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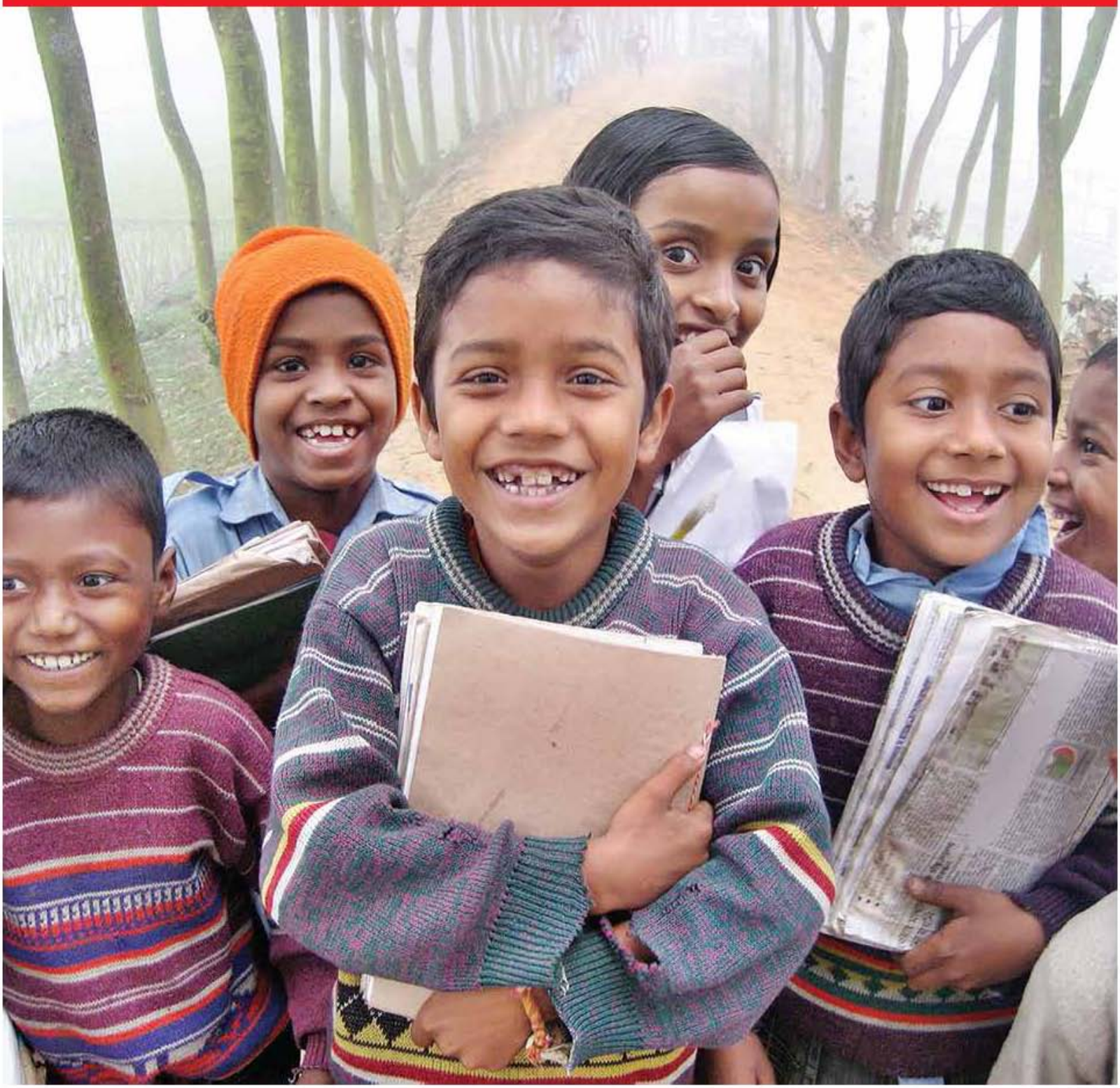
ANNUAL REPORT 2020



Damien Foundation - Bangladesh

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Preface

Damien Foundation Bangladesh has the great pleasure to present the achievements made during 2020 despite the difficulties faced due to the outbreak of COVID19. The achievements were only possible through contributions from all those involved in every step of our services during the year.

Our efforts continued to reach as many TB (including MDR TB) and leprosy patients as possible despite the difficulties during this pandemic situation. We also tried our best in maintaining maximum quality care and services possible despite constraints as quality of health care is at our core value. We always look at possibilities and opportunities through realistic analysis of the situation followed by their execution and as a result the pandemic situation couldn't affect much in reaching our beneficiaries and providing them maximum quality care possible. As a result, we reached 27,12,043 through various Advocacy Communication and Social Mobilization activities in this reporting year that helped in raising community awareness on TB and leprosy. A total of 318,927 TB presumptive cases provided sputum samples for examination using microscopy during 2020 and among them 12,429 sputum smear positive cases were detected. The results obviously reflect the efforts made by the staff members through their commitment, motivation and dedication. We also appreciate the supports received from national and local level health authorities and from other partners which also facilitated us in achieving these excellent results.

The organization expresses gratitude to Bangladesh NTP, all staff members, stakeholders and beneficiaries for their support for the development of the 9-month shorter treatment regimen for MDR TB that has led to WHO recommendation and adoption of this regimen by many countries in saving many lives of MDR TB patients globally. Conducting such research was only possible in an environment where highly controlled quality services can be provided through skilled personnel. Supports from international institutions like ITM and the Union besides the NTP Bangladesh essentially facilitated the organization in conducting such researches. We duly recognize their contributions for the achievement.

Involvement of all care providers in identification of presumptive (TB and leprosy) patients, ensuring their referral to the right place and utilization of all available diagnostic tools in their diagnosis followed by correct treatment contributed in achieving the good results in the project area. Increasing trend in involvement of government field staff in identifying presumptive TB cases indicates that field level integration of the TB Program is being strengthened further.

The organization intends to continue fruitful contribution to TB and leprosy field through partnership at home and abroad and expresses gratefulness for the continuous commitment of its partners, staffs and collaborators at all levels, and commits to continue to excel in quality health care provision, because that is what makes us unique.

Sincerely,

Dr. Aung Kya Jai Maug
Country Director
Damien Foundation Bangladesh

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Projects: FTLCP, MTLCP, NTLCP, RTLCP, TTLCP, DFCO together

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List of Abbreviations

ACSM	Advocacy, Communication & Social Mobilization
AFB	Acid - Fast Bacilli
AIDS	Acquired Immunodeficiency Syndrome
ALERT	All Africa Leprosy, Tuberculosis and Rehabilitation Training Centre
AO	Accounts Officer
BDQ	Bedaquiline
BRAC	Bangladesh Rural Advancement Committee
CCM	Country Coordination Mechanism
CDC	Chest Disease Clinic / Communicable Disease Control
CDH	Chest Disease hospital
CDR	Case Detection Rate
CS	Civil Surgeon / Culture and Sensitivity
CT	Complete Treatment
CTB	Challenge TB
DBLM	Danish Bangladesh Leprosy Mission (The Leprosy Mission Bangladesh)
DEPZ	Dhaka Export Processing Zone
DF	Damien Foundation
DFB	Damien Foundation Belgium
DFBD	Damien Foundation Bangladesh
DFCO	Damien Foundation Coordinating Office
DGDC	Directorate General of Development Cooperation
DGHS	Directorate General of Health Services
DPM	Deputy Program Manager
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment, Short-course
DST	Drug Susceptibility Testing
EP	Extra-Pulmonary
EQA	External Quality Assurance
FC	Field Coordinator
FDA	Fluorescein Diacetate
FDP	Fixed DOT Provider
FHI	Family Health International
FTLCP	Faridpur TB & Leprosy Control Project
FWA	Family Welfare Assistant
FWC	Family Welfare Center
GF	The Global Fund
GFATM	Global Fund to Fight AIDS, Tuberculosis & Malaria
GLC	Green Light Committee
GNP	Gross National Product
GoB	Government of Bangladesh
GP	General Practitioner
HE	Health Education
HIV	Human Immunodeficiency Virus
HNPSP	Health, Nutrition andPopulation Sector Program
HR	Human Resource
ICDDR, B	International Center for Diarrheal Diseases Research, Bangladesh
IDU	Injecting Drug User
IEC	Information Education and Communication
ITM	Institute of Tropical Medicine
IUATLD	International Union against Tuberculosis & Lung Diseases
JMM	Joint Monitoring Mission
KNCV	KoninklijkeNederlandse Centrale Vereniging tot bestrijding der Tuberculose (Dutch Tuberculosis Foundation)
LCA	Leprosy Control Assistant
LED-FM	Light Emitting Diode – Florescent Microscope
LEPRA	Leprosy Relief Association (UK)
LFA	Local Fund Agent
LPA	Line Probe Assay
L-J	Lowenstein Jensen
LTCC	Leprosy & TB Coordinating Committee
MB	Multi- Bacillary
MBDC	Mycobacterial Disease Control
MCR	Micro Cellular Rubber
MDG	Millennium Development Goal
MDR-TB	Multi-Drug Resistant TB
MDT	Multiple Drug Therapy
M&EO	Monitoring & Evaluation Officer
MO	Medical Officer
MoH&FW	Ministry of Health & Family Welfare
MoU	Memorandum of Understanding
MSH	Management Science for Health
MTB	Mycobacterium Tuberculosis
MTLCP	Mymensingh TB & Leprosy Control Project
NGO	Non-Governmental Organization
NLP	National Leprosy Program
NTP	National Tuberculosis Control Program
NTLP	National TB Control & LeprosyProgram
NTLCP	Netrakona TB & Leprosy Control Project
NTM	Non-Tubercular Mycobacterium
NTRL	National Tuberculosis Reference Laboratory
OPD	Out Patient Department
PAL	Practical Approach to Lung Health
PB	Pauci-Bacillary
PBC	Pulmonary Bacteriologically Confirmed
PCD	Pulmonary Clinically Diagnosed
PD	Project Director
PM	Program Manager
POD	Prevention of Disabilities
PPM	Public Private Mix
PR	Principal Recipient
PRSP	Poverty Reduction Strategic Paper
PT	Physio-Technician
PTB	Pulmonary Tuberculosis
QA	Quality Assurance
QMT	Quick Muscle Tests
RTLCP	Rajshahi TB & Leprosy Control Project
RTRL	Regional Tuberculosis Reference Laboratory
SDG	Sustainable Development Goal
SR	Sub-Recipient
SRL	Supranational Reference Laboratory
ST	Sensory Tests
TB	Tuberculosis
TLCA	TB & Leprosy Control Assistant
TLCO	TB & Leprosy Control Officer
TLMIB	The Leprosy Mission International Bangladesh
TTLCP	Tangail TB & Leprosy Control Project
UHC	Upazila Health Complex
UH&FPO	Upazila Health & Family Planning Officer
USAID	United States Agency for International Development
UT	Under Treatment
VD	Village Doctor
WHO	World Health Organization
XDR	Extensively Drug Resistant (TB)
ZN	Ziel Neelsen

1. Damien Foundation: Background Information

Damien Foundation (DF), a Belgian non-denominational and pluralistic NGO founded in 1964, is dedicated to the fight against Leprosy and Tuberculosis until these are no longer a threat to public health. The foundation is active in 16 countries of **Asia** (Bangladesh, India & Nepal), **Africa** (DR of Congo, Burundi, Rwanda, Nigeria, Niger, Guinea, Mozambique, Comoros & Senegal), **America** (Nicaragua, Guatemala & Bolivia) and **Europe** (Belgium).

The Foundation takes its name from Father Damien, a Belgian missionary who worked in the Hawaiian archipelago in the second half of the nineteenth century. He sacrificed his life caring for leprosy affected people abandoned on the island of Molokai.

The Foundation is a member of the International Federation of Anti-Leprosy Associations (ILEP) which coordinates the activities of organizations active in the field of leprosy control and care worldwide. Damien Foundation also conducts operational and epidemiological research projects, the scientific publications generated from these research projects contribute in national and international policy recommendations on leprosy and TB.

The Damien Foundation started its journey to serve leprosy patients in 6 districts of Bangladesh in 1972 and thus it has been almost five decades since the start of its journey in reaching the people affected by Leprosy in Bangladesh. In the beginning, DF fully concentrated on the elimination of Leprosy, and later on, since 1991 Tuberculosis (TB) Control has been included as the other major component considering the size of TB burden in Bangladesh. The organization is now involved in the control of Tuberculosis and further management of Leprosy in close collaboration with the National TB Control Program (NTP) & National Leprosy Program (NLP), Ministry of Health & Family Welfare (MoH&FW), Government of the People's Republic of Bangladesh. This collaboration is based on the Memorandum of Understanding (MoU) signed between National TB Control Program on behalf of the Government of Bangladesh (GoB) and LTCC (Leprosy & Tuberculosis Coordinating Committee). LTCC is a consortium of 10 Non-Governmental Organizations or NGOs (Damien Foundation, The Leprosy Mission International, LEPRA Bangladesh, HEED Bangladesh, RDRS, LAMB, Salvation Army, Dhanjuri Leprosy Center, PIME Sister and the Christian Leprosy Centre, Chandraghona).

As per MoU, each NGO partner is allocated to implement the Program in defined geographical area in order to avoid duplication of services and GoB agreed to ensure supply of essential drugs, equipment (e.g. microscopes), laboratory reagents, other consumables, recording and reporting forms, registers etc. Besides 6 existing districts, 3 new districts from Rajshahi division were included in this collaborative agreement and daily centres from sub-district level were started gradually since 1995. Full geographical coverage from each upazila was achieved by mid-1998 in these 9 districts. Expansion to a new area consisting of 5 districts (27 sub-districts) in greater Faridpur region was started in October 2001 upon request of the government and full geographical coverage in this new area was achieved by mid–2003. Thus, the organization now covers 14 districts (113 sub-districts) and serves about 33 million people (20% of total country population). The organization operates through five projects, namely Tangail, Mymensingh, Netrakona, Rajshahi & Faridpur projects. The Damien Foundation Bangladesh works as a non–political organization duly registered with NGO Affairs Bureau, Govt. of Bangladesh, under the Foreign Donations (Voluntary Activities) Regulations Ordinance 1978.

A total of 150 daily combined (TB & Leprosy) clinics including in 7 medical college hospitals and one workplace-Dhaka Export Processing Zone and 11 leprosy (9 intermittent and 2 daily) clinics are functional in 113 upazilas (sub-districts). Additional second microscopy centers were established in 2005-2006 in larger upazilas or in upazilas with higher population to ensure better geographical coverage and to improve access.

The project has also established a network of patient friendly directly observed treatment (DOT) services at the community level through voluntary involvement of village doctors, cured patients, religious leaders, school teachers etc. At present around 10,109 Fixed DOT Providers (FDPs) are involved in providing DOT in the area covered by DF.

The Damien Foundation program is providing specialized hospital care for complicated TB & Leprosy patients including MDR and XDR-TB patients by its own three referral hospitals with a total of 255 beds situated in Tangail Jalchatra hospital-95 beds, Mymensingh hospital- 100 beds & Netrakona hospital-60 beds.

Shortening the duration of treatment regimen for MDR TB was a dream. The Damien Foundation developed 9-month shorter regimen for MDR-TB treatment was finally endorsed by the WHO in May 2016 observing the excellent results of this regimen from different countries. Many countries, including Bangladesh, started implementing this shorter regimen. Based on this concept and example different shorter regimens are now being tried by different research organizations. The latest WHO recommended Shorter Oral Treatment Regimen (SOTR) for MDR-TB treatment is also based on the DF developed shorter regimen where only the injectable drug has been replaced by the new drug bedaquiline.

Funding sources

The Damien Foundation Bangladesh is mainly co-financed by the Belgian Government (Directorate General for Development-DGD) through the Damien Foundation-Belgium. Since August 2004, Damien Foundation Bangladesh is also financially supported for its Faridpur and Rajshahi projects from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM).

In 2020, a total amount of Taka 113,719,063.00 (Euro 1,196,500.00) was received as grant from Damien Foundation Belgium to cover the expenses of DGD supported projects. And a total fund received from GFATM in local currency was Taka 105,837,063.00 (equivalent to 1,121,215.90 Euro).

In addition, a considerable contribution was received from the Government of Bangladesh equivalent to Taka 130,573,846.00 which was realized in kind as TB drugs, MDR TB drugs, lab materials, logistic supplies, and so on. Besides, an estimated clinic-rent for 161 clinics was Taka 3,864,000.00. So, in total the government contribution was Taka 134,437,846.00 (equivalent to 1,424,206.67 Euro) in 2020.

2. Tuberculosis (TB)

Tuberculosis (TB) is a major public health problem in Bangladesh where about 360,000 people fell ill with TB in 2020. Bangladesh belongs to the list of top 20 high TB and MDR-TB burden countries in the world in 2020. The WHO estimates that there were 218 new patients (all forms of TB) per 100,000 population in Bangladesh in 2020 and the estimated mortality rate for the same year was 27 per 100,000 population. The exact TB burden in Bangladesh is not known. The first national TB prevalence survey which was conducted from October 2007 to March 2009 showed an overall adjusted prevalence of smear positive TB 79.4 per 100,000 adult population aged above 14 years, The survey found that 51.9% of sputum smear positive patients did not have any symptoms which are likely to be missed by health workers. Assuming a sensitivity of 75%, the authors estimated that the true smear positive TB rate might had been 105 per 100,000 adult population during the survey period. The most recent survey done in 2015/2016 following the latest WHO guidelines shows that the prevalence of pulmonary bacteriologically confirmed (PBC) patients among adult population (aged 15 years and above) is 278 per 100,000 adult population. This survey used the modern technology like GeneXpert, LED FM microscopy, digital chest X-Ray and culture in the diagnosis of pulmonary TB and used redefined screening questionnaire along with the digital X-Ray as screening tools. This prevalence survey also showed that only about 19% of the total Pulmonary Bacteriologically Confirmed (PBC) patients (52 out of 278) were detected through Microscopy among symptomatic (by symptom screening) and around 20% (56 out of 278) PBC patients were from symptom negative participants (screened through chest X-Ray and subsequently diagnosed by GeneXpert). It also showed that about 90% (251 out of 278) of the total PBC patients can be detected through Chest X-Ray.

The country adopted the WHO recommended DOTS strategy in 1993. The country achieved expansion of DOTS strategy throughout the country by 1998. With the financial support from GFATM, since August 2004, the NTP and its partner NGOs expanded and strengthened the overall TB control Program in the country. The service has been expanded to prisons, garments industries / work places, medical teaching institutes, Army hospitals etc. As a result, the national TB case notification (all forms) increased to174 per 100,000 population in 2019 from 58/100,000 population in 2000. DOTS services and active case finding were strengthened through financial support from GFATM and USAID (through projects like TBCAP, TBCARE II & Challenge TB) and through involving new partners in urban areas and also through introducing new technologies (i.e. LED FM system, GeneXpert, Digital X-Ray). NTP continued expansion of new GeneXpert sites during 2020 and a total of 400 GeneXpert machines were installed by the end of the year.

The NTP national strategic plan covering the period 2021–2026 contains strategies and interventions based on the principles outlined in the WHO's "End TB Strategy" that would enable the NTP to achieve the End TB Strategy's Milestones for 2025 (75% reduction in tuberculosis deaths and 50% reduction in tuberculosis incidence rate) and targets for 2035 (95% reduction in tuberculosis deaths and 90% reduction in tuberculosis incidence rate) compared with 2015.

2.1 Progress towards case detection and treatment outcome targets:

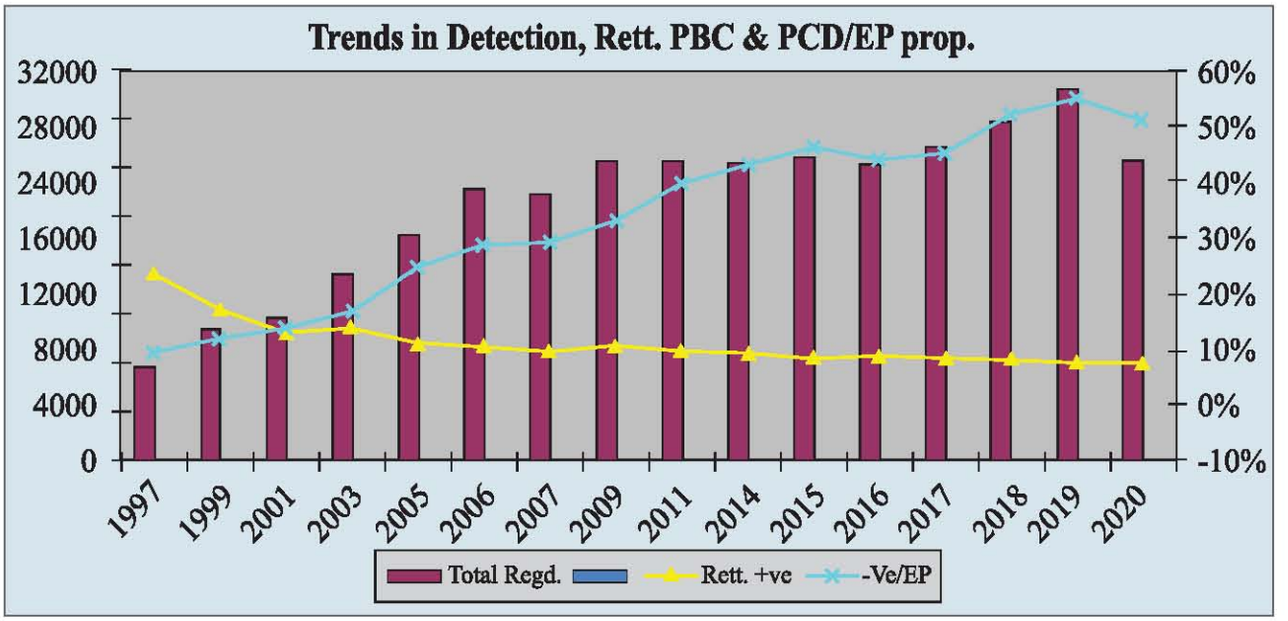
A total of 24,515 TB patients were registered during 2020, of which 49% were pulmonary bacteriologically confirmed TB patients, 24% pulmonary clinically diagnosed TB and 27% Extra-Pulmonary TB patients. The table below presents the numbers of the different forms of TB that were diagnosed annually during the period 2001-2020in all project areas combined.

