The RIT/JATA Philippines Inc. in Manila---- eleven-year contribution in controlling Tuberculosis in the urban setting

Table of Contents

Acknowledgement

The authors gratefully acknowledge all those who actively contributed to the accomplishment of the RJPI to serve the community towards TB-free Philippines. The RJPI activities came into reality through the funding from the 'Tuberculosis Control Project in Socio-Economically Underprivileged Urban Area in Metro Manila, the Philippines–Stop TB para sa Lahat' by the Ministry of Foreign Affairs (Tokyo, Japan); the 'TB Control and Prevention Project in Socio-Economically Unprivileged Areas in Metro Manila, The Philippines' under the technical cooperation for grassroots projects of the Japan International Cooperation Agency (JICA, Tokyo, Japan); the research project of the International Medical Centre of Japan, 'A sociomedical study for facilitating effective infectious diseases control in Asia' by the International Medical Cooperation Grant, the Ministry of Health, Labour and Welfare (Tokyo, Japan); 'Technical Assistance Services (TAPS) to Capacitate Community-Based Organizations (CBOs) as Rural Health Units (RHUs) Partners (TB) Control' by the USAID (Manila, the Philippines); Japan Society for the Promotion of Science (JSPS), Grant-in-Aid for Scientific Research (C) Grant No.16K09156 (Tokyo, Japan); and Japan Anti-Tuberculosis Association (JATA) double-barred cross seal donation fund (Tokyo, Japan).

Authors

Aurora Querri, Akihiro Ohkado, and Nobukatsu Ishikawa, the RIT/JATA Philippines, Inc. (RJPI).

Message from:
Dr. Nobukatsu Ishikawa
JATA Emeritus

Good day everyone!

On behalf of Japan Anti-Tuberculosis Association (JATA), as well as the RIT/JATA Philippines Inc., I would like to express our sincere gratitude to all Government (GO) and Non-Government (NGO) as well as international organizations, who have been part of our 11- year work as an organization.

Our mission has been a collaborative endeavour to strengthen and stimulate NTP of the Philippines for ensuring that the quality Tuberculosis (TB) services are accessible, affordable and available for all TB patients with the special attention to the urban poor.

I remember the day when we started our work in 2008, just after the Japan International Cooperation Agency (JICA) TB project finished, many of our friends asked us, “Are you leaving the Philippines? TB problems of the Philippines are so enormous, we need your collaboration/impute, we need you to work together with us. We even have some money.”

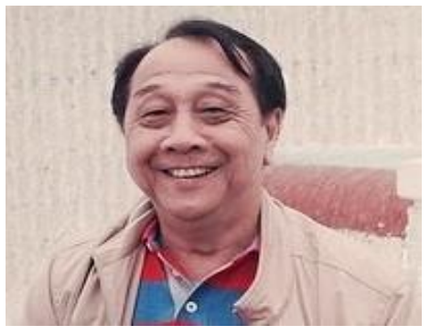
Within these 11 years, we have made some achievements in reaching the underprivileged people in the community by bridging the gaps through the networks among GOs and NGOs. But I could say we have done something, something very important, which is we worked together in the battle in promoting TB services where ordinary services did not reach in the routine programme.

However, we could not say we have been very successful in accomplishing our mission. I recall a very sad incident of Bethel, a 14-year-old girl who died of MDR-TB after a few years’ treatment. Her DOTS was successfully done with a full support of the Canossa Centre and health volunteers. Nobody ever suspected that such a girl should suffer from MDR-TB. In our workshop in 2010, while she was still getting ordinary treatment course for a re-treatment patient, she brilliantly said, “Don’t give us only medicine, my heart aches as I lost my ordinary life as well as friends. So please understand that TB patient heart also suffers “. We have learned from her that TB treatment is not just giving medicine, but mental and spiritual care are necessary.

According to the latest WHO report, based on the epidemiological prevalence survey and patient’s cost survey, TB burden in the Philippines was worst in Asia in terms of incidence rate, and 35% of the TB patients face catastrophic cost, which is seriously high. So, our battle has not ended yet, we need to continuously work together. We regret that we must close our project office at this moment, so we should say it is not closing our work, we need to leave some possibility to reopen the project or activities in some way.

We thank all of the partners again who loved and cared for the work at this moment of tentative closure of the office, and we pray that our collaboration should continue, and we should restart our project in the near future.

