the term defaulter has been replaced by Lost to follow-up and TB suspect by presumptive TB case.

Revised definitions
1. Case definitions

A presumptive TB case is one who presents with symptoms or signs suggestive of TB (previously known as a TB suspect).

A bacteriologically-confirmed TB case is one that is positive upon sputum-smear microscopy, culture or WRD (WHO-approved rapid diagnostics such as Xpert MTB/RIF).

A clinically-diagnosed TB case is one who is started on a full treatment for active TB but who does not fulfill the criteria to be considered bacteriologically-confirmed. This includes pulmonary and extra-pulmonary cases diagnosed on the basis of X-ray abnormalities or suggestive histology without a laboratory confirmation. Clinically-diagnosed cases subsequently found to be bacteriologically-positive (before or after starting treatment) should be re-classified as bacteriologically-confirmed.

Cases of TB are also classified according to:

- anatomical site of disease
- history of previous treatment
- drug resistance (Ref PMDT Guidelines-2nd edition)
- HIV status

1.1 Classification based on anatomical site of disease

Annex- 7

These classifications are the same as previously published: Pulmonary and Extra pulmonary

1.2 Classification based on history of previous TB treatment (patient registration group)

New patient have never had treatment for TB, or have taken anti-TB drugs for less than 1 month.

Previously-treated patients have received 1 month or more of anti-TB drugs in the past. They are further classified by the outcome of their most recent course of treatment as follows: **(all previously treated patients should be referred for geneXpert test)**

Relapse patients are previously treated for TB, were declared cured or treatment completed at the end of their most recent treatment episode and are now diagnosed with a recurrent episode of TB (either a true relapse or a new episode of TB caused by re-infection).

"Treatment after failure" patients are previously treated for TB and were declared treatment failed at the end of their most recent treatment episode.

"Treatment after loss to follow-up patients" are previously treated for TB and were declared Lost to follow-up after interruption of treatment for two or more consecutive months at the end of their most recent treatment episode. (These were previously known as Treatment after default patients).

"Other previously-treated" patients are previously treated for TB but with an undocumented outcome for their most recent treatment episode.

Patients with unknown previous treatment history are to be considered as new patients

1.3 Classification based on HIV status

HIV-positive patients have a documented HIV-positive result (e.g. there is documented evidence of enrolment in HIV care such as enrolment in the pre-ART register or in the ART register once started on ART) or have a positive HIV result from testing conducted at the time of TB diagnosis.

HIV-negative TB patients have a documented negative HIV result conducted at the time of TB diagnosis. HIV-negative TB patients subsequently found to be HIV-positive should be re-classified as HIV-positive TB patients.

HIV status unknown TB patients do not have a documented HIV test result.

Treatment outcomes for drug-susceptible TB patients

Table: 2 Treatment outcomes for drug-susceptible TB patients

Outcome	Definition
Cured (applicable for Bacteriologicaly confirmed pulmonary cases)	A pulmonary TB patient whose sputum is bacteriologically-confirmed at the beginning of treatment and who was smear- or culture-negative in the last month of treatment and on at least one previous occasion.
Treatment completed (applicable for Bacteriologicaly confirmed & Clinically diagnosed cases)	A TB patient who completed treatment without evidence of failure BUT there is no record to show that sputum smear or culture results in the last month of treatment and on at least one previous occasion are negative, either because they were not done or because results were not available.
Treatment failed	i) i) A bacteriologically confirmed TB patient whose sputum smear or culture is positive at month 5 or later during treatment. ii) ii)A clinically diagnosed Pulmonary TB patient whose sputum smear becomes positive at month 2/3 iii) iii) Non converter: A Bact confirmed TB patient whose sputum smear or culture remains positive at month 2/3 should be sent for GeneXpert test. If Xpert test shows Rif resistant (RR) should be placed on adequate 2nd line
Died	A TB patient who dies for any reason during the course of treatment.
Lost to follow-up	A TB patient whose treatment was interrupted for 2 consecutive months or more.
Not evaluated	A TB patient for whom no treatment outcome is assigned. (This includes cases "transferred out" to another treatment unit and whose treatment outcome is unknown).
Treatment success	The sum of cured and treatment completed.