Table: 1 Tuberculosis patients (different type) registered since 2001

Year	New smear positive / PBC	Re-treatment	Smear negative/ PCD& EP	Total
2001	8677	1327	1637	11641
2002	9895	1607	2078	13580
2003	10912	1744	2619	15275
2004	11298	1714	3772	16784
2005	12350	1552	4616	18518
2006	14084	1717	6455	22256
2007	13899	1501	6366	21791
2008	14150	1475	6752	22377
2009	14611	1746	8096	24453
2010	13805	1566	9233	24604
2011	13268	1435	9722	24425
2012	13966	1418	9348	24732
2013	13115	1314	10145	24574
2014	12683	1321	10476	24480
2015	12194	1148	11396	24738
2016	12328	1185	10787	24300
2017	12900	1204	11529	25633
2018	12149	1102	14424	27675
2019	12665	1055	16715	30435
2020	11094	942	12479	24515

Registration of TB patients (all forms) has increased over time mainly due to increase in clinically diagnosed and extra-pulmonary cases and bacteriologically confirmed cases remained almost stable for the last several years. However, due to some special efforts, like identifying scope of increasing the clinically diagnosed patients according to recent prevalence survey and micro planning to find out missing patients, 2042 more TB patients were identified in 2018 than in 2017 and 2760 more patients were identified in 2019 than in 2018, but the case finding again decreased in 2020 due to impact of COVID-19 pandemic.The proportion of re-treatment patients among the positive patients remained at 8%, as shown in graph-1. The increase in numbers of pulmonary clinically diagnosed (PCD) and extra-pulmonary (EP) patients has contributed to the overall increase in TB case detection.

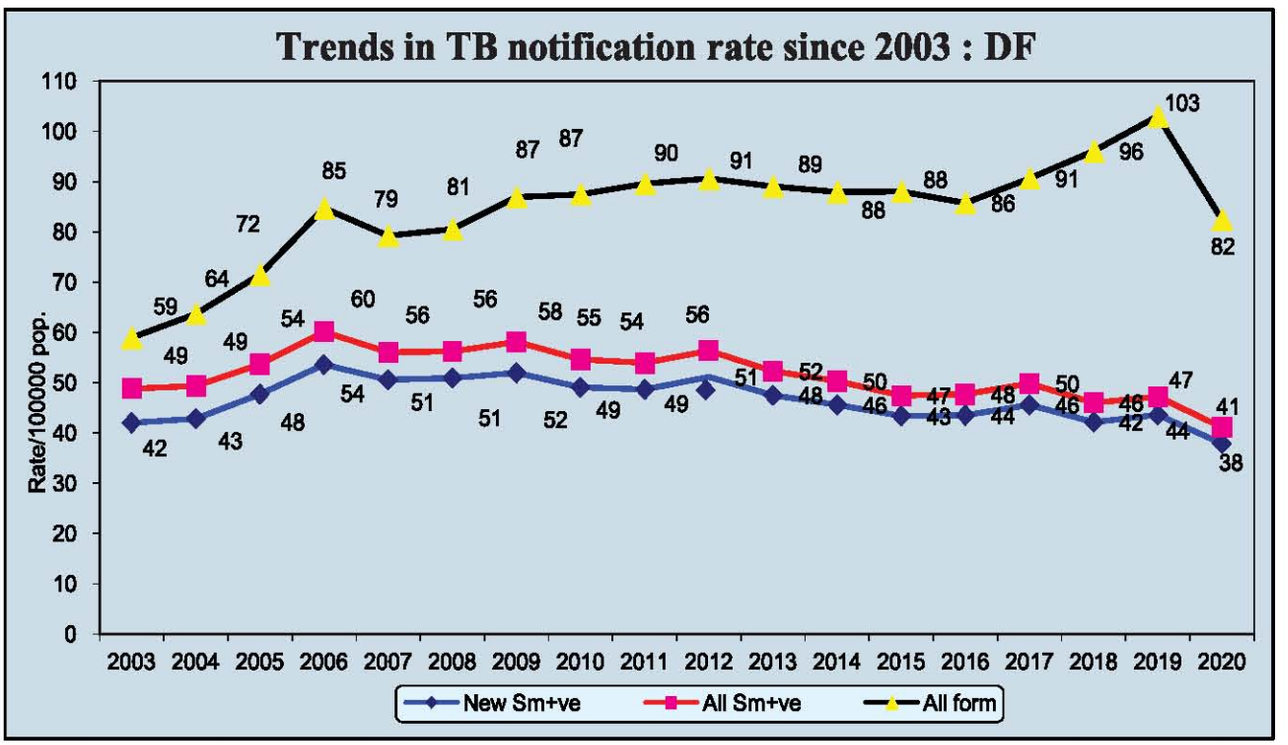
Graph 1: Trends in TB case registration, Retreatment PBC and Sm-ve (PCD/EP) proportion



This increase (shown in table-1) is mainly due to the focus given to enhance the diagnosis and treatment of all forms of TB including clinically diagnosed pulmonary and EP TB since 2006 through establishing collaboration with Chest Diseases Clinics, medical colleges and specialists and by conducting training for doctors on x-ray reading. Besides training of the doctors, support to patients was also provided for diagnostic examinations e.g. X-Ray and biopsy costs utilizing GFATM fund. All these efforts have contributed to an increase in clinically diagnosed pulmonary and extra-pulmonary TB patients during the 3 years period from 2017 to 2019, but the case finding again seriously affected by COVID-19 pandemic situation in 2020. As a consequence, 5920 cases less detected in 2020 compare to 2019 and case notification rate (CNR) of all forms sharply dropped to 82 in 2020 compared to 103 in 2019.
The decreasing trend of re-treatment patients could be explained as a good indicator of Program performances. At start of the project, during the year 1995 most of the re-treatment patients registered by the project were treated previously outside the NTP by the private providers, as such the proportion of re-treatment patients among all smear positives (PBC) at that time was 29%. Over the years this proportion has come down to and remained at around 8% which explains the good referral linkage with the private sectors and better accessibility & acceptability of NTP services. Almost all of them are from NTP regimen's failures, relapses and returns after lost to follow up who returned back for re-treatment.

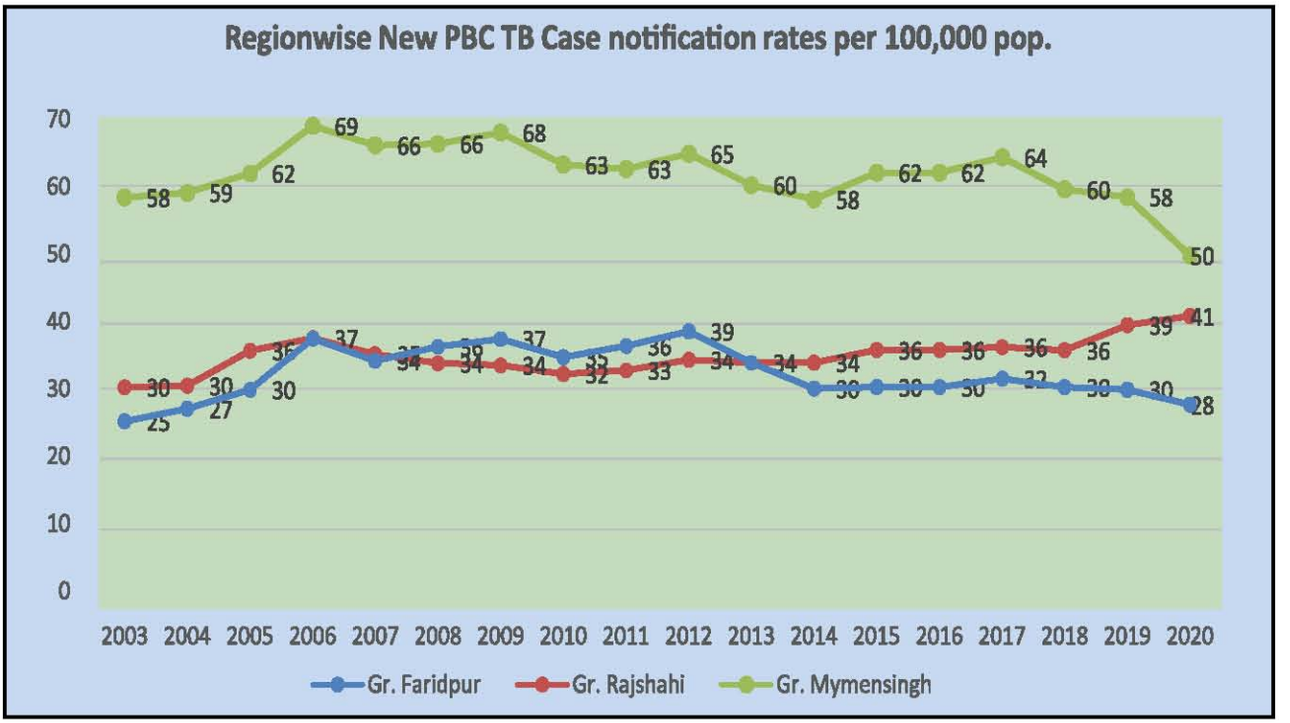
Although there was an increase in trend of all forms notification rate from 90 per 100,000 population in 2017 to 103 per 100,000 in 2019 but there was almost no change in CNR of Bacteriologically Confirmed TB Patients. Therefore, the overall trend of increase is not significant enough to conclude on the reflection of real current epidemiological situation in the project area.

Graph 2: Trends in TB notification rate per 100,000 population in DF working area



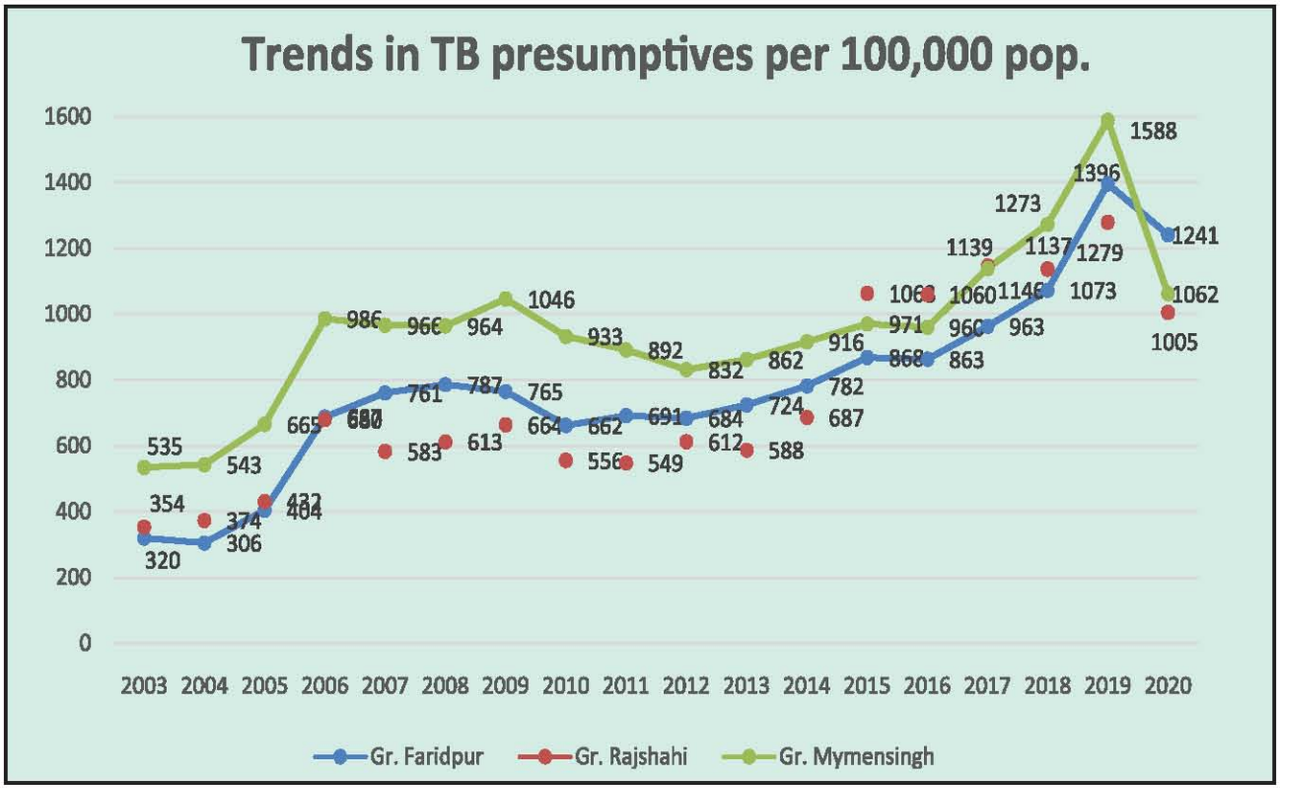
New Pulmonary Bacteriologically Confirmed (PBC) TB case notification varies significantly among the different regions. In the Northern region (greater Mymensingh) the notification rate of new PBC patients has always been higher (50 per 100,000 population) than in the other two (greater Rajshahi around 41 and greater Faridpur around 28 per 100,000 pop) regions. The same variation in notification rates for pulmonary clinically diagnosed and extra-pulmonary TB patients has been observed between these regions which might indicate low level TB prevalence in these (greater Rajshahi & Faridpur) regions.

Graph 3: DF region wise new sm+ve (PBC) TB notification rate per 100,000 populations

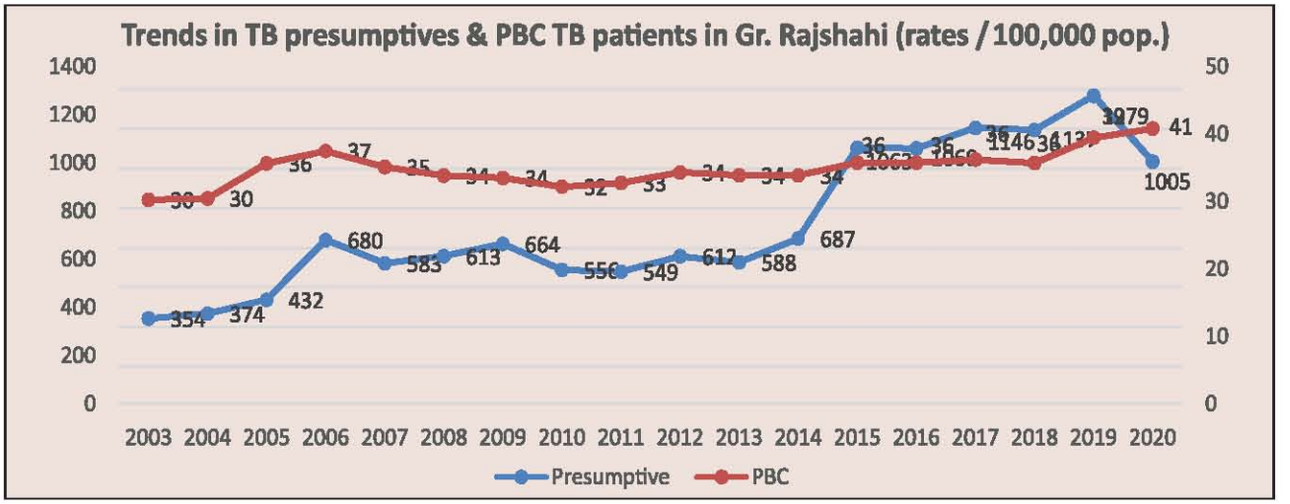


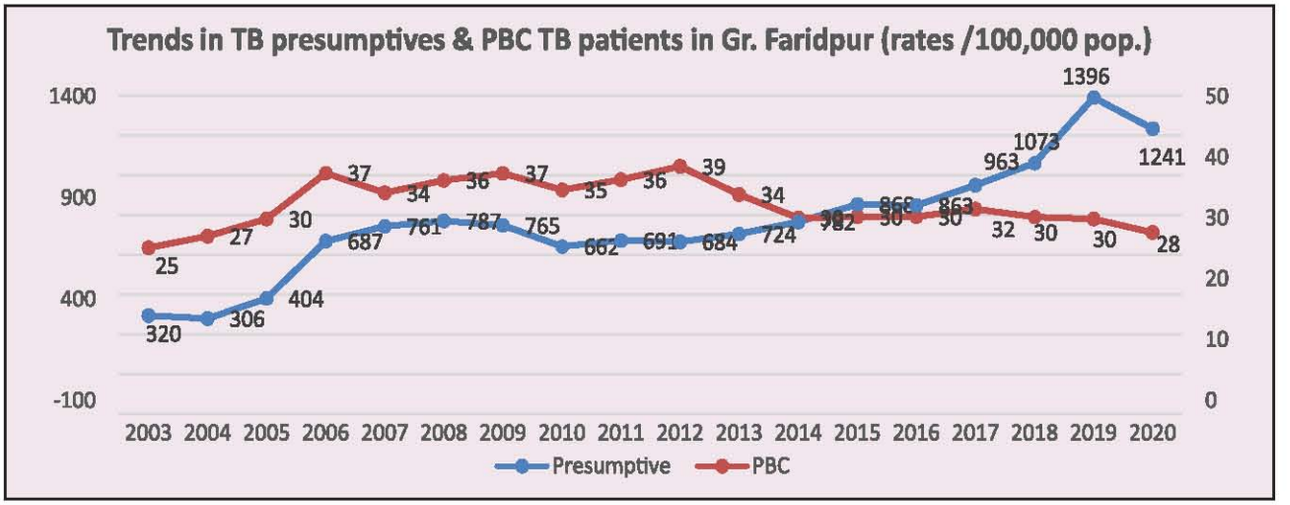
Analysis of data also shows that despite significant increase in presumptive TB patients in all the 3 regions with significant efforts, the PBC case notification did not increase in those two regions - only very little in fact as shown in graphs 4 and 5-7.

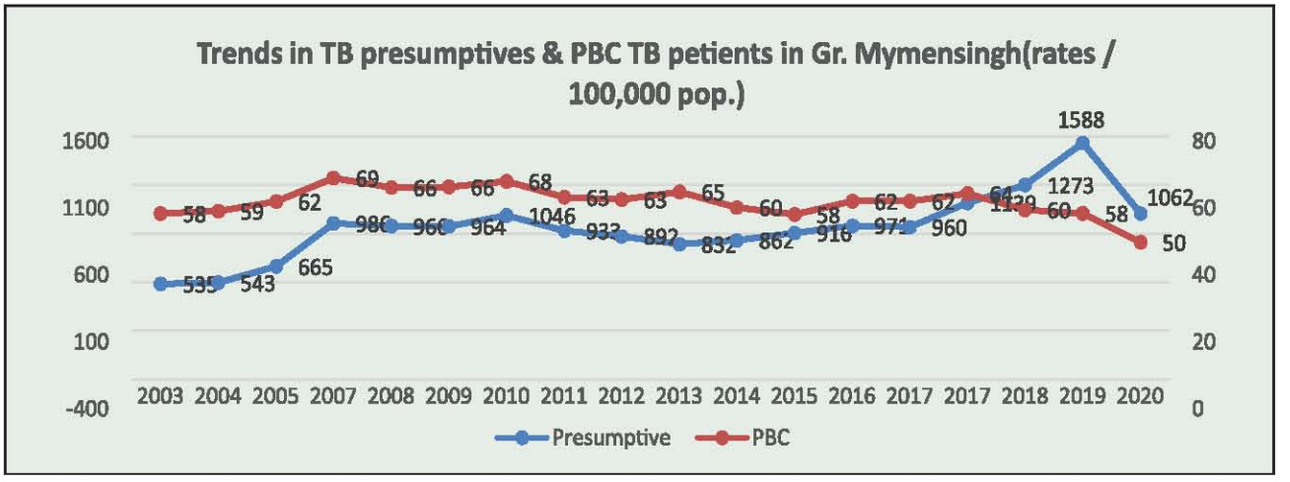
Graph 4: DF region wise trends in TB presumptive per 100,000 populations



Graph 5 - 7: Trends in presumptive and new PBC TB patients per 100,000 populations in 3 different DF working regions





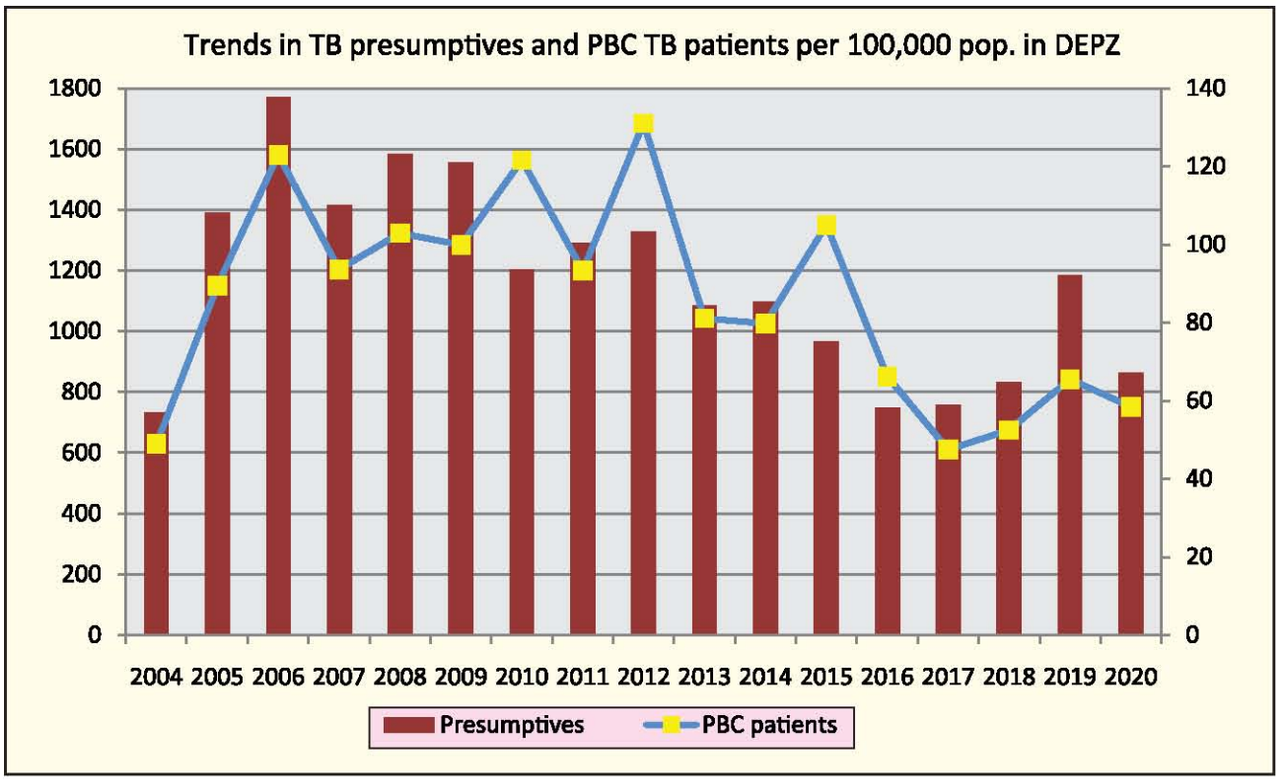


Taking into account the good quality of microscopy services along with expansion of GeneXpert machines up to upazila levels in the project area and standardized screening system of presumptive, it could be concluded that TB is not equally distributed all over the country. The WHO thus recommends use of notification trends to assess performances of TB control Programs and does no longer recommend using national estimates for the sub-national level.