Message from:
Dr. Jaime Lagahid,
President of RJPI's Board of Trustees



Hello everyone! First of all, I would like to express my gratitude to Dr. Nobukatsu Ishikawa who was actually the one who conceptualized the concept of linking the Non- Governmental Organizations (NGOs) with the Government Organizations (GOs). Without Dr. Ishikawa, we could have not started this project and have not created the RIT/JATA Philippines, Inc. (RJPI). Also, thank you to Dr. Kosuke Okada, Dr. Akihiro Ohkado, and all the members of the Board of Trustees – Dr. Camilo Roa and other members; to the representative of the Department of Health- Metro Manila Health Office—Dr. Amelia Medina, thank you for all your support to the RPJI for 11 years. Let me also thank the RJPI staff who have stayed despite these trying times---- Auwie and the team.

Of course, the success of bringing the TB services closer to the community will not be possible without the help of the Manila Health Department, Quezon City Health Department and the NGOs like Canossa; Sto. Nino de Tondo; Center for Community Transformation; Youth With A Mission; Educational, Research, and Development Association; San Pablo Apostol; Philippine Christian Foundation; For People; Payatas Orione Foundation, Inc.; German Doctors; and St. Luigi Orione.

I know the legacy of RJPI in substantially contributing to end TB in the Philippines will not be put in vain because there is this partnership that will remain--- as there are active NGOs like you who will continue RJPI's journey, for a TB-free Philippines!

I. Summary of the Activity Report

The Research Institute of Tuberculosis / Japan Anti-Tuberculosis Association Philippines, Inc. (RJPI) has made its trademark in the Philippines, in making the tuberculosis (*TB) services more accessible to the community for 11 years.* People from the Department of Health (DOH)- National TB Control Program (NTP), the DOH- Metro Manila Center for Health Development, other Local Government Units (LGUs) and Non-Governmental Organizations (NGOs) indeed have that distinct impression of the immense contribution of the RJPI in community engagements and empowerment---- it is like if it is "TB in the Community", it is commensurate with the RJPI initiative.

The RJPI has linked the LGUs with the NGOs in 2008 through the grants received from the Official Development Assistance-Japan and the Japan International Cooperation Agency. Since then, several trainings have been conducted by the RJPI, which have honed the skills of the health care workers (HCWs) and the community health volunteers (CHVs) both from the LGU and NGO sides in Tondo, Manila, and Payatas, Quezon City. Trainings which have synchronized their efforts with the NTP guidelines and goal (TB-Free Philippines)[1], aiming to assist in improving case detection and the treatment outcomes of the TB patients as well as the People Living With HIV (PLHIV) in the urban poor sites. HCWs were provided with trainings on Basic TB DOTS (Directly Observed-Treatment Short-Course), TB in Children, TB Infection Control, and Appreciation of Chest Radiographs to reduce delay in TB diagnosis. Almost similar trainings, fine-tuned at their level, have been provided with the CHVs. Moreover, selected CHVs were trained as microscopist or smearer and as community treatment partners to equip the NGOs as NGO DOTS or NGO referring facility. Comparable to this, another community engagement activity was conducted in the six (6) municipalities of Bulacan (Baliwag, Paombong, Plaridel, Calumpit, San Ildefonso, and San Miguel) through the small grants received from IMPACT-USAID project. Alongside these trainings were various operational researches involving the NTP and the LGUs in assessing the current situation, appreciating the good practices and learning from the barriers and challenges faced by the HCWs, and the CHVs in implementing the TB Program; Pioneering integration of Smoking Cessation into TB services to reduce smoking rates and promote smoke-free home among TB patients. Moreover, hearing and listening to the needs of the community and TB patient themselves for a more patient-centered approach to TB care.

All these efforts have paved a way to RJPI's legacy in bridging the gaps and enhancing access of the community to quality TB services. A "Guidance on Tuberculosis Patient Care for the Urban Poor: The RJPI Experience" was developed in 2014 which summarizes how the GO-NGO model was established.[2]

II. Introduction, brief history and mission

RIT/JATA Philippines, Inc. Profile

Research Institute of Tuberculosis / Japan Anti-Tuberculosis Association Philippines, Inc. (RIT/JATA Philippines, Inc., RJPI) is local-based Non- Government Organization (NGO) which was officially established in January 2008. This organization was funded by Japan's Official Development Assistance (Japan's ODA, 2009-2011) and by Japan International Cooperation Agency (JICA, 2012-2014). In addition, the Innovations for Multi-Sectoral Partnership to Control Tuberculosis in the Philippines (IMPACT), a USAID funded project, supported our organization from 2015- 2016.