2.2 TB control activities in workplace (Dhaka Export Processing Zone)

There has been a rapid urbanization trend in Bangladesh leading to the development of several factories in urban and peri urban areas both in organized and non-organized ways. Poor people from rural areas migrate to work in those factories where the working condition is often unhealthy with overcrowding and poor ventilation. These poor workers are often paid low and several workers also share a small room for their living. Such living and working conditions are the most favourable environment for easy transmission of highly communicable tuberculosis disease. Considering the situation DF started TB control activities in 2004 in Dhaka Export Processing Zone (DEPZ), a government-controlled workplace, located near Dhaka where more than 100,000 workers are engaged in processing export goods and most of them are young female workers. Since the start of the Program in DEPZ, DF has observed a higher TB incidence among the workers compared to the general population. The female ratio among detected TB patients in this workplace is almost three times compared to the general population. The graphs below show the trends in presumptive and TB patients per 100,000 workers:

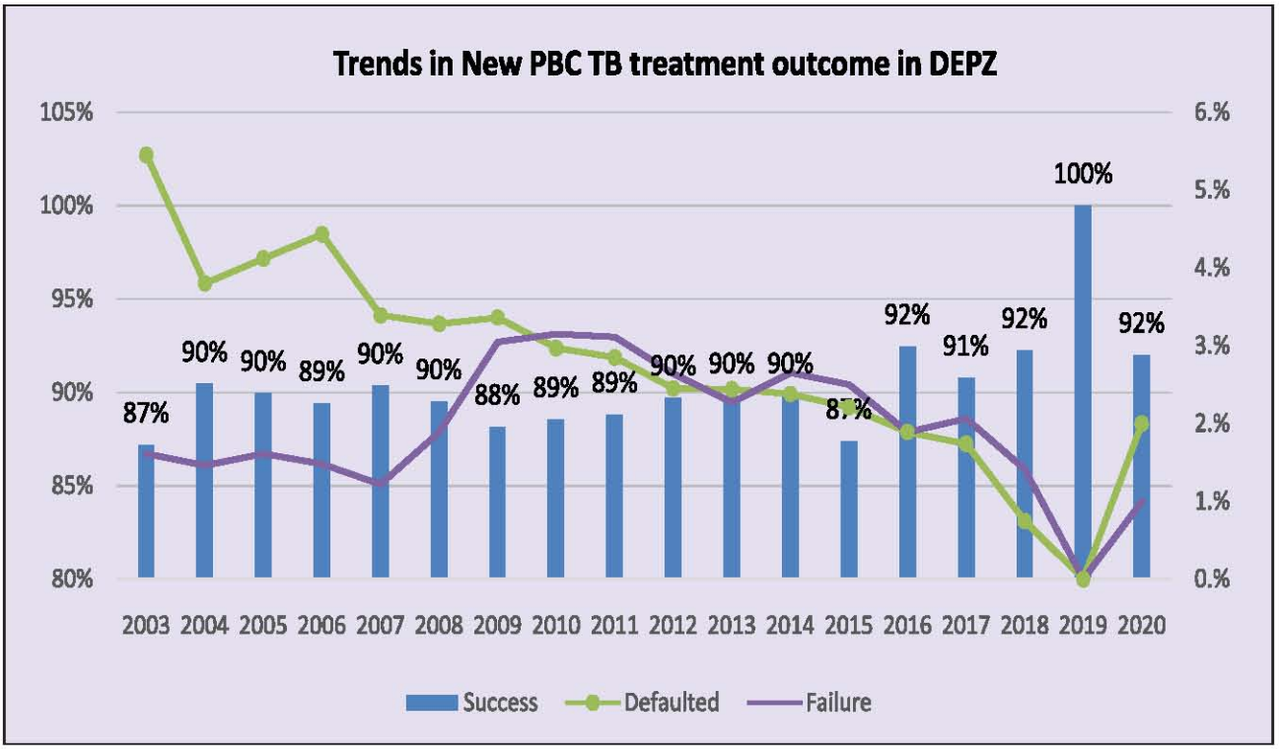
Graph 8: Trends in presumptive TB patientsand new PBC TB patients per 100,000 population in DEPZ



Considering the growing expansion of industrial factories, DF planned to strengthen TB activities in newly industrialized DF border districts involving the private sector. Situation analysis involving the workers who got admitted in DF hospitals indicated their unawareness about the availability of TB services near their workplaces. As a result, they first seek care from private pharmacies and return home when they do not improve. In order to increase awareness on TB among factory workers and the factory owners and managers, DF organized orientation and advocacy sessions for them. Moreover, DF also improved the record keeping & reporting at existing TB clinics in industrial areas for the factory workers. As a result, in 2020 a total of 871 TB patients were diagnosed among workers of different factories in DF area and put them on treatment. It has been observed that the notification rates are higher among these worker populations compared to the general population.

The TB treatment success rate has been maintained above 85% since 1995 and 90% or above since 2012 with a low rate in unfavorable outcomes (death at <4%, lost to follow up at less than 1%). Treatment success rate for PBC cases registered in 2019 was 100% and for all cases 97%. The graph below shows the trends in TB treatment success rates for PBC TB cases since 2003.

Graph 9: Treatment outcome in new PBC patients since 2003



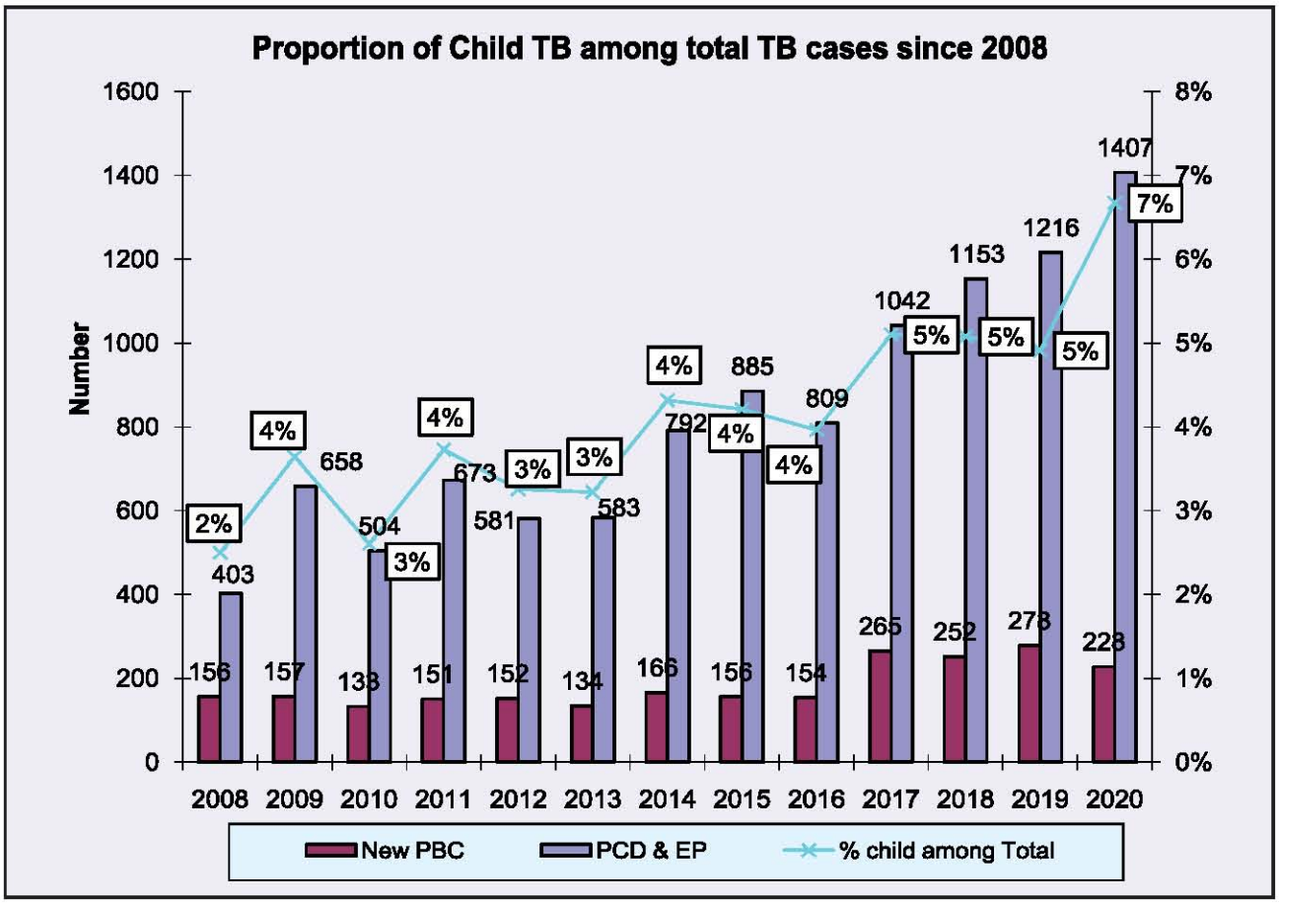
2.3 Tuberculosis in children:

Child TB diagnosis is a global concern given the continued under-detection of TB among the child population. Children remain the most vulnerable in contracting TB from adults. Diagnosis of TB in children remains very challenging, especially in Bangladesh where there are inadequate diagnostic facilities and specialists for detecting Child TB patients. Presentation of symptoms of childhood TB is different compared to adult TB. Young children cannot produce good sputum. Microscopy of sputum smear often cannot detect the bacilli as the number of bacilli is few in the sputum of children. Analysis done by the DF project in the past showed a sputum positivity rate among children presumptive for TB of 1% compared to 6-7% among adult symptomatic TB.

Estimating the incidence of TB among children is difficult and the published estimates vary. The study conducted in one DF upazila during 2009 in collaboration with ICDDR, B showed a child TB prevalence of 52 per 100,000 children. This study seems to have provided important evidence on under-detection of child TB patients in Bangladesh which helped the NTP Bangladesh to adopt strategies to increase child TB patients throughout the country. In order to improve child TB case detection, the Damien Foundation in collaboration with the Centre for Women and Child Health (CWCH) conducted a study to evaluate the effectiveness of algorithm for detection of child TB and effectiveness of community awareness in enhancing diagnosis of child TB which also support the above findings. An increase in child TB detection in the study clinics was also observed.

Efforts at improving diagnosis of TB among children were continued in 2020 through coordinating with government doctors on diagnosis of childhood TB. A total of 918 doctors were oriented through 47 sessions in 2020. The proportion of child TB detection has been remaining more in DF area for the last few years compare to national average. In 2020 around 7% of the total TB cases in DF area were children, and not only proportion but also increased in absolute number in the reporting year than previous year, even within the COVID-19 pandemic situation. One important reason for this may be people were concerned about the diseases of their children than adults in COVID-19 pandemic situation where assess to the general treatment services were limited. The graph below shows the year wise proportion of child TB patients diagnosed in the DF project area since 2008.

Graph 10: Child TB detection from 2008 to 2020 in DF working areas



Chemoprophylaxis using Isoniazid tablet (initially 5 mg per kg body weight, later on changed to 10 mg per kg body weight) for 6 months is being recommended for children aged below 5 years not suffering from TB who are close contacts of a Pulmonary Bacteriologically Confirmed (PBC) TB patient. The Isoniazid Preventive Therapy (IPT) prevents two severe forms of TB in children, namely milliary TB and TB meningitis. A total of 44,586 children received chemoprophylaxis during the last 10 years, of which 5655 in 2020. Enrollment rate of children under chemoprophylaxis was around 97% in 2020 among those eligible for IPT while completion rate among children enrolled during 2019 was 89%.

2.4 TB in prisoners and other vulnerable groups

It was found from several surveys that the prevalence of TB is higher in prison compared to the general population. The reason of this higher prevalence is due to the fast spread of TB in poorly ventilated, densely crowded living conditions in the prisons. Prisoners often have limited access to the health care services and the health care service providers also have limited access to the prisons as the prisons are restricted places. For this reason, very little is known about the severity of TB in the prisons of Bangladesh. The foundation in collaboration with the NTP Bangladesh organized a survey in the 4 jails of Rajshahi, Naogaon, Nawabganj and Tangail districts in 2003. The findings were that the TB prevalence in the surveyed jails is 152/100,000 population compared to 79.4/100,000 population among the general population. Since then, DF has established a referral linkage with the local jail authorities and health personnel. DF staffs are informed if TB presumptiveare identified among the prisoners and sputum samples are collected by prison health staff. DF staffs regularly visit the prisons to collect sputum samples. During 2020, out of total 12 prisons in DF working area only 4 reported 30 TB patients where 26 pulmonary bacteriologically confirmed, 2 pulmonary clinically diagnosed and 2 extra-pulmonary TB patients were detected and treated. The prison health staffs are engaged in providing DOT inside the prison and DF staff is informed when a prisoner is released for further arrangement of treatment engaging a DOT provider from the resident upazila. It is to be mentioned here that there were restrictions in most of the prisons due to COVID-19 situation and the TB staff did not have access to those prisons.

2.5 TB HIV co-infection

TB remains the most common opportunistic infection among HIV infected people in high TB burden countries like Bangladesh. TB-HIV co-infection leads to rapid progression to TB disease and earlier deaths. Fortunately, HIV prevalence among Bangladeshi adult population and TB patients is still low (<0.1%) but rising, and the prevalence is higher in high-risk groups such as intravenous drug users located in some hot spots (in 23 districts). As such HIV testing services are limited to those district spots only and DF has been referring TB patients with high-risk behavior (if any) to the available nearest HIV Counseling and testing centres.

2.6 MDR/RR– TB

Since 1997, DF started to treat MDR-TB patients using a succession of standardized regimens under operational research conditions, which led to the identification of a highly effective, safe, short and relatively cheap regimen initially resulting in close to 90% cure with minimal bacteriological failure or relapse, and without amplification of second-line drug resistance. Treatment success has been maintained at above 85% during recent years because of earlier detection of fluoroquinolones resistance through slide DST and enrolling them on appropriate treatment though the potent fluoroquinolone (gatifloxacin) had to be replaced by a weaker one (levofloxacin) because of its unavailability in the market.

DF has developed locally appropriate, low cost, simple and safe laboratory screening and drug susceptibility testing methods (FDA vital staining; slide DST) which has led to an increasingly early screening, diagnosis and treatment of such patients. Currently 4 very simple laboratories in DF areas are capable of delivering minimum 95% correct diagnoses of TB resistant to rifampicin, fluoroquinolones (high or low level) and 2nd-line injectables, besides its differentiation from non-TB mycobacterial disease, and this within 2 weeks.

This "Bangladesh MDR regimen" was tested by The Union through a clinical trial named STREAM (Standardized Treatment Regimen of anti-Tuberculosis Drugs for patients with MDR TB), a randomized controlled clinical trial, in South Africa, Vietnam, Mongolia and Ethiopia. This regimen was also formally evaluated in two trials, one in 9 francophone African countries. In the Union STREAM stage 2, two new regimens were included with stage 1: one of them is a 40-week regimen with bedaquiline, clofazimine, ethambutol, levofloxacin & pyrazinamide supplemented by isoniazid and prothionamide for the first 16 weeks and the other is 28-week regimen with bedaquiline, clofazimine, levofloxacin & pyrazinamide supplemented by isoniazid & kanamycin for the first 8 weeks. Following an expert review of available observational study findings on shorter regimens, the WHO updated it's guideline in 2019 including the shorter regimen for use under certain programmatic conditions.

Observing the excellent results obtained by DF Bangladesh and following the WHO endorsement, several countries-including NTP Bangladesh, adopted and expanded this short course regimen. NTP Bangladesh adopted and started expansion of this regimen throughout the country in 2018 using moxifloxacin as the core drug and continued strengthening the services for MDR TB patients. DF Bangladesh also adopted this national regimen for MDR/RR TB patients since 2018. A total of 1,027 DR TB patients were enrolled in Bangladesh during 2020, out of which 89% were on shorter regimen. The number of MDR/RR TB enrolled in DF area in 2020 on shorter regimen were 207.

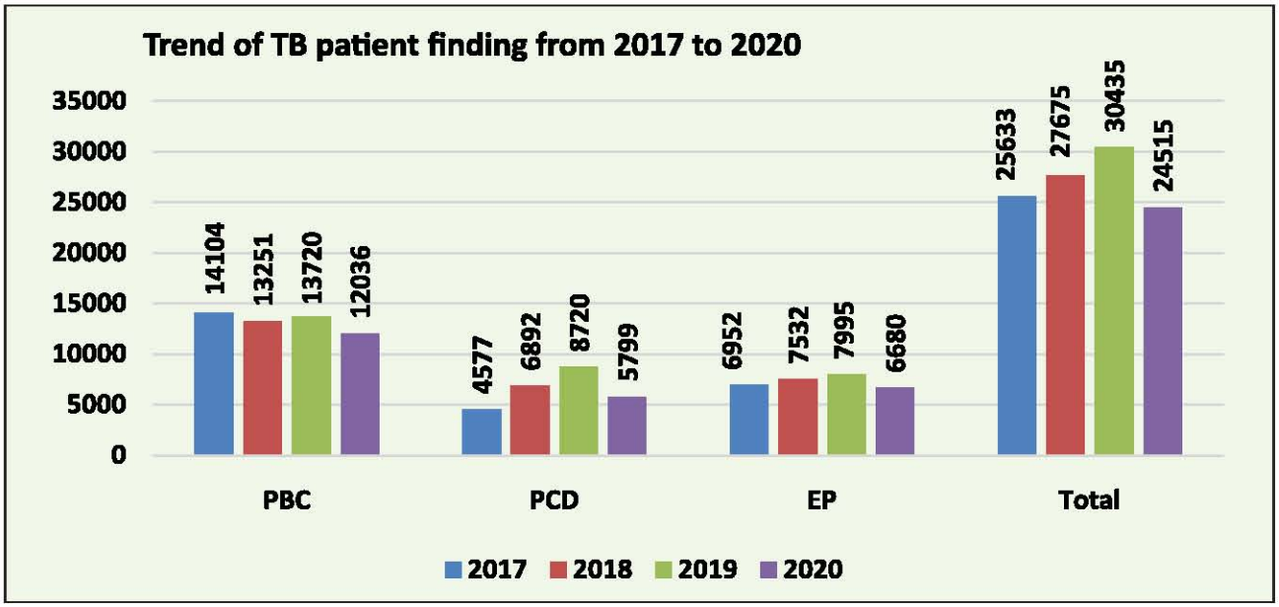
2.7 Infection Control (IC) for tuberculosis

Infection Control (IC) aiming at protecting healthy people from the sick remains an important step in TB control Program especially when M/XDR TB is posing threat to the achievements made so far in this disease Program. Moreover, strengthening the IPC has become more important due to COVID-19 pandemic situation, not only for protecting the healthy people and staff but also TB patients from COVID-19. Infection control measures were established in DF hospitals since its inception through ensuring separate rooms for MDR TB patients from non-MDR TB patients, smear positives from smear negatives and Extra-pulmonary TB patients. Adequate ventilation and fresh air circulation in hospital ward rooms (removing the TB droplet containing air) have been ensured in all the DF hospitals through keeping the doors and windows open and installing adequate ceiling fans. Health education among hospitalized patients on safe sputum collection (in 2-5% phenol solution containing buckets), cough hygiene and cough etiquette are being continued routinely. Surgical masks are routinely supplied to all hospitalized patients in DF and Rajshahi Chest disease hospitals and their regular use and cleaning have been ensured by the nurses. In the clinics, the infection control measures have been ensured through arranging the different assets (cupboard, tables, chairs etc.) and through modifying the sitting arrangements taking the airflow into account.Due to the COVID-19 pandemic situation in 2020, the infection control measures have been further strengthened by developing specific guidelines; orienting all staff on infection control; changing sitting arrangements for staff, presumptive and patient for maintaining social distancing; providing more protective materials like masks, sanitizer, gloves, protective googles, gown, soap etc. for each clinic and hospital. Also modified the arrangement of TB-leprosy community level activities by maintaining preventive and protective measures and social distancing. Practice of ensuring infection control measures have already been incorporated in routine supervision visit checklist, however, virtual monitoring system was also added during the COVID-19 pandemic to strengthen the monitoring of infection control status. Moreover, sample survey was conducted among staff and patients of each clinic to assess their knowledge level on infection control. The result shows that around 86% of staff and 83% of patients are aware of infection control, meaning that they have satisfactory level of knowledge on the subject according to their practical needs of prevention and protection from infection.

2.8 Continuing special efforts for finding missing TB patients:

Latest Global TB Report 2020 (WHO) shows that there are about 19% missing TB patients in Bangladesh although there is no clear picture about volume of local/district level missing patients as the prevalence survey did not show any local level prevalence. In 2020,although during the 2nd quarter case finding was seriously affected by COVID-19 pandemic, Damien Foundation Bangladesh continued to finding missing TB patients actively in DF area in subsequent quarters through micro planning and strengthening contact tracing and emphasizing house to house visit to avoid gathering. The Micro-planning initiative was first designed and implemented in last two quarters of 2017 by analyzing the information of recent TB prevalence survey 2015-2016 in Bangladesh. The prevalence survey indicates that more use Gene Xpert and digital X-Ray technology can be helpful for finding out missing TB patients. Accordingly, all projects of DF Bangladesh prepared their own plan up to upazila & union level to find out the missing presumptive TB patients, bring them to microscopy, GeneXpert, X-Ray and other tests with the help of GFATM supported social/diagnostic support activities. Due to continuation of this special effort detection TB patients increased for three years from 2017 to 2019 and then there is sudden fall in 2020 due to COVID-19 pandemic.Following graph shows the comparison of TB case finding in 2017, 2018, 2019 and 2020–

Graph 11: The following graph shows the trend of TB case finding from 2017 to 2020



3. LEPROSY

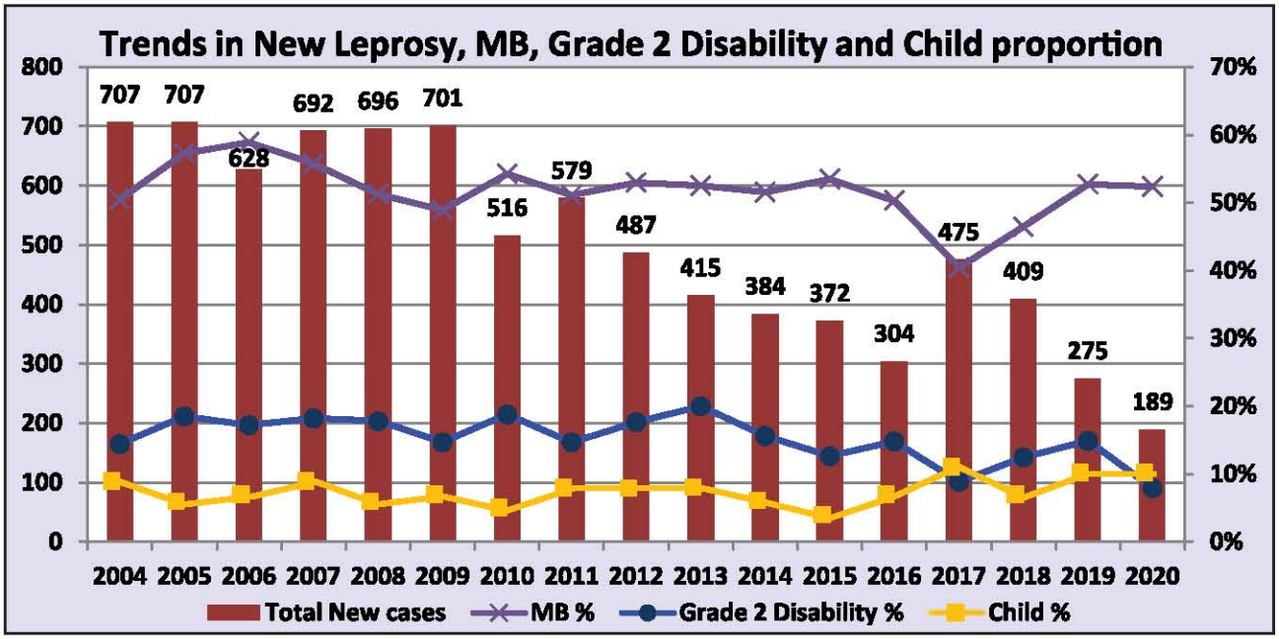
Following the achievement of the elimination status in 1998 at national level, leprosy has no longer been considered as a major public health problem in Bangladesh. Since then, the interest in leprosy by health care providers decreased significantly resulting in a sharp decline in leprosy case detection in the country, e.g. a decrease of about 72% in 2020 (2719 patients) compared to 2002 (9844 patients). It is to be mentioned here that there was less leprosy case finding compared to previous year because of COVID-19 outbreak.