Our focus was reaching the underprivileged people in the community by bridging the gap through the networks among the NGOs and Local Government Units (LGUs) in support of the National TB Control Program (NTP) to improve access to quality TB services.

Our Vision: TB-Free Philippines

Our Mission: To contribute to the NTP of ensuring that quality TB services are accessible, affordable, and available for all TB patients.

Project Sites:

- Japan's ODA and JICA: District I- Tondo, Manila City, and Payatas, Quezon City
- IMPACT: Baliwag, Calumpit, Paombong, Plaridel, San Ildefonso, and San Miguel in Bulacan Province

Interventions employed:

- Capacitating the health care workers (Doctors, nurses, medical technologists, and radiological technologists) and community health volunteers (CHVs, referrers of presumptive TB and as treatment partner, microscopists, smearers)

This was the very first training conducted prior to the project implementation in June 2008. Physicians, nurses, or non-medical DOTS personnel from GOs and NGOs were trained on *Basic TB DOTS*. The training focused on the NTP guidelines in terms of finding presumptive TB and managing TB cases.

The CHVs were trained on how to do sputum smearing/staining/fixing on glass slides. This aimed to assist the medical technologists or microscopists in GOs and NGOs.

This is an additional training which came-up as part of the monitoring visits. The MHD and RJPI monitoring team have noted delays in TBDC chest x-ray reading due to poorly taken chest radiographs. The physicians and nurses were trained then on the appreciation of chest radiographs quality to reduce diagnosis delays.

- Engagement of NGOs as DOTS facility or as Referring Facility.

This is Ms. Aurorita Dumalag. She is a CHV for 10 years at *PAOFI, an NGO DOTS. After a year, she was trained by RJPI as smearer and she has become a laboratory assistant since then.*

On the left side of the photo is Ms. Gloria Lagas, a non-medical personnel who was trained by RJPI on Basic TB DOTS. She has no medical background but through the training she has been running the Sto.Nino NGO DOTS as DOTS Officer. Beside her is Mr. DC Hermosura, a CHV who helps in finding presumptive TB and as treatment partner.

- Conduct of joint monitoring and evaluation visits with the LGU representatives.

On the photo is Ms. Gloria Inocencio, nurse supervisor of District I- Tondo. This is an ideal monitoring visit since there is an opportunity to receive first-hand information and to correct gaps in the NTP implementation.

Japanese experts came alternately in a quarter to conduct monitoring visits. On the photo, Dr.Akira Shimouchi led the monitoring visit and conducted records review of the TB register, laboratory register, laboratory register including the referrals coming from the NGO referring facilities.

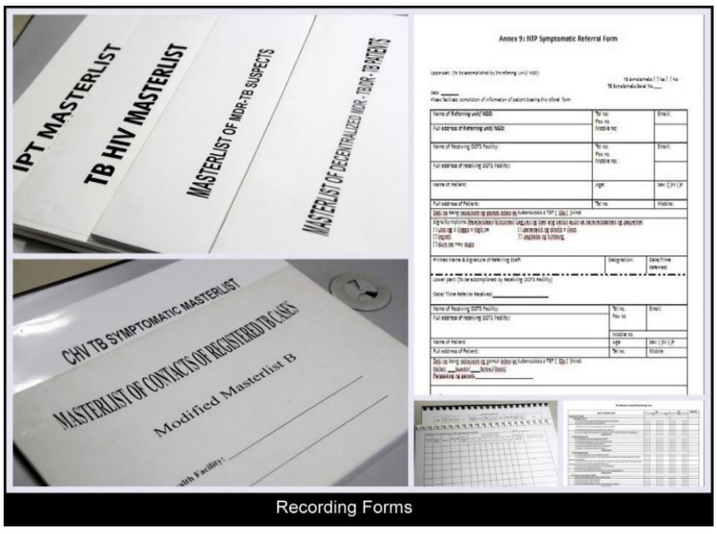
The heart of the monitoring visit is providing “feedback” of the findings among the staff. Through this the weaknesses and the strengths in TB program implementation can be discussed. Likewise, “agreements” and feasible actions to address the gaps will be determined by the staff. This could mean smooth implementation of the partnership.