Despite the elimination status, Bangladesh remains one of the countries worldwide detecting around 3000 new leprosy patients annually. About 40% of the geographical area in Bangladesh is covered by leprosy NGOs whereas the government provides services for the remaining 60%. It has been observed that among the total new patients detected in Bangladesh more than 70% patients are detected in the NGO covered area. It thus seems that there is a serious under-detection in the area covered by the government.

A total of 189 new leprosy patients were detected in 2020 in the DF area, out of which around 52% were MB leprosy and 19% of MB patients were skin smear positive. The decreased proportion of MB leprosy patients with skin smear positive (19%) might also indicate their early detection. The proportion of children among new patients was 10% in 2020 which is same as 2019. Among all new leprosy patients 76 (40%) were female.

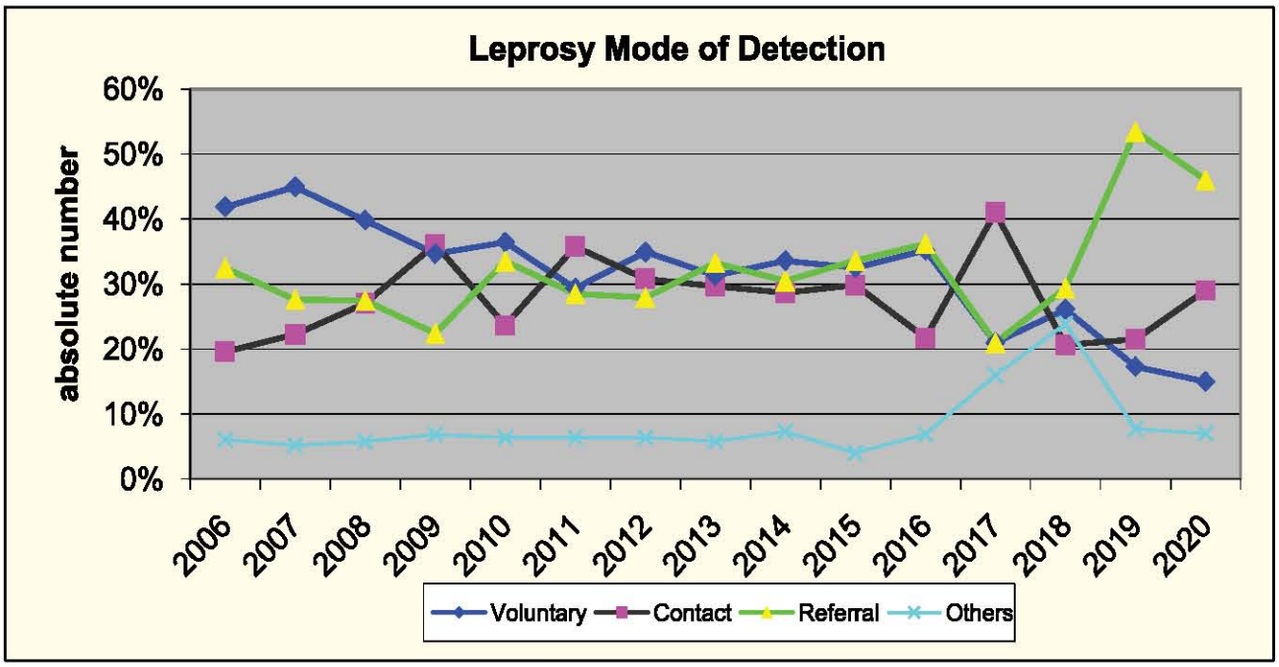
Overall disability G2D rate in 2020 in DF area was around 7.41%. This rate of G2D is lower than previous year (which was around 15%), however, it might not reflect the actual situation, because, due to COVID-19 situation movement of disabled people were less than others, therefore, less number of disabled people might have attended the clinic.

Graph 12: New Leprosy Detection, Proportion of MB & disability grade 2 in DF Bangladesh, 2004 – 2020



COVID-19 pandemic had a negative impact on leprosy case finding, both on active and passive case finding. Due to rarity of the disease and low number of cases, contact checking (active case finding) remains an important part in sustaining leprosy case detection in situations where the leprosy endemicity is low. Sustaining the level of community awareness (indicating voluntary reporting) is also a difficult task in such low endemic situation. The graph below shows the trends in leprosy case reporting indicating the sources.

Graph 13: Trends in leprosy mode of case detection in DF Bangladesh projects



High treatment success (>96%) has been maintained for both PB and MB leprosy patients in DF Bangladesh project during the last several years. This rate for PB was 99% and for MB 94% during 2020.

However, the high proportion (52%) of multi-bacillary infectious patients among the newly detected Leprosy patients, higher (10%) child proportion and high (7.41%) grade-2 disability indicates the late diagnosis and continued spread of diseases in the community. This situation along with the need of lifelong care for deformed leprosy patients indicates the importance for the DF project of continuous and intensified support and care for the leprosy component.

3.1 CARE OF LEPROSY PATIENTS (PREVENTION OF DISABILITIES - POD)

Leprosy, being a disabling neurological disease, leaves affected persons with permanent disabilities if not detected early and treated properly. Disabilities and deformities require lifelong care to prevent further deformities and disabilities. Hence prevention and care of deformities and disabilities are the most important aspects of leprosy management. This could be achieved by early diagnosis and judicious treatment both of the disease and of any reaction/neuritis that occurs. Every step is taken to prevent further development of new disabilities through routine follow up, early diagnosis and prompt management of nerve-function-impairment (NFI), supply of protective foot-wears, teaching on self-care etc.

The main objective of POD activities is: minimum additional disability apart from that which was present at diagnosis through teaching patients with disabilities on self-care and through providing protective foot-wears & ulcer cares. Since the beginning (1972), DF has been providing passive care to limit further disability and deformity by asking them to report voluntarily for any problem after completion of MDT. Additionally, from the year 2008 to 2017, DF took the special initiative for prevention of disability and deformity by active surveillance of all patients whether new or completed MDT by means of observing 'POD DAY' in every clinic once a year. The main objectives of POD DAY were to promote self-care by the patients and to optimize the skills of all field staff to limit the disability due to leprosy. To organize a successful POD Day, all clinic staffs were informed for their presence in the clinic about the Pre-POD visit by the physio-technician (PT), visit by PT one month prior to the POD Day. This POD Days has now been transformed into regular POD visits by Physio Technicians and MOs. For POD visit to a clinic, the clinic staff including the TLCO are informed so that they can make a good planning arranging effective POD activities including the listing of patients under care and to inform them, checking the stock of POD materials, prepare list of patients for reconstructive surgery and other supports needed. TLCAs also gain more confidence and improve their skill on patient management through this POD activity.

General counseling on self-care to limit further disability through Peer Educationby the selective patient is performed on the POD Day. Individuals are taught on self-care, ulcer care and active & passive exercises. Protective footwear is distributed based on needs of patients. Since 2017, the POD Day has been integrated in the regular field visit program of the physio-technician, where leprosy patients are informed to attend the clinic on the day of physio-technician's visit to the clinic. The clinic staff and physio-technician jointly provide necessary support services to the patients who attend the clinic. For the care of patients having anesthetic feet, a total of 1202 pairs of MCR shoes were supplied during 2020.

During the year 2020, a total of 181 leprosy patients were hospitalized for the management of different types of complications in the three DF hospitals, 65% of them were hospitalized for ulcer management and for special type of shoes. Around 17% of the admitted leprosy patientshad reaction/neuritis.

4. DF REFERENCE LABORATORY AND QUALITY CONTROL OF LABORATORIES

The Damien Foundation culture laboratory located at Netrakona started L-J culture in 2002 under close supervision of the mycobacteriology laboratory of Institute of Tropical Medicine, Antwerp, Belgium. This lab has been serving at the central role for laboratory aspects of all researches in Damien Foundation in Bangladesh.

Netrakona laboratory provides technical supports to the DF project laboratories located at the project offices. GeneXpert machines in the NKLab and in DF project laboratories are being used as a screening tool for DR TB besides the Xpert machines at the district and Upazila level clinics in DF working area. Slide DST is routinely performed besides L-J culture DST for all sputum samples collected from all RR TB patients at start of enrollment and the initial strains are also routinely sent to the Antwerp lab for first- and second- line DST through Netrakona lab.

2. DF DST LAB AT NETRAKONA

Along with L-J culture DST, FDA staining was used as the screening tool for identification of MDR TB presumptive patients and slide culture DST (which gives results in 2 weeks) for detection of MDR TB. This laboratory procedure requires very minimal equipment and infra-structure which was also established in other project laboratories afterwards. Later on, since 2012, the game changer revolutionary technology, Gene Xpert machine was made available in all DF hospital- based laboratories. This technology can detect the presence of MTB in sputum specimen and the presence of rifampicin resistance only in about 2 hours. Since then, Gene Xpert has been used as a screening tool for detection of rifampicin resistance. Slide DST has been used for GeneXpert RR samples to detect SLD resistance. L-J culture DST has been performed if X-pert MTB/RIF test shows RR and for routine monitoring of MDR TB treatment and other extensive DST for diagnosis of pre/XDR TB in DF area.

Quality Assurance (QA) system for all other laboratories of DFBD has been developed through a regular monitoring mechanism by this DF- Reference lab at Netrakona, which is working with the full technical support of SRL, Antwerp, Belgium. This laboratory serves as 2nd controller for QA system. Netrakona lab is also providing full assistance for DF clinical and lab related researches, e.g currently supporting the lab aspect of MDR TB study. Different trainings on (LED) microscopy as well as on slide-DST and Liquid-DST (LJ-DST) are performed in Netrakona.

Primary culture is done in Netrakona lab as well as conventional LJ_DST and around 50% is sent in Antwerp. Culture is done at Netrakona reference lab on LJ medium. Netrakona DF reference lab strains isolated on LJ have been referred systematically to Antwerp supra-national reference lab (SRL), but because of workload the selection has been narrowed recently.

For 2020, Reference laboratory processed 2,803 primary culture and 333 LJ-DST, 30 slide DST and 1137 Xpert test. Netrakona lab also sent one strain for each MDR patients before the treatment start of MDR/Pre-XDR and also NTM strains those are asked by ITM. LJ- DST in Netrakona is done only for Rifampicin, kanamycin and Levofloxacin that is giving reward to find out Pre-XDR and XDR. This laboratory works as the EQA 2nd controller for sputum microscopy of whole DF-Bangladesh. Netrakona Lab. is also participating for EQA of WHO for 1st line and 2nd line drugs for phenotypic DST and genotypic for Rifampicin only. EQA of SSS (Slit skin smear) is also done in nklab for DF-Bangladesh.

Netrakona lab passed for WHO round 25 and a certificate has been given for phenotypic test for Isoniazid, Rifampicin and Ethambul and Levofloxacin and as well for genotypic test of Rifampicin.

5. HOSPITAL ACTIVITIES

Besides 160 field clinics, DF also runs three hospitals with a bed capacity of 255 to take care of complicated leprosy and TB, including MDR TB patients for about 33 million population in DF area in Bangladesh. These hospitals are situated in Jalchatra- Madhupur, Raghurampur – Shambhuganj and Anantapur (Baluakanda) under Tangail, Mymensingh and Netrakona districts respectively. During the year 2020 a total of 855patients(TB: 620 Leprosy: 235) received care from DF hospitals. As the complicated patients and patients with very poor general conditions are normally referred to hospitals for intensive care, the death rate among hospitalized patientsare likely to be higher than the patients treated ambulatory from the field clinics. But the death rate among hospitalized TB patients was lower (3%) compared to the overall death rate among all TB patients including those treated in the field (5%) which indicates the high-quality services provided by DF hospitals or the timely referral. Overall bed occupancy in Jalchatra, Mymensingh and Netrakona hospitals was 34%, 23% and 30% respectively during 2020. The average bed occupancy rates per disease category and duration of stay in different DF hospitals are shown in the table below:

Table 2: Bed Occupancy and duration of stay

	TTLCP			MTLCP		NTLCP	
	Leprosy	TB	General	Leprosy	TB	Leprosy	TB
Subtotal	30%	35%	0%	32%	17%	40%	28%
Total	34%			23%		30%	
Duration of stay in days							
Average	32	29	0	37	62	30	20

Graph 14: Trends in hospital bed occupation

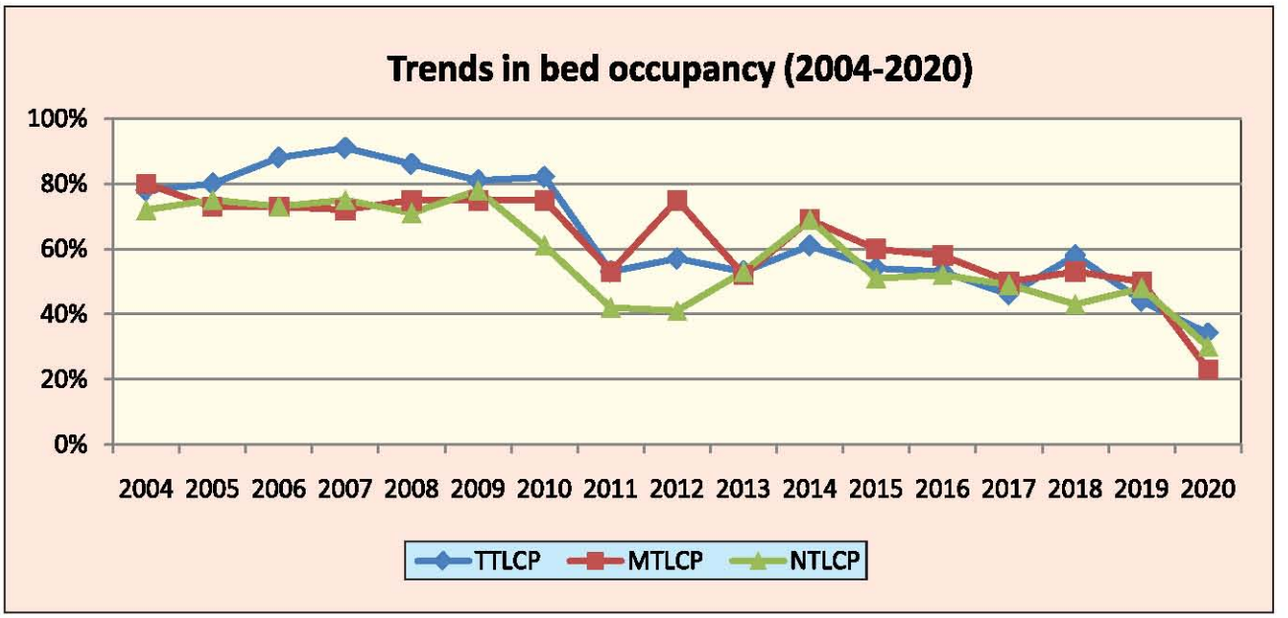


Table 3: Reasons of TB admission – 2020

Hospital	Complication	Poor general health	Drug reaction	MDR	Other	Total patient
TTLCP	66 (26%)	114 (44%)	47 (18%)	30 (12%)	0 (0%)	257
MTLCP	2 (2%)	21 (24%)	6 (7%)	44 (49%)	16 (18%)	89
NTLCP	106 (39%)	94 (34%)	58 (21%)	16 (6%)	0 (0%)	274
Total	174 (28%)	229 (37%)	111 (18%)	90 (14%)	16 (3%)	620

Table 4: Reasons of Leprosy Admission-2020

Hospital	Reaction & neuritis	Ulcer	Eye complication	Reconstructive Surgery	Other	Total patient
TTLCP	13 (30%)	26 (59%)	0 (0%)	0 (0%)	5 (11%)	44
MTLCP	14 (11%)	101 (76%)	2 (2%)	1 (1%)	15 (11%)	133
NTLCP	9 (16%)	43 (74%)	2 (3%)	2 (3%)	2 (3%)	58
Total	36 (15%)	170 (72%)	4 (2%)	3 (1%)	22 (9%)	235

The organization runs an OPD for general patients from Jalchatra hospital (TTLCP) to serve the local community and ensures twenty-four hours emergency service for the general patients. During the year 2020, a total of 19,127 general patients came for consultations at the OPD and a total of 349 patients received emergency care, out of which 247 were out of office hour.

6. Advocacy Communication & Social Mobilization (ACSM)

ACSM has been continuingfrom the period of MDG and Stop TB strategy to the SDG of End TB Strategy (up to 2035)as an important component of the TB control Programto address four key challenges like, improving case detection and treatment adherence, combating stigma and discrimination, empowering people affected by TB and mobilizing political commitment and resources for TB.

The objectives of ACSM are to increase awareness, bring about behavioral change, influence social norms, and expand community support in TB control Program those are important for sustaining community level support for TB activities. In line with the Global and National strategy the Damien Foundation Bangladesh (DF) is actively involved in disseminating TB & Leprosy related health messages through a variety of communication channels to improve and sustain TB & Leprosy related safe behavior among the individual and community. These are as follows:

- Community & OPD health education
- Orientation of village doctors
- Meeting with cured TB patients/elites of the community (TB club meeting)
- Orientation of MO/GP
- Meeting/orientation with different NGO staff/Govt. health service providers
- Health Education in out-patient and indoor department of health service providing institutes
- Mobilization through miking at community/market places for and mobilization through house to house visits
- Patient to patient education for self-care
- Observance of World TB & Leprosy Day
- Dissemination of TB message through cable TV network
- Training and refresher course for own staff

3. Community based health education

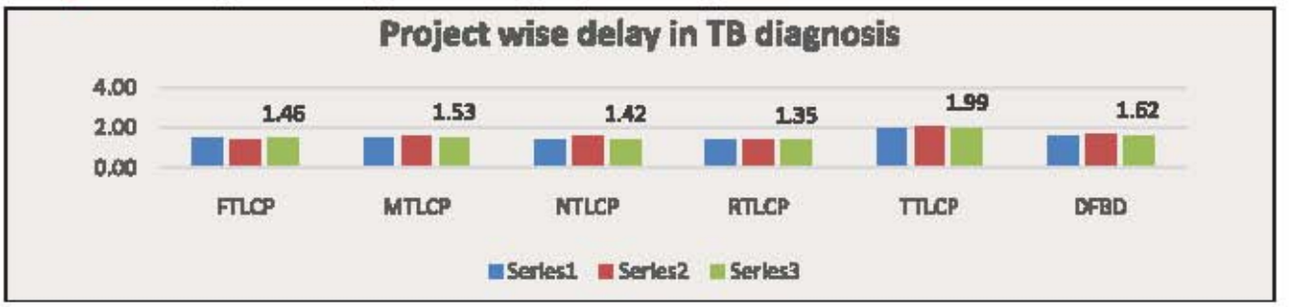
Table 5: ACSM activities in 2020 at a glance-

Training/Orientation and other ACSM activities conducted in 2020		
Activities	**Session Conducted**	**Participant Attended**
Training/Orientation/Refresher		
Training for Village Doctors, Pharmacy Holders (1 day)	278	6936
Orientation for Medical Doctors (Public-Private)	47	918
Other ACSM Events		
TB Club Meeting	207	5368
Health Education session at community level	201215	1016757
Health Education in Out Patient Department (OPD) of Upazila Health Complex, Sadar Hospital, Medical College, Sub Center, Community Clinic	75485	992179
Health Education session in Indoor of Upazila Health Complex, Sadar Hospital, Medical College	15190	223027
Health Education session in Damien Foundation clinic/treatment center	153282	480262
Dissemination of TB message through cable TV network	23 units in 2020; 10-15 times for each unit per day	
TB Campaign at Sub district/Urban areas (Remote and underserved areas)	429	
World TB and Leprosy Day celebration	Celebrated at National and local level: total 22 events	

World TB Day and World Leprosy Day of this reporting year have been observed on 26 January 2020 and 24 March 2020 respectively. The days were observed in collaboration with local govt. health authorities.Due to COVID-19 situation observance of the days were limited to 23 upazilas out of total 113 DF working upazilas.

The impact of several ACSM activities and dense network of services ultimately plays an important role in the promotion of TB service facilities in the community, which leads to early diagnosis. As a result, the main duration of diagnostic delay (patient delay plus health service delay) for TB is decreasing. The overall delay is continued at less than 2 months in all DF projects till 2020. The delay in case of females to total patients is almost similar as the delay for males.

Graph 15: Diagnosis delay in 2020- project and gender wise



7. Engaging all care providers and community

7.1 Public-public and public private mix approaches

Engaging all care providers through public-private mix (PPM) approaches is an important core component of TB Control Program. The engagement of all relevant health-care providers is essential to meet the TB-related Sustainable Development Goals and reach the targets for TB Control Program.

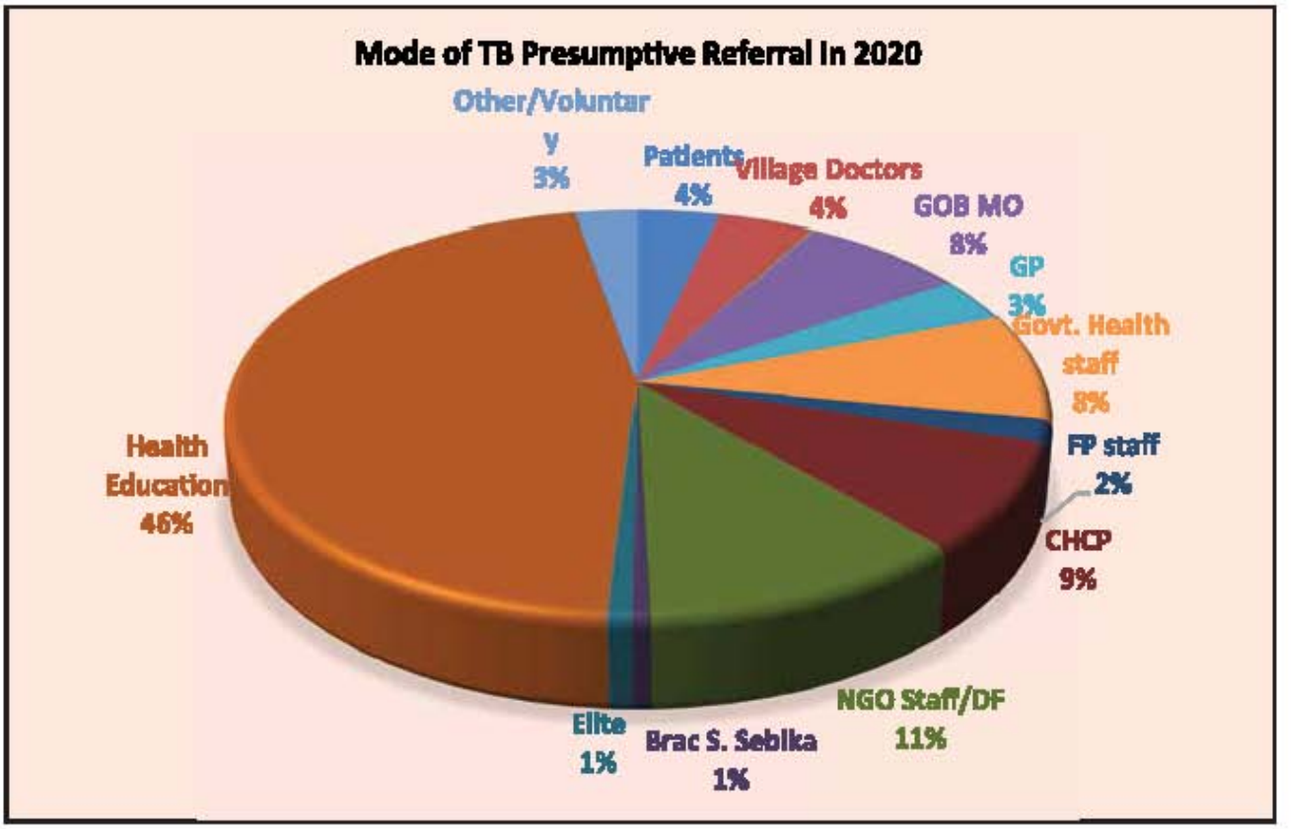
In the project area, Damien Foundation successfully involved all health institutions belonging to public sector health care networks, such as public hospitals, health care providing facilities at rural levels, medical college hospitals, prison health facilities and workplaces.

4.Medical Officer (MO) & General Practitioners' (GP) orientation

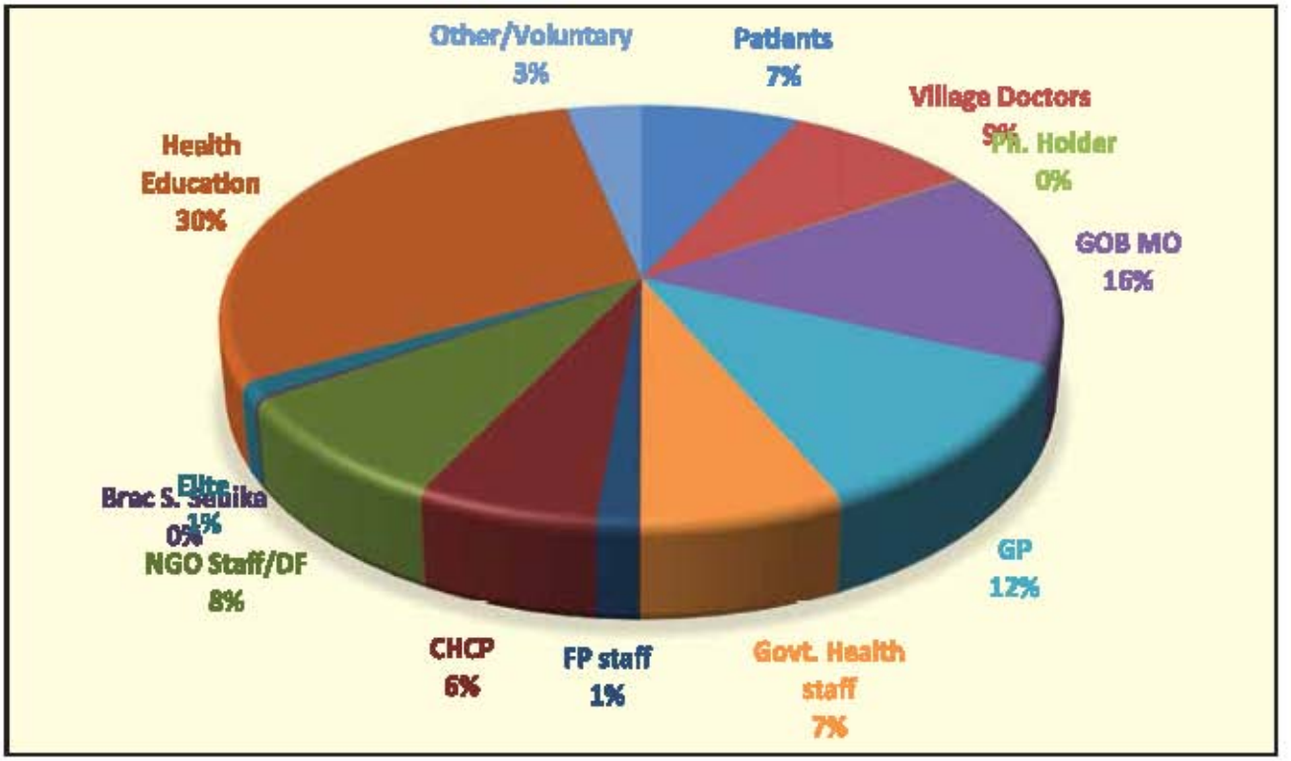
Besides, a large number of non-graduate private practitioners (village doctors), graduate medical practitioners, private hospitals and NGO health facilities were involved in referral of presumptive patients and providing DOT.

5.Non-Graduate PPs (VD/Pharmacist) orientation

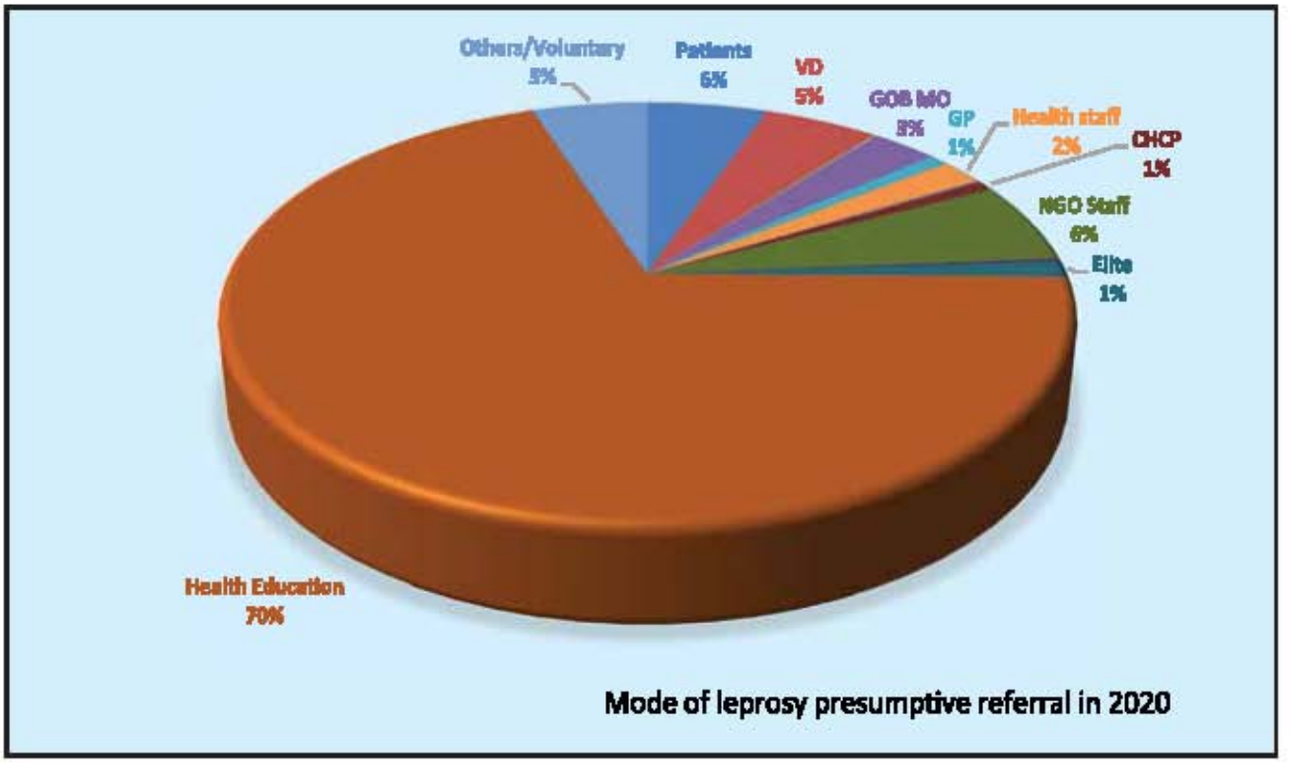
Graph 16: The graph below shows contribution to referral of presumptive and case detection by different providers and sources.



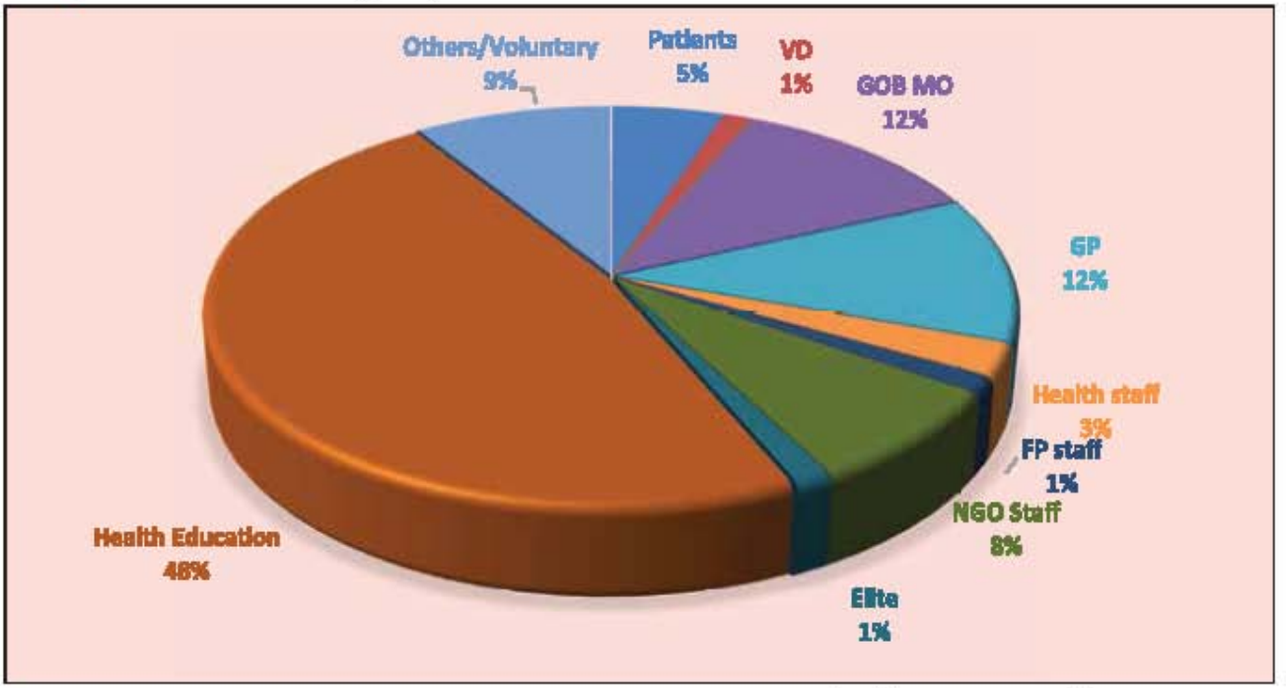
Graph 17: The graph below shows contribution to TB case detection by different providers and sources.



Graph 18: Mode of Leprosy Presumptive Referral



Graph 19: Mode of Leprosy PatientsDetection



Mode of leprosy patient detection In 2020

7.2 Partnership with the Village Doctors

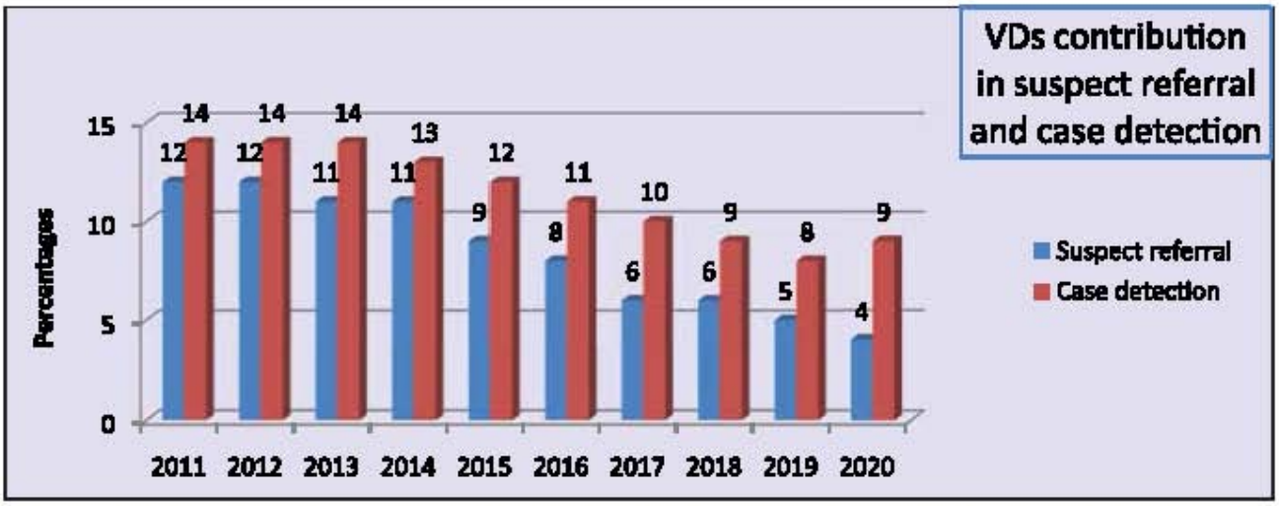
Over the period, the Damien Foundation partnership with the Village Doctors (VD) has been proven as one of the most effective and sustainable approaches; thus, the partnership with the VD was continued in 2020. The Village Doctors continued their important role in contributing to case detection by referring Presumptiveand providing DOT services to the community as in previous years.

6.Village Doctors'(VD) Orientation

Table 6: Village Doctors in 2020

DF Efforts in 2020 with VDs			Contribution by Village Doctors		
	Session	Participants		Presumptive	Patients
Training (1 day)	278	6936	TB (Number)	13,398	1,027
			% amongtotal	4%	9%
In addition to the referral, the Village Doctors were involved as DOT providers for 12,499 TB patients, 58%of the total TB patients.					

Graph-20: Contributions of village doctors in TB case detection



7.3 Working with the Government Health & Family Planning staff and General Physicians

DF partnership with the Government Health Personnel is another cost-effective approach for case finding and case holding. During last year, this partnership approach has been strengthened.

Table 7: Govt. Medical Doctors and General Practitioners in 2020

DF Efforts in 2020 with Medical Doctors (GoB MOs & GPs)			Contribution by Medical Doctors		
	Session	Participants		Presumptive	Patients
Orientation for Medical Doctors (1 day)	47	918	TB (Number)	34854	3208
			% among total	11%	27%
			Leprosy (Nr.)	165	18
			% among total	5%	27%

In the project area, the Govt. Medical Doctors continue their support in diagnosing and managing complicated patients (both TB & Leprosy) at the early stages and facilitating different courses/orientation for other stakeholders.

Govt. Health & Family Planning staff in 2020

Support of the Government Primary Health Care Field Staff in referring presumptive patients to the clinic and monitoring of DOT in the community has been continued as in previous years.

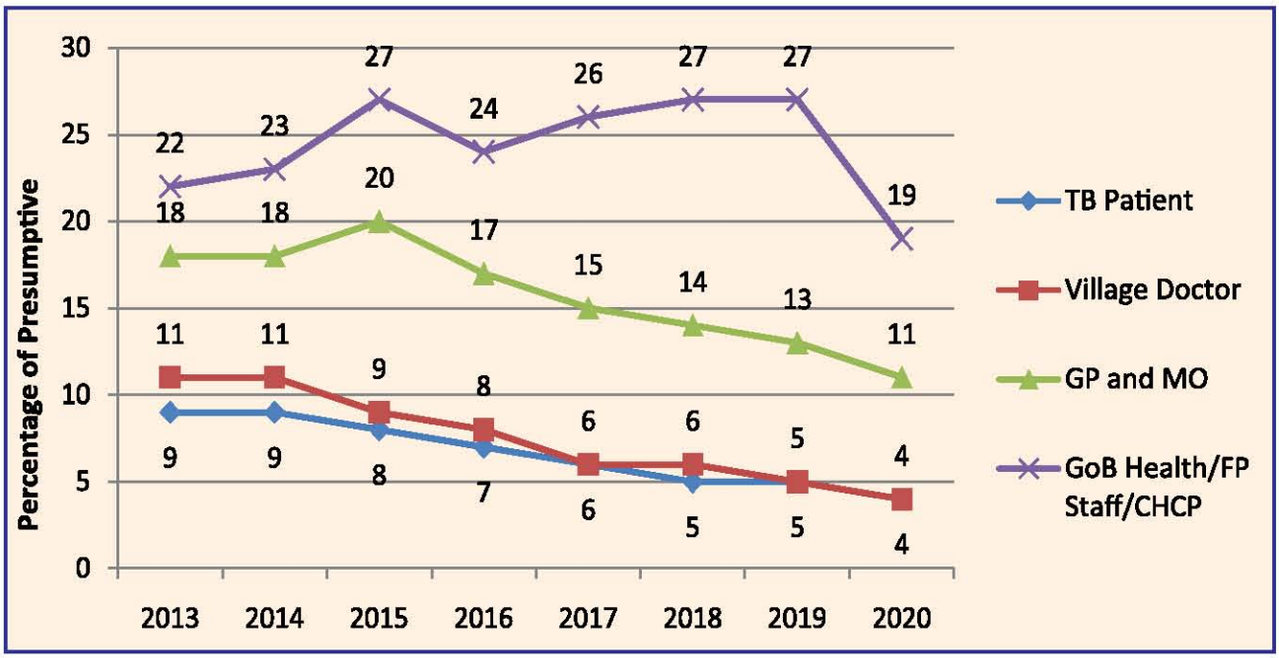
Table 8: Govt. Health & Family Planning staff in 2020

DF Efforts in 2020 with Govt. Health & Family Planning staff			Contribution by Govt. Health & Family Planning staff		
	Session	Participants		Presumptive	Patients
Review meeting/ Orientation (1 day)	104	5200	TB (Number)	59,102	1668
			% amongtotal	19%	14%
			Leprosy (Nr.)	137	0
			% amongtotal	4%	0%

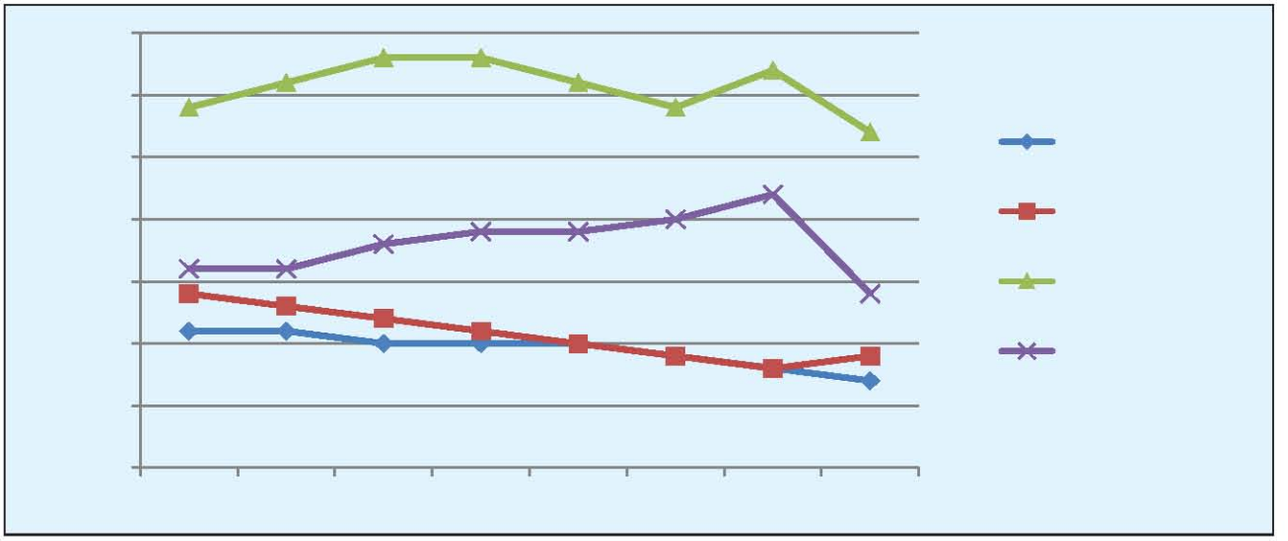
Besides referral, Govt. Health & FP staff play an important role in providing DOT. A total of 3,186 TB patients received DOT under their supervision in 2020, which is 15% contribution to the total DOT monitoring. Their involvement increased the DOT expansion in the community, which is very much important to improve patient friendly access to the services and enabling community participation in TB control for enhancing sustainability.

Report of last eight years shows that there is a slow decreasing trend in referral of TB presumptive by Govt. MO and GP. Around 1-2% decrease per year. But, their contribution in TB case detection has been more or less static except for 2020 which was due to to COVID-19 situation.There is a slight increasing trend of referral of presumptive by govt. health care providers and also increasing trend in case detection from their referred presumptive which is a good sign of strengthening GO-NGO partnership.This increasing trend of involvement of field health staff also seems a positive sign for sustainability. Following graphs shows the trend of TB presumptive and case detection in last seven years (2013 to 2020) -

Graph 21: Comparison of trend of TB presumptive referral from Cured TB Patients, VD, GoB Staff and GP-MO



Graph 22: Comparison among trend of contribution from VD, GoB Staff and GP-MO for TB patient detection



7.4 Empowering patients and communities

Considering the pivotal role of Advocacy, Communication and Social Mobilization (ACSM) in the field of TB control and Leprosy elimination the ACSM activities have been continued in collaboration with the Government (NTP & NLEP), with the financial support from the Belgian Government through Damien Foundation and GFATM.

The effect of several ACSM activities and dense network of services has been revealed through sustaining the referral of presumptive patients and increasing trend among certain group of people as well. The clinic staffs were involved with several ACSM activities besides routine activities on diagnosis, treatment and follow-up.

7.4.1 Working with the Former patients and Elites (TB Club Meeting)

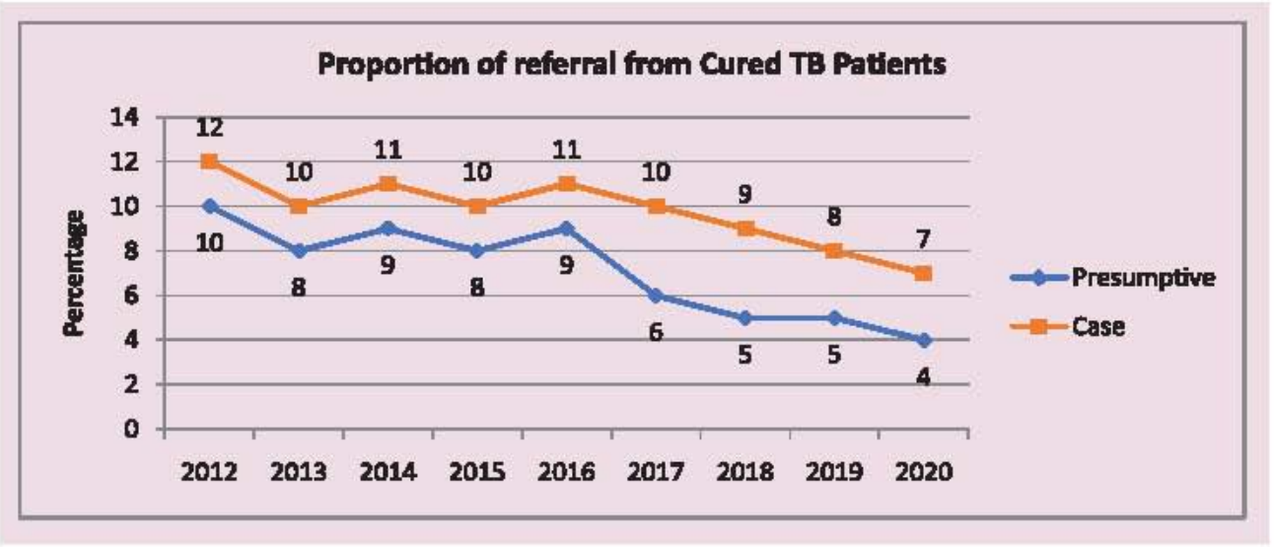
The objective is to involve cured patients from the community to increase the case finding and to encourage them to refer presumptive TB patients and for early detection of new case and relapse. Since 2000, DF has emphasized involving former patients in the identification of presumptive TB patients from the community and for referring them to health centers. This involvement was extended to organizing "TB clubs" of former patients at the union level (a union is a small administrative unit with a population of about 20,000). The vast majority of the cured TB patients are from the poorest segment of the society, but their role in TB & Leprosy control activities has given them an identity as the best advocate to the community in terms of referral of presumptive TB & Leprosy patients.

Table 9: Working with former TB patients & Elites

DF Efforts in 2020 with Cured Pat ients and Local Elites			Contribution by Patients and Local Elites		
	Session	Participants		Presumptive	Patients
TB Club meeting at union level (1 day)	20 7	Patients - 5,3 68	TB (Number)	11,931	857
			% among all	4%	7%
			Leprosy (Nr.)	250	3
			% among all	7%	5%
		Elites - 570	TB (Number)	2563	135
			% among all	1%	1%
			Leprosy (Nr.)	87	1
			% among all	2%	2%
Each cured patient is a living example for the community that "TB is curable".					

7. TB Club Orientation

Graph 23: Contribution of former TB patients in referring presumptive TB patients and smear positive case detection during last seven years (2012-2020)



7.4.2 Health Education Activities in Community and Govt. Health Facilities:

Health education events do create greater social commitment and support behavioral change in order to ensure access to treatment and care for all, particularly the poor, vulnerable and hard-to- reach populations. The activities include disseminating accurate information on the diseases and dispelling myths about TB/Leprosy, educating and encouraging people with their family members to be more actively involved.

Several events of health education were conducted in the year 2020.

Table 10: Health Educational Activities in 2020

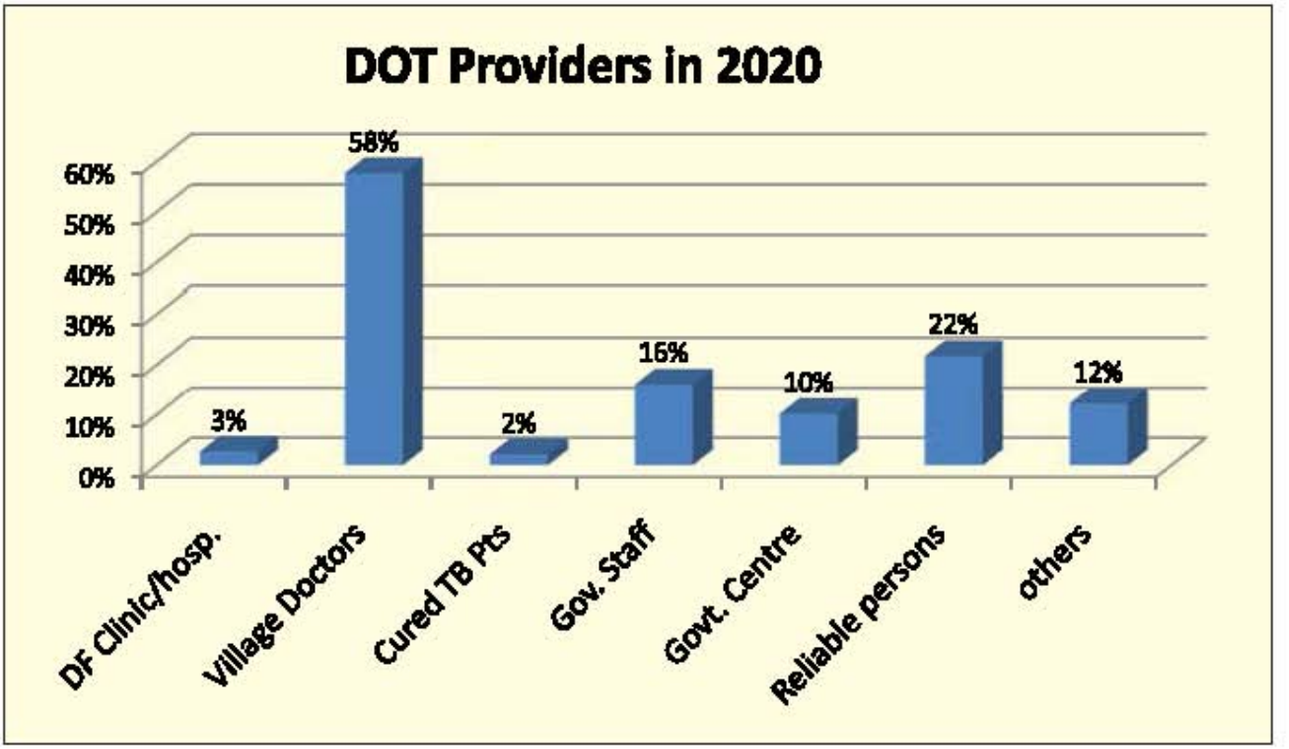
Health Education Activities in 2020			Contribution from Health Educational Activities		
	Session	Participants		Presumptive	Patients
Health education session in community	201,215	1,016,575	TB (Number)	144,110	3,469
HE session in OPD (UHC, SH, MC, FWC, SC, CC)	75,485	992,179			
HE session in INDOOR (UHC, SH, MC)	15,190	223,027	% among total	46%	29%
HE session in DF clinic	153,282	480,262	Leprosy (Nr.)	2339	36
TB Campaign	35		% among total	67%	55%
Total	445,207	2,712,043			

Health education activities helps to enhance community participation which leads to increased awareness, promote health-seeking behavior, inspire dialogue, and heighten community concern and action for TB/Leprosy control.

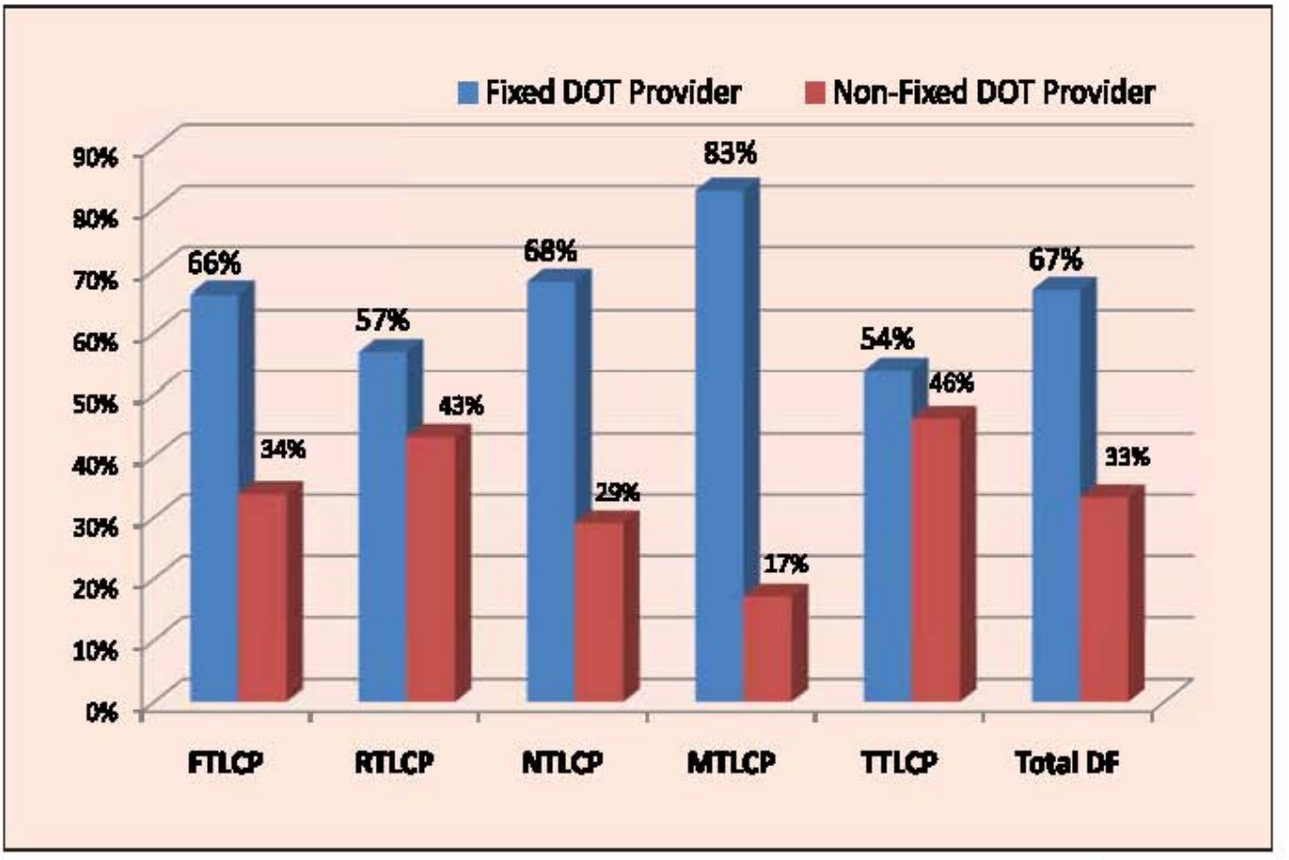
7.4.3 Community participation in DOT expansion

In compliance with the global strategy of maintaining high-quality DOTS, Damien Foundation Bangladesh, since initiation of the TB control Program, has decentralized DOT to the community level to make it more patient friendly by involving VDs, GOB Health and Family planning staffs, other NGO staffs, cured patients, school teachers, religious leaders and local elites. In each Union, there are 5 to 6 Fixed DOT Providers (FDP) to provide DOT to the patients, this next to other Non-Fixed DOT Providers. The graph bellow shows the involvement different categories of DOT providers in TB Control Program, where about 58% of them are Village Doctors in DF project areas.

Graph 24: DOT Providers in 2020



Graph 25: Fixed and Non-Fixed DOT Provider in DF project areas in 2020



8. Operational Research in Damien Foundation Bangladesh

Damien Foundation Bangladesh conducted several operational researches next to its routine activities aiming at defining/establishing cost-effective means of diagnosis & treatment, documenting/validating different research findings/publications from other countries and to provide input to the national and international Health Agencies to develop/recommend new tools and strategies for different NTPs based on study results obtained in DF Bangladesh.

8.1 Assessing the Effectiveness of Intensified Extended Contact Survey (IECS) to Routine Contact Survey (RCS) in Bangladesh

In 2020, Damien Foundation started implementation of this study project with the funding support from Leprosy Research Institute (LRI) and in collaboration with ITM, Antwerp, Belgium; MSF, Belgium; Erasmus MC, University Medical Centre Rotterdam. Although the agreement with the donor was signed in 2019 but due to process delay in getting approval from different authorities the project was actually started in March 2020. As per agreement this project is supposed to be ended in August 2023, but the implementation of the project was seriously affected due to COVID-19 situation in 2020 the donor agreed to extend the project period for one more year.

Realising the fact and experiences from different countries that leprosy often clusters not just within households but also within neighbourhoods. Apart from screening household contacts it would therefore be equally important to screen neighbourhood contacts. Therefore, a new approach of contact screening based on door-to-door screening of a wide circle of neighbourhood contacts of new leprosy patients will be tested through this operational research project. Areas to be screened will be determined based on geographical coordinates of the affected households, ensuring a targeted area that is wide enough to avoid identification of the index case households. With this 'Intensified Extended Contact Survey' approach, hereafter called the 'IECS Strategy', and through this strategy it is expected to achieve early case detection, reflected in a reduced prevalence of G2D among new patients.

Main objective of this operational study project is to assess the impact of the IECS strategy in reducing the proportion of patients with G2D at diagnosis. Moreover, reducing the delay in diagnosis and cost effectiveness of the project are also important aspects of the project to assess feasibility of this strategy to run in future in the programmatic condition. This is a cluster randomized intervention trial where, out of total 14 DF districts, 7 districts have been selected as intervention area and 7 as control area. A total of 658 patients (328 in each of intervention and control arm) will be enrolled under this project. GPS trackers are used for collecting coordinate (longitude & latitude) of the patients' house which is used to draw line around the patient house (covering about 75 meter radius) through QGIS software and create a GPX file. This GPX file is used to locate the patients house and the area (about 75 meter radius around patient house) to be screened (in intervention area) with the help of android mobile set.

In intervention districts consenting incident leprosy patients are provided with a GPS tracker for a period of one week. The GPS tracker records a GPS point every three minutes. This allows to identify on a satellite image such as Google Earth the exact location of the home of the patient. Then either a complete hamlet is outlined or a circle of 75 meters around the index case household is drawn. This is the area for door-to-door screening. Data on all individuals screened plus geographic coordinates of households are recorded in an Android app. If secondary leprosy cases are found, the area to be screened is expanded accordingly.

So far till December 2020, a total of 140 leprosy patients were enrolled – 86 in control area and 54 in intervention area. The figure shows that the intervention area, the mainly IECS activity, was affected more by COVID-19 than the control area. As a result, very few IECS was possible to conduct. So, no result of IECS was obtained in 2020.

8.2 Diagnosis and Management of MDR–TB

Since 1997 DF started to treat MDR-TB patients using a succession of standardized regimens of MDR TB under operational research conditions, which led to the development of a highly efficient, safe, short and relatively cheaper regimen initially resulting in close to 90% cure with minimal bacteriological failure or relapse, and without amplification of second-line drug resistance.

Additionally, DF has developed locally appropriate, low cost, simple and safe laboratory screening and drug susceptibility testing methods (FDA vital staining; slide DST) which has led to an increasingly early screening, diagnosis and treatment of drug resistant TB patients. Currently 4 very simple laboratories in DF areas are capable of delivering min. 95% correct diagnoses of TB resistant to rifampicin, fluoroquinolones (high or low level) and 2nd-line injectables, besides its differentiation from non-TB mycobacterial disease, and this within 2 weeks.

The more efficient but relatively expensive molecular diagnosis of rifampicin resistance by GeneXpert machines have already been installed and running in 30 sites in DF working area including 3 DF hospitals (donations from NTP/USAID) which are currently being used to detect RR TB patients. Moreover, 31 more Gene X-pert machines are in the process of installation. Sputum samples from RR TB patients are then processed for SL DST to detect drug resistance to quinolone and SLI drugs.

For these achievements in the field of drug resistant TB, DF Bangladesh received intensive support from the Mycobacteriology Unit of the Institute of Tropical Medicine in Antwerp, Belgium, with gradual transfer of capacity to its reference laboratories (the main one at its own hospital in Netrakona).

In 2020 enrolment of MDR TB patients on shorter 9-month regimen was continued. A total of 2,651 MDR TB patients have been enrolled under 9-month shorter regimen since 2005 and the enrollment during 2020 was 207. Among them, 84 (41%) from greater Dhaka division (that include Greater Mymensingh and Faridpur region of DF) and 123 (59%) from Rajshahi division (including DF Rajshahi project area). Male and female proportion among total MDR TB patient was 70% and 30% respectively.

8.3 Drug resistance monitoring

Monitoring of the TB drug resistance in DF Bangladesh projects is in place since end of 1995, mainly through systematic referral of sputum from return after lost to follow up, relapse and failure patients, besides the random surveys done in 1995 and 2001. From May 2002 onwards, most primary cultures were handed over by Antwerp to the reference lab in Bangladesh (Netrakona). Netrakona lab started LJ DST in 2008 and since 2010 this lab is performing LJ DST independently under the direct supervision and control of Antwerp lab. Selective strains are sent for quality control to Antwerp lab besides the routine participation in proficiency testing. The total number of inoculated cultures has risen considerably during the years. Annually more than 3,000 sputum samples are processed in Netrakona lab, most of which belong to follow-up samples of MDR TB patients. Since 2004, following the introduction of rifampicin throughout intermittent regimen in the country, an increase in MDR TB rate was observed. The analysis of trends in RMP and Ofloxacin resistance incidence for all DF districts expressed per 1000 smear positive patients (new+Rett.), show at least that there is no increase in rifampicin resistance over the last several years. Considering only RIF-resistant isolates, fluoroquinolone resistance has reached 20%, and the trend seems to be increasing. Apart from MDR follow-up specimens, XDR and 2nd-line injectable resistance are virtually absent. NTP Bangladesh started 2nd national TB drug resistance survey in 2018 and completed in 2019. A total of 40 clusters were selected, all consecutive sputum smear positive samples were included in the survey. All sputum samples were transported to NTRL for GeneXpert testing and culture. Among the 40 clusters, there were 4 clusters belonging to DF working area. The 2nd national TB drug resistance survey was completed and submitted to WHO for publication.

8. 4 FDA staining and slide DST

Since mid-2008, slide culture and (FDA) vital staining are used decentralized by all DF Bangladesh projects, except for FTLCP where the lab is still suitable only for FDA. FDA staining was installed in 8 clinics of Greater Mymensingh, preparing for the OneRIF clinical trial on earlier detection of MDR-TB and effect of double dose rifampicin first-line treatment. FDA results at 2 weeks treatment was used as screening to define samples for further tests (GeneXpert, slide DST). Following the WHO recommendation to abandon Cat.2 for patients with INH resistance but not MDR TB, expansion of FDA staining is planned to more sites for strengthened Cat.2 study where FDA staining will be performed on sputum smears at start and at 2 weeks.

FDA staining of sputum smears is now being used for declaration of failure of MDR regimen: FDA result at least 1+ in 2 occasions one month apart from 5 months onwards, so failure of MDR regimen is declared at 6 months or later.

Slide DST is performed to detect 2nd-line drug resistance. This test provides information on Kanamycin and levofloxacin results at different concentrations besides rifampicin in 2 weeks' time described in the laboratory section.

9. Human Resource Management & Development

9.1 Overview

To provide high quality healthcare service to the community and to ensure smooth functioning of 160 DF field clinics and 3 hospitals, a total of 673 local staff are involved. Out of this, 483 staffs (including Field Level Staff) are involved in carrying out the field activities under the supervision of 35 Supervisors (TLCOs, Sr. TLCO, Monitoring & Evaluation Officers or Field Coordinators) and 6 Medical Doctors. Among the total staff 220 Field Level Staff are involved in community level active case finding activities. These Field Workers have been trained in identifying TB & Leprosy presumptive and in preparing smears. The male-female staff ratio of Damien Foundation Bangladesh is 2:1in 2020.

9.2 Workshop/Training/course organized by Damien Foundation throughout the year 2020

To develop skills in different key staff, the DF Bangladesh organized several workshops in the year of 2020. A detailed schedule of the workshop/training is given below:

Name of Training Course/Orientation	Participants	Duration, place & organized by
TLCA basic training on TB and Leprosy	Total 21 C-TLCA :3 from RTLCP, 8 from MTLCP and 10 from FTLCP.	Four weeks classroom training from 15 November 2020 to 10 December 2020 at Jalchatra DF training centerand For weeks filed training from 11 December 2020 at respective posting places.
Refreshers Training on TB for Fiel d Staff	372 DF Staff (Clinic staff & Field workers)	A total of 15 three -day's refreshers training courses were organized in five DF projects for DF clinic staff (TLCA) and Field workers in 2020 (10 courses in 3rd quarter and 5 courses in 4th quarter).
Capacity Building Training.	72 Supervisor and Mid-level DF staff	A total of 3 t hree -day's capacity building training courses were organized for DF supervisors and Mid-Level Managers (PD, MO, M&E Officer and TLCO)
Capacity building training on compliance of Income Tax and Value Added Tax.	Total 07 Participants: 4 Accounts Officers, 1 Accountant, 1 Accounts Assistant and 1 logistic Officer	03 -day training from 21.06.2020 to 23.06.2020 organized at Jalchatra Training Centre by Finance Department of Damien Foundation.
Workshop on procurement procedure with compliance of income tax and value added tax rules & regulations	Total 30 participants including Project Directors, Medical Officers, M&E Officers, Accounts Officers, Logistic Officers, Admin office r, procurement related staff and Office Secretaries.	01- day workshop was organized on 16.01.2020 at Jalchatra Hospital Training Centre by DFCO.
LED Microscopy Training	08 TLCA s/ATLCAs participated	A4-day training course organized at CDC, Faridpur by DF Faridpur project from 01 to 04 November 2020

8.TLCA Refreshers Training on TB and Leprosy at Mymensingh

9.3 Participation in different in-country training courses in 2020 :

To develop skills in different fields, DF staff members attended different in-country training courses in 2020, organized by NTP/BRAC/LTCC. A detail of the training courses & participants is given below -

Name of Training Course/Orientation/Workshop	Participants	Date, Duration & Organized by
6-day refresher's training on LED microscopy	18 DF TLCAsfrom Faridpur and Rajshahi project participated in this training course	Training courses organized by NTP atdifferent places in 2020
Training on Integrated TB & COVID-19 Testing using GeneXperts	05 TLCAs participated in this training	One-day training course organized by NTP at NTRL, Dhaka in 2020
Training on eTB Manager	20 TLCAs participated in this orientation training	Training course organized by NTP at different places in 2020
Training of laboratory personnel on HIV Counselling and Testing	04 MT-Labs from Rajshahi, Mymensingh, Tangail and Netrakona project of DF participated in this training course	A five-day training course was organized by NTP at IDH, Mohakhali, Dhaka from 8 to 12November 2020
One-day orientation training on integrated TB and COVID-19 testing using Gene Xpert Machine	04 participant from DF projects participated in this orientation training	One-day orientation training organized by NTP on 06 September 2020, NTRL Dhaka
Training on Gene X-pert	05 TLCAs participated in this training course	Three-day training course organized by NTP in different places in 2020.
Orientation on TB	22 TLCAs participated in this orientation training	One-day orientation organized by NTP at different places in 2020

10.Workshop on procurement with DF Management and AOs

11.Training on Income TAX & VAT with DF Management Team and Accounts Personnel

12. Orientation Medical Officers & General Practitioners:

9.4 Participation in International training courses/meetings/conferences including webinar :

With a view to update knowledge and to share experience, DF Bangladesh staff members participate in different international training courses, meetings, conferences, workshops, seminars and also provided technical support by DF staff around the world. In 2020, the following DF staff attended conferences, meetings, training courses and provided technical support as focal person as per schedule below:

Conference/ Meeting /Training	Participants/focal person	Place, Duration & Organized by
Online Union conference on TB & Lung health	Dr. Aung Kya Jai Maug, Country Director, Dr. Dipak Kumar Biswas, Medical Coordinator	Held from October 20 to October 23, 2020

10. Program Management and Coordination

At the project level, overall implementation management of program is done through a team approach by the Management Team (MT). The Management Team is headed by the Project Director with the Hospital/Field Director, Medical Officer/consultant, M&E Officers/Field Coordinators/Senior TLCOs as MT members. The MT discusses the day-to-day management issues on weekly basis and decides on the major issues, including issues referred from TLCO meetings, on quarterly basis. They can also organize the MT meeting at any time to deal with urgent issues.

An important process of Program Management and Coordination is the regular monthly TLCO meeting, where all TLCOs, FCs, M&E Officers/Medical Officers, Hospital/Field Directors and Project Director attend. The TLCOs, in fact, serve as the main bridge between the project office and the field clinics besides the project-based supervisors (doctors and M&E officer).

In depth analysis of monthly progress reports including performance, achievements, challenges and problems are done through active participation of the participants present, and decisions are taken, recommendations are made or action plans are adapted to improve the situation. Dissemination of information and instruction from national level, exchange of information between field clinic and project/DFCO, monthly clinic wise planning, settlement of bills and collection of monthly running / different costs of the clinics take place in these monthly meetings.

In order to assess case detection and results of health education activities, a manual geographic information system is maintained in each Upazila. This information helps to identify areas with low case finding and enables the staff to identify the barriers for that specific area and to act accordingly.

Information / instruction flow takes place mostly through emails between national level office and the project offices on a regular basis. Besides, mobile phone communications are used for urgent matters between national & project levels, and field clinics. In this way, the national office is kept updated on what is happening at any point at field level.

For facilitating better coordination representative/s from Damien Foundation Coordination Office at Dhaka also participated in some project level meetings of Management Teams and TLCO meetings and guided them.

11. Monitoring, Supervision &Evaluation

11.1 Internal monitoring, supervision & Evaluation

Damien Foundation is maintaining its monitoring, supervision and evaluation according to its a Monitoring and Evaluation.Monitoring of case detection, sputum conversion, results of treatment and quality control of smear microscopy are routinely done and evaluated quarterly. In addition, drug resistance surveillance is continued through routine sputum culture and DST of failure and relapse patients. Monitoring MDR TB treatment through regular updating of MDR files are routinely done by DFCO. The quarterly collected data from the projects are being used to monitor the performances. Cross checking between different datasets allows assessing the quality of the data and feedback is given to the projects in order to improve the performances. Reports are cross-checked with registers and cards by supervisors during their supervision visits and feedback is given on the spot to the field staffs.

Monitoring of activities and supportive supervision of staff is done through field visits by different levels of staff. At the field level, TB & Leprosy Control Officers (TLCOs) are the first line staff for monitoring of the project activities in 3-4 upazilas (Sub-districts) each. They supervise the first line field staff, TB & Leprosy Control Assistants (TLCAs) / paramedics, Assistant TB & Leprosy Control Assistant (ATLCA) and Clinic Assistants (CAs). TLCOs monitor all the activities implemented at the field level, provide need-based support and build/strengthen the capacity of the field staff for better implementation or improvement.

A TLCO regularly visits each TB clinic/lab/UHC under his/her mandate to monitor and supervise at least once a week and check/cross-check the clinic documents including registers, reports, treatment cards and other records. S/he monitors case detection, sputum conversion, treatment results, quality control of sputum microscopy, and drug resistant and failure and relapse patients. S/he also pays need-based visits to the community and discusses with patients, DOT providers and other stakeholders to cross check status of DOT implementation, patient follow up, social mobilization and presumptive referral activities. Monitoring and follow-up of project performances is carried out through analyzing the achievements realized, compared to the planned activities and results. Quarterly and annual reports are used to monitor the project performances.
M&E Officer (M&EO), Medical Officer (MO) and Field Coordinator (FC) pay monitoring visits to a TB clinic/lab/UHC at least once in 3 months (quarterly) as well as additional visits based on the needs of the program/project. During the monitoring visits they supervise the activities of TLCO and other field staff, guide them, provide technical supports and build or strengthen their capacities through on-the-job training.

The Project Director, who is the overall responsible person of a project, and the Hospital Director/ Field Director are the management staff at the project level of DF, and they also monitor field activities on a sample basis as well as according to the needs.

From the Damien Foundation Coordinating Office (DFCO), the Medical Coordinator, M&E Specialist and TB Coordinatorvisit the field especially for programmatic monitoring to provide professional and technical support. Finance Director (FD) and Finance Manager visit the field for need based monitoring purposes. The Country Director of DF also pays visits based on the needs of project management and to discuss strategic issues (program/project).

11.2 Supervision & monitoring from NTP& other Govt. Officials:

DF field projects, hospitals & clinics were routinely visited by the different officials of the government health services including Director MBDC/Line Director and other representatives from NTP, Civil Surgeon and other govt. officials.

Also, top level personnel visited DF projects, hospital & clinics from Ministry of Health, Bangladesh Country Coordinating Mechanism (BCCM), Local Funding Agent (LFA), National TB Control Programme (NTP), PR-BRAC etc, Representatives from WHO, Directorate General of Health Services (DGHS) including National TB Control Programme and Local Health Authorities (Civil Surgeon).

13. Visit of Dr. Abu Naser, WHO Consultant to DF Mymensingh project with NTP team

14. Visit of Prof. Dr. Samiul Islam, Line Director NTP at DF Chapai Nawabganj clinic

11.3 Supervision by DF Brussels

DF Bangladesh project also supervised and monitored through regular communications and field visits from Damien Foundation head quarter in Brussels. In 2020, Mrs. Celine Venden Bergh, Project Manager, visited Bangladesh from 15 February to 01 March 2020, Dr. Nimer Ortuno Gutierrez, Medical Adviser, also visited twice: 26 February to 02 March 2020.

15. Faridpur project visit by Ms Celine Van den Bergh, Project Manager, DFB

16. Mymensingh project visit by Ms Celine Van den Bergh, Project Manager, DFB

17. Mymensingh project visit by Dr. Nimer Ortuno Gutierrez, Medical Adviser, DFB

12. Impact of COVID-19 on DF project and mitigation strategies

The first 3 COVID-19 cases were identified on 8th March 2020 and the government declared national holidays from 27th of March 2020, there was restriction of movement and gathering of people throughout the country. Quarantine, isolation and separation of suspected COVID-19 cases and contacts and hoisting a red flag to mark the house having covid-19 with rapid spread of the disease made people scared and initially they were not coming forward for testing due to fear of being isolated. Lack of awareness among the people about the prevention of this new emerging and rapidly spreading disease along with limited testing capacity, limited access, fear, stigmatization/isolation etc. allowed rapid and silent spread of COVID-19 virus among the population.

Health care providers including the doctors also became scared and entry to the upazila health complexes for people having cough were restricted, many private chambers were closed. People also stopped going to health complexes to seek care as these places were considered as the potential places to contract coronavirus because these places were used to collect samples for corona testing.

TB & and leprosy case detection seriously affected throughout the country from April to June 2020, came down to around 20% compared to previous year (2019), then it was gradually increasing with the lifting of restrictions and increase of field activities. Most routine activities like contact tracing, ACSM, Training etc. were stopped during 2nd quarter of 2020. More than half of the TB-Leprosy clinics affected due to lock down and movement restriction situation during 2nd quarter of 2020. There were days or weeks with no TB presumptive attending the centre. In some of the areas, villagers did not allow any health staff to enter into the village as these health staff are potential carrier of Covid-19 according to their perception. As a consequence, there were less detection of 5910 TB cases and 87 leprosy cases in 2020 compare to 2019. Total 36 DF Bangladesh staff (out of around 600) were found COVID-19 test positive.

To reduce the risk of exposure and getting covid-19 infection among DF staff members, DF clinics were kept open daily with one staff only for centre-based treatment service provision and field activities had been stopped from last week of March till July 2020 and then gradually started. As mitigation strategy DF Bangladesh took initiative to make the clinic staff aware on protective and preventive measures, arranged frequent counselling of affected staff, rearranged TB-leprosy clinic physical setup for protecting staff and patients from the COVID-19 situation, supplied protective materials to clinics, gradually started contact tracing maintaining protective and preventive measures and gradually started training, orientation sessions and other activities maintaining protective and preventive measures. Frequent follow up and monitoring was maintained mainly virtually.

As a result of these initiatives, clinic staff regained their confidence for continuing regular activities, there was gradual increasing trend of TB & leprosy case finding and implementation of almost all activities came to normal level in last quarter of 2020.

Outreach activities like, Health Education, contact tracing, campaign, community meeting, orientation/training, outreach sputum collection & smearing centre (OSCC) are stopped but drug supply & patient follow up are continued and then other activites were started gradually.

18. Patient consultation at DF clinic during COVID-19 pandemic

19. Physiotherapy of Leprosy Patient at DF hospital

20. Agreement signing with Principal Recipient (BRAC) as a Sub-Recipient of Global Fund

21.Standing Rally on observance of World Leprosy Day 2020 at Chapai nawabganj.

22. Intensive Extended Contact Survey (IECS) in Tangail under LRI supported project

Government Health Infrastructure in DF-areas Annex Table-1

District / Project	Square km	Population	Hospitals	Upazila Health Complexes	Health Centers	TB Clinics	Leprosy Control Assistants	TB beds	Lep. beds
Tangail Project	**6,810**	**7,839,137**	**3**	**24**	**1,078**	**2**	**24**	**0**	**0**
Tangail	3,414	3,932,223	1	12	545	1	12	0	0
Jamalpur	2,032	2,472,401	1	7	332	1	7	0	0
Sherpur	1,364	1,434,513	1	5	201	0	5	0	0
Mymensingh Project.	**7,052**	**8,968,643**	**4**	**24**	**958**	**2**	**15**	**48**	**0**
Mymensingh	4,363	5,740,224	2	12	593	1	6	48	0
Kishoreganj	2,689	3,228,419	2	12	365	1	9	0	0
Netrakona Project.	**2,810**	**2,468,488**	**1**	**9**	**350**	**0**	**7**	**0**	**0**
Netrakona	2,810	2,468,488	1	9	350	0	7	0	0
Rajshahi Project	**7,546**	**7,552,018**	**14**	**25**	**1,106**	**2**	**24**	**150**	**0**
Rajshahi	2,407	2,846,624	9	9	389	1	8	150	0
Naogaon	3,436	2,801,756	4	11	489	0	11	0	0
Nawabganj	1,703	1,873,638	1	5	228	1	5	0	0
Faridpur Project	**7,008**	**6,806,473**	**7**	**24**	**982**	**3**	**26**	**24**	**0**
Faridpur	2,073	2,056,552	3	8	268	1	11	24	0
Gopalganj	1,490	1,193,142	1	4	262	1	6	0	0
Madaripur	1,145	1,190,772	1	3	149	1	3	0	0
Rajbari	1,119	1,133,223	1	4	166	0	4	0	0
Shariatpur	1,181	1,232,784	1	5	137	0	2	0	0
Total DF	**31,226**	**33,604,759**	**29**	**106**	**3,487**	**9**	**96**	**222**	**0**

Supportive activities over 2020
Hospitals, physiotherapy, shoemaking and health education

Annex Table-2

Project	no. of beds on		Hospitalizations: no. of bed-days for			Average bed occupation	no. of Lep. patients admitted		TB admissions for		OPD consultations
	01/01/2020	31/12/2020	Leprosy	TB	General		surgery / ulcer	Reaction / other	Retreatments	Others	
TTLCP	95	95	2,203	8,748	0	34%	26	20	57	200	19,127
MTLCP	100	100	4,631	3,804	0	23%	104	29	44	45	0
NTLCP	60	60	1,606	5,028	0	30%	43	9	8	266	0
RTLCP	No hospital, not applicable										
FTLCP	No hospital, not applicable										
Total projects	**255**	**255**	**8,440**	**17,580**	**0**	**29%**	**173**	**58**	**109**	**511**	**19,127**

Project	Shoes made (pairs)		Plastic / Spring shoes supplied	HE activities: no. of sessions				Training / Orientation / ref. / seminar: no. of sessions for						Skinsmears		Physiotherapy sessions
	MCR	Plastazote		Milding	Folk song	Community *1	Schools	GP / MO	GoB H & FP staff	VD / FDP *2	TB club	Seminar / workshops *3	Opinion leader/ scout / NGO *4	Total done	Positives	
TTLCP	485	3	12	34	0	11,893	0	8	0	47	37	0	15	210	42	496
MTLCP[5]	1,285	5	3	96	0	74,863	192	8	0	67	44	0	30	405	41	0
NTLCP	74	0	0	0	0	256,283	0	3	0	29	20	0	10	84	15	0
RTLCP	0	0	193	125	0	171,221	750	10	0	69	50	0	29	477	195	0
FTLCP	0	0	0	114	0	170,291	438	18	0	68	58	0	24	25	2	0
Total projects	**1,844**	**8**	**208**	**369**	**0**	**684,551**	**1,380**	**45**	**0**	**280**	**209**	**0**	**108**	**1201**	**295**	**496**

Personnel and infrastructure over 2020
Numbers of personnel, transport, equipment

Annex Table-3

Department: Administrative + Hospital

Project	Personnel					Transport			Operation Theatre (OT)	X-Ray Units	Microscopes in use	Shoe workshops
	Doctors	Paramedical	Administrative	Support/Techn.	Others	Cars	Motorcycles	Bicycles				
TTLCP	1	19	4	19	0	1	1	2	1 sterile	1	2	1
MTLCP	1	14	3	17	0	1	1	0	1 septic	1	2	1
NTLCP	1	14	1	15	0	0	2	6	1 septic	0	4	0
RTLCP	0	0	6	7	0	0	0	0	not applicable, no hospital		0	0
FTLCP	0	2	2	6	2	0	18	30	not applicable, no hospital		2	0
DFCO	3	0	4	7	0	2	0	0	not applicable, no hospital		0	0
Total projects	**6**	**49**	**20**	**71**	**2**	**4**	**22**	**38**	**3**	**2**	**10**	**2**

Department: Field

Project	Personnel						Transport			Microscopes in use	Combined TB/Lep clinic	Leprosy clinic
	Doctors	TLCO/M&EO	TLCA	Assis. TLCA	Field Workers	Clinic Assis.	Cars	Motorcycles	Bicycle			
TTLCP	1	7	61	0	36	0	1	10	70	35	34	5
MTLCP	1	8	42	16	37	0	1	10	0	34	34	6
NTLCP	0	2	16	6	24	0	1	3	12	12	12	0
RTLCP	1	8	46	8	42	3	2	8	42	32	32	0
FTLCP	1	9	58	8	44	0	2	9	74	38	38	0
DFCO	0	0	0	0	0	0	0	0	0	0	0	0
Total projects	**4**	**34**	**223**	**38**	**183**	**3**	**7**	**40**	**198**	**151**	**150**	**11**

CONSOLIDATED REPORT, LEPROSY 2020
Evolution of casefinding and caseload
Annex Table-4

Year	Project	Districts & population	NUMBERS						RATES				
			New cases			New children	Disabled new cases	On treatment at end (Year)	New Lepr. / 100.0000 pop.	Lep. preval. / 10.000 pop.	Proportion MB new Lep.	Prop. new children L.	Prop. new disabled L.
			PB	MB	Total								
2013	TTLCP	TG+JM+SP 7,386,189	35	43	78	3	22	78	1.06	0.11	55%	4%	28%
	MTLCP	MM + KS 8,224,766	42	38	80	7	16	60	0.97	0.07	48%	9%	20%
	NTLCP	Netrakona 2,280,834	5	16	21	1	4	18	0.92	0.08	76%	5%	19%
	RTLCP	RA + NG + NW 7,000,045	91	96	187	12	37	170	2.67	0.24	51%	6%	20%
	FTLCP	FP+GP+MP+RJ+SR 6,534,388	24	25	49	9	4	40	0.75	0.06	51%	18%	8%
	TOTAL	31,426,222	197	218	415	32	83	366	1.32	0.12	53%	8%	20%
2014	TTLCP	TG+JM+SP 7,452,350	29	48	77	3	12	66	1.03	0.09	62%	4%	16%
	MTLCP	MM + KS 8,328,458	41	43	84	8	16	62	1.01	0.07	51%	10%	19%
	NTLCP	Netrakona 2,306,900	7	11	18	1	4	13	0.78	0.06	61%	6%	22%
	RTLCP	RA + NG + NW 7,080,143	85	72	157	8	24	124	2.22	0.18	46%	5%	15%
	FTLCP	FP+GP+MP+RJ+SR 6,573,679	24	24	48	3	4	40	0.73	0.06	50%	6%	8%
	TOTAL	31,741,530	186	198	384	23	60	305	1.21	0.10	52%	6%	16%
2015	TTLCP	TG+JM+SP 7,519,262	36	39	75	2	10	59	1.00	0.08	52%	3%	13%
	MTLCP	MM + KS 8,433,791	41	38	79	7	9	68	0.94	0.08	48%	9%	11%
	NTLCP	Netrakona 2,333,286	3	10	13	1	4	11	0.56	0.05	77%	8%	31%
	RTLCP	RA + NG + NW 7,161,268	76	89	165	4	22	135	2.30	0.19	54%	2%	13%
	FTLCP	FP+GP+MP+RJ+SR 6,613,354	17	23	40	2	2	37	0.60	0.06	58%	5%	5%
	TOTAL	32,060,961	173	199	372	16	47	310	1.16	0.10	53%	4%	13%
2016	TTLCP	TG+JM+SP 7,586,936	16	31	47	1	6	39	0.62	0.05	66%	2%	13%
	MTLCP	MM + KS 8,540,798	34	39	73	7	14	62	0.85	0.07	53%	10%	19%
	NTLCP	Netrakona 2,359,995	4	9	13	0	3	9	0.55	0.04	69%	0%	23%
	RTLCP	RA + NG + NW 7,188,760	86	64	150	13	18	140	2.09	0.19	43%	9%	12%
	FTLCP	FP+GP+MP+RJ+SR 6,653,417	11	10	21	1	4	18	0.32	0.03	48%	5%	19%
	TOTAL	32,329,907	151	153	304	22	45	268	0.94	0.08	50%	7%	15%
2017	TTLCP	TG+J M+SP 7,649,200	31	36	67	3	6	51	0.88	0.07	54%	4%	9%
	MTLCP	MM + KS 8,645,801	34	29	63	4	8	51	0.73	0.06	46%	6%	13%
	NTLCP	Netrakona 2,386,663	13	13	26	1	9	25	1.09	0.10	50%	4%	35%
	RTLCP	RA + NG + NW 7,270,597	202	101	303	46	16	220	4.17	0.30	33%	15%	5%
	FTLCP	FP+GP+MP+RJ+SR 6,691,233	3	13	16		3	8	0.24	0.01	81%	0%	19%
	TOTAL	32,643,494	283	192	475	54	42	355	1.46	0.11	40%	11%	9%
2018	TTLCP	TG+JM+SP 7,711,985	36	44	80	8	25	65	1.04	0.08	55%	10%	31%
	MTLCP	MM + KS 8,752,099	35	31	66	1	16	57	0.75	0.07	47%	2%	24%
	NTLCP	Netrakona 2,413,632	11	22	33	1	16	28	1.37	0.12	67%	3%	48%
	RTLCP	RA + NG + NW 7,353,411	130	84	214	18	40	165	2.91	0.22	39%	8%	19%
	FTLCP	FP+GP+MP+RJ+SR 6,729,346	7	9	16	2	9	12	0.24	0.02	56%	13%	56%
	TOTAL	32,960,473	219	190	409	30	51	327	1.24	0.10	46%	7%	26%
2019	TTLCP	TG+JM+SP 7,775,296	19	25	44	7	13	40	0.57	0.05	57%	16%	30%
	MTLCP	MM +KS 8,859,707	30	33	63	3	13	44	0.71	0.05	52%	5%	21%
	NTLCP	Netrakona 2,440,906	5	11	16	0	7	10	0.66	0.04	69%	0%	44%
	RTLCP	RA + NG + NW 7,437,214	71	67	138	18	28	92	1.86	0.12	49%	13%	20%
	FTLCP	FP+GP+MP+RJ+SR 6,767,759	5	9	14	0	6	10	0.21	0.01	64%	0%	43%
	TOTAL	33,280,882	130	145	275	28	41	196	0.83	0.06	53%	10%	24%
2020	TTLCP	TG+JM+SP 7,839,136	4	19	23	3	3	21	0.29	0.03	83%	13%	13%
	MTLCP	MM + KS 8,968,642	22	25	47	7	5	34	0.52	0.04	53%	15%	11%
	NTLCP	Netrakona 2,468,488	8	9	17	1	1	13	0.69	0.05	53%	6%	6%
	RTLCP	RA + NG + NW 7,522,018	48	41	89	7	4	74	1.18	0.10	46%	8%	4%
	FTLCP	FP+GP+MP+RJ+SR 6,806,474	8	5	13	1	1	10	0.19	0.01	38%	8%	8%
	TOTAL	33,604,759	90	99	189	19	14	152	0.56	0.05	52%	10%	7%

CONSOLIDATED REPORT, LEPROSY 2020
Caseloading and results of treatment, workload

Annex Table - 5

Project	District	PB/MB	On treatment on 31/12/2020	Completed MDT	Under care During 2020	MDT Relapse over 2020	Outcome of treatment (cohort: PB 2019& MB 2018 in %)	
							Completed	Defaulted
TTLCP	Tangail	PB	0	2	7	0	100%	0%
		MB	3	7	90	0	91%	9%
	Jamalpur	PB	1	2	11	0	100%	0%
		MB	11	13	109	0	87%	9%
	Sherpur	PB	1	10	31	0	100%	0%
		MB	5	5	179	0	86%	0%
	TOTAL PROJECT	PB	2	14	49	0	100%	0%
		MB	19	25	378	0	88%	6%
		TOTAL	21	39	427	0	91%	4%
MTLCP	Mymensingh	PB	13	18	57	0	96%	4%
		MB	19	25	218	1	96%	4%
	Kishoreganj	PB	0	1	25	0	100%	0%
		MB	2	7	97	0	100%	0%
	TOTAL PROJECT	PB	13	19	82	0	97%	3%
		MB	21	32	315	1	97%	3%
		TOTAL	34	51	397	1	97%	3%
NTLCP	Netrakona	PB	3	5	26	0	100%	0%
		MB	10	9	112	0	100%	0%
		TOTAL	13	14	138	0	100%	0%
RTLCP	Naogaon	PB	13	20	15	0	100%	0%
		MB	13	26	91	0	94%	3%
	Nawabganj	PB	2	10	6	0	100%	0%
		MB	15	17	60	0	94%	0%
	Rajshahi	PB	14	11	4	0	96%	4%
		MB	17	21	88	0	94%	3%
	TOTAL PROJECT	PB	29	41	25	0	98%	2%
		MB	45	64	239	0	94%	2%
		TOTAL	74	105	264	0	96%	2%
FTLCP	Faridpur	PB	0	1	1	0	100%	0%
		MB	1	5	47	0	0%	0%
	Gopalganj	PB	0	1	1	0	0%	0%
		MB	0	1	41	0	100%	0%
	Madaripur	PB	1	0	3	0	0%	0%
		MB	1	2	35	0	100%	0%
	Rajbari	PB	0	0	7	0	0%	0%
		MB	0	0	21	0	100%	0%
	Sariatpur	PB	5	1	9	0	100%	0%
		MB	2	5	49	0	100%	0%
	TOTAL PROJECT	PB	6	3	21	0	100%	0%
		MB	4	13	193	0	100%	0%
		TOTAL	10	16	214	0	92%	0%
ALL PROJECTS		PB	53	82	203	0	98%	2%
		MB	99	143	1237	1	94%	3%
		TOTAL	152	225	1440	1	96%	3%

CONSOLIDATED REPORT, LEPROSY 2020
Evolution of casefinding and caseload

Annex Table-6

Project	Districts & population	NUMBERS									RATES					
		New cases			New child	New SLPB	New Women	New Gr. 2 Disab.	SSS+ve MB	UT at end	New per 100,000 pop.	Preval. per 10,000 pop.	New (%) MB	(%) SSS+ve among MB	New (%) Child.	New Gr. 2 (%) Disab.
		PB	MB	Total												
TTLCP	Tangail 3,932,223	0	5	5	0	0	2	1	1	3	0.1	0.0	100.0	20.0	0.0	20.0
	Jamalpur 2,472,401	1	9	10	1	0	5	2	4	12	0.4	0.0	90.0	44.4	10.0	20.0
	Sherpur 1,434,513	3	5	8	2	0	3	0	1	6	0.6	0.0	62.5	20.0	25.0	0.0
	Total project 7,839,136	**4**	**19**	**23**	**3**	**0**	**10**	**3**	**6**	**21**	**0.3**	**0.0**	**82.6**	**31.6**	**13.0**	**13.0**
MTLCP	Mymensingh 5,740,224	20	21	41	7	0	12	4	5	32	0.7	0.1	51.2	23.8	17.1	9.8
	Kishoregonj 3,228,419	2	4	6	0	0	1	1	2	2	0.2	0.0	66.7	50.0	0.0	16.7
	Total project 8,968,642	**22**	**25**	**47**	**7**	**0**	**13**	**5**	**7**	**34**	**0.5**	**0.0**	**53.2**	**28.0**	**14.9**	**10.6**
NTLCP	**Netrakona 2,468,488**	**8**	**9**	17	**1**		**11**	**1**	**1**	**13**	**0.7**	**0.1**	**52.9**	**11.1**	**5.9**	**5.9**
RTLCP	Naogaon 2,801,756	22	12	34	3	0	11	0	1	26	1.2	0.1	35.3	8.3	8.8	0.0
	Nawabganj 1,873,638	5	14	19	0	0	8	1	4	17	1.0	0.1	73.7	28.6	0.0	5.3
	Rajshahi 2,846,624	21	15	36	4	0	13	3	0	31	1.3	0.1	41.7	0.0	11.1	8.3
	Total project 7,522,018	**48**	**41**	**89**	**7**	**0**	**32**	**4**	**5**	**74**	**1.2**	**0.1**	**46.1**	**12.2**	**7.9**	**4.5**
FTLCP	Faridpur 2,056,553	0	1	1	0	0	1	0	0	1	0.0	0.0	0.0	0.0	0.0	0.0
	Gopalgonj 1,193,142	1	1	2	0	0	0	1	0	0	0.2	0.0	0.0	0.0	0.0	0.0
	Madaripur 1,190,771	1	1	2	1	0	1	0	0	2	0.2	0.0	50.0	0.0	50.0	0.0
	Rajbari 1,133,223	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
	Sariatpur 1,232,785	6	2	8	0	0	7	0	0	7	0.6	0.1	25.0	0.0	0.0	0.0
	Total project 6,806,474	**8**	**5**	**13**	**1**	**0**	**9**	**1**	**0**	**10**	**0.2**	**0.0**	**38.5**	**0.0**	**7.7**	**7.7**
All project	**Total population 33,604,759**	**90**	**99**	**189**	**19**	**0**	**75**	**14**	**19**	**152**	**0.6**	**0.0**	**52.4**	**19.2**	**10.1**	**7.4**

TUBERCULOSIS: Evolution of case findings and caseload

Annex Table-7

Year	Project	Districts & population	All TB patients	PBC	No smear done PTB	PCD & EP	Proportion PBC / total
2013	TTLCP	TG + JM + DEPZ 6,060,941	5,898	3,718	0	2,180	63%
	MTLCP	MM + KS 5,963,971	6,905	4,187	0	2,718	61%
	NTLCP	Netrakona 2,280,834	2,673	1,638	0	1,035	61%
	RTLCP	RA + NG + NW 6,751,823	4,521	2,458	0	2,063	54%
	FTLCP	FP+GP+MP+RJ+SR 6,534,388	4,577	2,428	0	2,149	53%
	TOTAL	27,591,957	24,574	14,429	0	10,145	59%
2014	TTLCP	TG + JM + DEPZ 6,118,537	6,030	3,700	0	2,330	61%
	MTLCP	MM + KS 6,037,824	6,995	4,044	0	2,951	58%
	NTLCP	Netrakona 2,306,900	2,765	1,587	0	1,178	57%
	RTLCP	RA + NG + NW 6,801,430	4,488	2,530	0	1,958	56%
	FTLCP	FP+GP+MP+RJ+SR 6,573,679	4,202	2,143	0	2,059	51%
	TOTAL	27,838,370	24,480	14,004	0	10,476	57%
2015	TTLCP	TG + JM + DEPZ 6,176,815	6,044	3,501	0	2,543	58%
	MTLCP	MM + KS 6,112,926	7,098	3,898	0	3,200	55%
	NTLCP	Netrakona 2,333,286	2,734	1,540	0	1,194	56%
	RTLCP	RA + NG + NW 6,875,746	4,658	2,358	0	2,300	51%
	FTLCP	FP+GP+MP+RJ+SR 6,613,354	4,204	2,045	0	2,159	49%
	TOTAL	28,112,127	24,738	13,342	0	11,396	54%
2016	TTLCP	TG+JM+DEPZ 6,235,784	5,766	3,353	0	2,413	58%
	MTLCP	MM + KS 6,189,302	7,451	4,243	0	3,208	57%
	NTLCP	Netrakona 2,359,995	2,585	1,569	0	1,016	61%
	RTLCP	RA + NG + NW 6,896,330	4,393	2,292	0	2,101	52%
	FTLCP	FP+GP+MP+RJ+SR 6,653,417	4,105	2,056	0	2,049	50%
	TOTAL	28,334,828	24,300	13,513	0	10,787	56%
2017	TTLCP	TG+JM+DEPZ 6,239,782	5,906	3,391	0	2,515	57%
	MTLCP	MM + KS 6,254,078	7,905	4,403	0	3,502	56%
	NTLCP	Netrakona 2,386,663	2,724	1,716	0	1,008	63%
	RTLCP	RA + NG + NW 6,781,245	4,812	2,498	0	2,314	52%
	FTLCP	FP+GP+MP+RJ+SR 6,691,233	4,286	2,096	0	2,190	49%
	TOTAL	28,353,001	25,633	14,104	0	11,529	55%
2018	TTLCP	TG+JM+DEPZ 6,294,251	6,531	3,114	0	3,417	48%
	MTLCP	MM + KS 6,329,761	7,974	4,073	0	3,901	51%
	NTLCP	Netrakona 2,413,632	3,094	1,589	0	1,505	51%
	RTLCP	RA + NG + NW 6,857,942	5,302	2,463	0	2,839	46%
	FTLCP	FP+GP+MP+RJ+SR 6,729,346	4,774	2,012	0	2,762	42%
	TOTAL	28,624,932	27,675	13,251	0	14,424	48%
2019	TTLCP	TG+JM+DEPZ 6,419,197	7,221	3,353	0	3,868	46%
	MTLCP	MM + KS 6,406,364	8,361	4,115	0	4,246	49%
	NTLCP	Netrakona 2,440,906	3,308	1,474	0	1,834	45%
	RTLCP	RA + NG + NW 6,985,551	6,060	2,756	0	3,304	45%
	FTLCP	FP+GP+MP+RJ+SR 6,767,759	5,485	2,022	0	3,463	37%
	TOTAL	29,019,777	30,435	13,720	0	16,715	45%
2020	TTLCP	TG+JM+DEPZ 6,474,624	5,703	2,635	0	3,068	46%
	MTLCP	MM + KS 6,483,896	7,365	3,825	0	3,540	52%
	NTLCP	Netrakona 2,468,488	2,516	1,183	0	1,333	47%
	RTLCP	RA + NG + NW 7,064,085	5,048	2,657	0	2,391	53%
	FTLCP	FP+GP+MP+RJ+SR 6,806,474	3,883	1,736	0	2,147	45%
	TOTAL	29,297,567	24,515	12,036	0	12,479	49%

TB case notification, 2020

Annex Table-8

District	Population covered	Pulmonary Bacteriologically Confirmed (PBC) TB Patients					Pulmonary Clinically Diagnosed (PCD)	Extra-pulmonary (EP) New	PCD & EP not New	Total registration	% of new PBC patients	Notification rate/100,000 pop. new PBC	Notification rate/100,000 pop. all forms of TB
		New cases	Relapses	Failures	RALTFU	Other							
Faridpur	2,056,553	403	29	6	3	9	196	310	34	990	41%	20	48
Rajbari	1,133,223	160	15	2	1	5	94	130	29	436	37%	14	38
Madaripur	1,190,771	277	24	8	1	10	154	179	23	676	41%	23	57
Gopalganj	1,193,142	281	25	4	0	6	176	209	39	740	38%	24	62
Shariatpur	1,232,785	433	26	2	0	6	334	192	48	1041	42%	35	84
FTLCP	**6,806,474**	**1554**	**119**	**22**	**5**	**36**	**954**	**1020**	**173**	**3883**	40%	23	57
Naogaon	2,801,756	1234	45	9	3	2	286	543	77	2199	56%	44	78
Nawabganj	1,873,638	503	38	5	2	0	136	459	33	1176	43%	27	63
Rajshahi	2,338,691	734	29	12	2	0	166	547	39	1529	48%	31	65
RMCH	50,000	26	4	6	1	2	1	100	4	144	18%	52	288
RTLCP	**7,064,085**	**2497**	**116**	**32**	**8**	**4**	**589**	**1649**	**153**	**5048**	49%	35	71
Tangail	3,932,223	1428	78	19	7	8	904	812	167	3423	42%	36	87
Jamalpur	2,472,401	958	62	13	6	11	468	568	102	2188	44%	39	88
DEPZ	70,000	42	1	1	1	0	9	36	2	92	46%	60	131
TTLCP	**6,474,624**	**2428**	**141**	**33**	**14**	**19**	**1381**	**1416**	**271**	**5703**	43%	38	88
NTLCP	**2,468,488**	**1080**	**82**	**18**	**1**	**2**	**700**	**518**	**115**	**2516**	43%	44	102
Mymensingh	3,255,478	1396	98	30	6	14	837	811	199	3391	41%	43	104
Kishoreganj	3,228,419	2139	109	20	3	10	654	910	129	3974	54%	66	123
MTLCP	**6,483,896**	**3,535**	**207**	**50**	**9**	**24**	**1,491**	**1,721**	**328**	**7,365**	48%	55	114
DF Bangladesh	**29,297,567**	**11,094**	**665**	**155**	**37**	**85**	**5,115**	**6,324**	**1,040**	**24,515**	45%	38	84

Note: RL = Relapses, FL = Failures, RALTU = Retrun after loss to follow-up

Treatment outcomes for new smear positive cases, 2019 cohort

Annex Table - 9

		Treatment outcomes (%)						
Districts	**Registered**	**Cured + Completed**	**Died**	**Failed**	**Lost to follow up**	**Transferred out / Not. Evaluated**	**Not evaluated**	**Treatment success (%)**
NETRAKONA	1357	93%	4%	2%	1%	0%	0%	93%
TANGAIL	1831	92%	5%	1%	2%	0%	0%	92%
DEPZ	53	100%	0%	0%	0%	0%	0%	100%
JAMALPUR	1217	87%	5%	2%	4%	1%	0%	87%
MYMENSINGH	1717	91%	4%	1%	1%	2%	0%	91%
KISHOREGANJ	2076	94%	4%	2%	0%	1%	0%	94%
NAOGAON	1157	92%	6%	2%	1%	0%	0%	92%
NAWABGANJ	577	94%	4%	2%	0%	0%	0%	94%
RAJSHAHI	833	90%	4%	3%	3%	0%	0%	90%
FARIDPUR	465	93%	4%	2%	1%	0%	0%	93%
GOPALGANJ	370	95%	4%	1%	0%	0%	0%	95%
MADARIPUR	328	89%	7%	2%	2%	0%	0%	89%
RAJBARI	238	92%	6%	1%	1%	0%	0%	92%
SARIATPUR	444	93%	6%	1%	1%	0%	0%	93%
TOTAL DF	**12663**	**91.7%**	**4.6%**	**1.7%**	**1.5%**	**0.4%**	**0.0%**	**91.7%**

Treatment outcomes for re-treatment smear positive cases, 2019 cohort

Annex Table - 10

		Treatment outcomes (%)						
Districts	**Registered**	**Cured**	**Died**	**Failed**	**Lost to follow up**	**Transferred**	**Not evaluated**	**Treatment success (%)**
NETRAKONA	117	90%	7%	3%	0%	0%	0%	90%
TANGAIL	126	90%	6%	0%	2%	0%	2%	90%
DEPZ	1	100%	0%	0%	0%	0%	0%	100%
JAMALPUR	124	90%	5%	2%	2%	1%	1%	90%
MYMENSINGH	154	89%	3%	3%	1%	3%	1%	89%
KISHOREGANJ	168	88%	7%	4%	1%	0%	1%	88%
NAOGAON	82	91%	5%	4%	0%	0%	0%	91%
NAWABGANJ	51	94%	4%	2%	0%	0%	0%	94%
RAJSHAHI	55	85%	5%	5%	4%	0%	0%	85%
FARIDPUR	50	84%	12%	2%	2%	0%	0%	84%
GOPALGANJ	37	92%	5%	3%	0%	0%	0%	92%
MADARIPUR	38	82%	11%	0%	5%	0%	3%	82%
RAJBARI	22	95%	5%	0%	0%	0%	0%	95%
SARIATPUR	30	93%	7%	0%	0%	0%	0%	93%
TOTAL DF	**1055**	**89.1%**	**5.9%**	**2.4%**	**1.3%**	**0.6%**	**0.8%**	**89.1%**

Table: Summary resutls of External Quality Assurance by project 2020

Annex Table-11

		Routine smears examined (nos.)			Smears rechecked by EQA (nos.)			EQA rechecking results					
PROJECTS	Nr. Of Microscopy centres	Total	% positive	% scanty	Pos.	Scanty	Neg.	Nr. HFP slides	Nr. HFN slides	Nr. Of centres with at least 1 HFP	Nr. Of centres with at least 1 HFN	HFP%	HFN%
FTLCP	38	158,012	1.4%	0.6%	132	57	2015	3	3	3	2	1.59%	0.15%
MTLCP	35	157,822	3.5%	1.2%	206	56	1824	4	4	4	3	1.53%	0.22%
NTLCP	12	58,313	3.0%	1.1%	81	21	609	0	1	0	1	0.00%	0.16%
RTLCP	32	122,434	2.1%	1.4%	192	54	1673	5	3	5	4	2.03%	0.18%
TTLCP	35	118,619	3.0%	1.3%	50	14	1923	1	10	1	7	1.56%	0.52%
DF Total	**152**	**615,200**	**2.54%**	**1.09%**	**661**	**202**	**8044**	**13**	**21**	**13**	**17**	**1.97%**	**0.26%**

Jalchatra & Mymensing hospital labs are included in 152 centres 14%

Damien Foundation Bangladesh
Quality Control of Skinsmears: 2020

Annex Table-12

Project	Total smears checked in QC			Rates of false results						Proportions registered results			Neg.(among all smears)
	Pos.		Neg.	False positives		False negatives		Quantification		Among all positives			
	+1	+2 to +6		+1	+2 to +6	+1	+2 to +6	1 log	>1 log	+1/+2	+3/+4	+5/+6	
TTLCP	1	5	21	0%	0%	0%	0%	67%	17%	54%	29%	17%	80%
MTLCP	3	9	33	0%	0%	0%	0%	33%	8%	37%	46%	17%	90%
NTLCP	4	5	17	0%	0%	0%	0%	11%	0%	67%	7%	27%	82%
RTLCP	1	11	42	0%	0%	0%	0%	17%	0%	29%	29%	43%	91%
FTLCP	3	0	21	0%	#DIV/0!	0%	0%	33%	33%	100%	0%	0%	92%
DF TOTAL	**12**	**30**	**134**	**0%**	**0%**	**0%**	**0%**	**29%**	**7%**	**45%**	**30%**	**25%**	**88%**

Picture of some activities

24.Refreshers' Training of Field & Clinic level staff at Rajshahi project

25. Health Education at Mymensingh TB & Leprosy Hospital of Damien Foundation

26.LED Microscopy Training at Faridpur Project

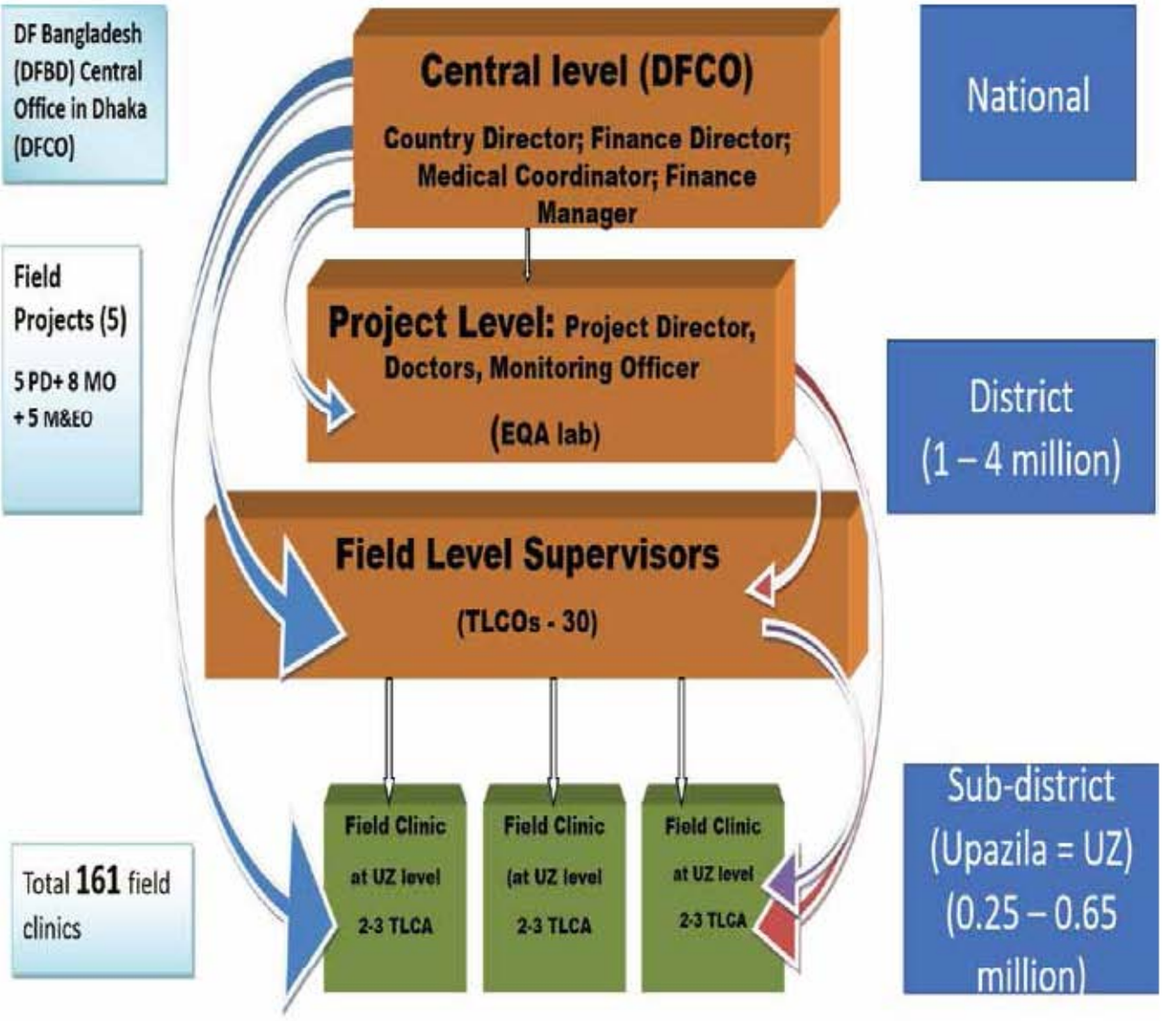
27.Opinion Leaders Orientation at Mymensingh Project

28. Quarterly Staff Meeting at DF Faridpur Project

29. Orientation of Village Doctors in Netrakona Project

Damien Foundation Bangladesh

Monitoring and Supervision Structure



PD = Project Director, MO = Medical Officer, M&EO = Monitoring & Evaluation Officer, UZ = Upazila (Sub-district), TLCO = TB & Leprosy Control Officer, TLCA = TB & Leprosy Control Assistant.

DF Jaichatra Hospital

DF Mymensingh Hospital

DF Netrakona Hospital

ANNUAL REPORT 2020

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