- Conduct of Advocacy Campaigns

Through the World TB Day and Lung Month celebrations every March and August, respectively, we can inform the community of the activities taken to control TB. Initially, this was participated by the partner organizations but in the later years, the successfully treated TB patients and their neighbors were invited. Through the testimonies of the TB patients, we have strongly communicated to the community that TB can be cured and that TB patients can still be productive afterwards.

The involvement of those who are at risk with TB came in during the JICA Project. Through, the engagement of the Tricycle Operators and Drivers Association (TODA), we were able to orient them as health educators (for their passengers) on the Basic Facts about TB and when, where to access diagnosis and treatment. Posters and stickers were distributed among the tricycle drivers. This could help them in their health education.

- Development of recording forms and guidelines relevant to the TB Program and Philippine National AIDS Council (PNAC) at San Lazaro Hospital.



Recording Forms

Various recording forms were developed in consultation with the NTP, NCRO, MHD and QCHD. The following forms were developed to track and document the contribution of the organizations in TB program: (1) CHV Referral Masterlist/Presumptive TB Identification Form; (2) Contact Investigation Masterlist; (3) Presumptive MDR-TB Masterlist; (4) TB/HIV Masterlist and IPT Masterlist at San Lazaro Hospital; (5) TB Infection Control Monitoring Tool

- Conduct of operational researches to improve TB services.

✔ **The challenges of the Philippines social health insurance program in the era of Universal Health Coverage in 2018:** This study aimed to quantitatively and qualitatively describe some of the challenges faced by the Philippines' health insurance programme, PhilHealth, in the era of Universal Health Coverage. The proportion of individuals enrolled as 'poor' exceeded the number officially assessed as being poor by 1–11 times in almost all of the LGUs evaluated. Interviews revealed 'politically indigent' individuals, i.e., the enrolment of non-poor individuals as poor. Several health centres were not receiving reimbursements from PhilHealth, likely due to structural and political deficiencies in the process of claiming and receiving reimbursements. In conclusion, the composition of the sponsored and indigent membership groups requires closer examination to determine whether people who are truly marginalised are left without health coverage. PhilHealth also needs to improve its reaccreditation and reimbursement systems and processes so that health centres can appreciate the benefits of becoming PhilHealth-accredited service providers.[3]

✔ **The role of continuing education in improving the quality of chest radiography images based on experiences in three Asian countries:** This article summarizes our experiences in improving the quality of chest radiography (CXR) images in resource-constrained settings in Asia. Considering the global need for improving the quality of CXR images, the Research Institute of Tuberculosis/Japan Anti-Tuberculosis Association has conducted semi-standardized training for RTs in Asian and African countries since 2009. The course contents are based on a handbook developed by the Tuberculosis Coalition for Technical Assistance in 2008. At the pre- and post-training, the quality of CXR images performed by the RTs who underwent the training was assessed, and the results statistically confirmed that the quality of CXR images improved in the Philippines, Laos, and Vietnam. Although modern medical imaging technology is drastically expanding worldwide, RTs working in developing countries have limited opportunities to receive appropriate professional education on CXR image quality and assessment. In conclusion, Our experiences imply that technical assistance in the form of semi-standardized training could be an option for continuing education to improve and maintain the quality of CXR images, especially in resource-constrained settings.[4]

- ✔ **Strengthening the link between Government and Non-Government Organizations in tuberculosis control in the urban poor of Metro Manila, Philippines: A retrospective descriptive study:** This study aimed to assess the effects of engagements by GOs and NGOs in enhancing access to DOTS facilities and in increasing case finding of TB in the urban poor areas in the Philippines. The percent contribution of NGO DOTS facilities in the number of presumptive TB significantly increased from 25% to 30% ($p<0.001$). It slightly decreased from 28% to 27% in new smear positive TB ($p=0.737$) and it declined from 46% to 35% in new smear negative/clinically diagnosed PTB ($p<0.001$). CHVs notified 3% of the total TB cases. Treatment success rate of new smear positive PTB ranged from 82% to 92%. In conclusion, the increase in the number of presumptive TB examined and TB notifications showed that GO-NGO intervention model was able to improve access to TB services in the urban poor areas in the Philippines. Thus, the engagement of NGOs has complemented the work of GOs in TB control activities to reach more people in the urban community.[5]

- ✔ **Does a quality assurance training course on chest radiography for radiological technologists improve their performance in Laos?**: The study aimed to determine the effectiveness of a training program in improving the quality of CXR among radiological technologists (RTs) in Laos. Nineteen RTs from 19 facilities at 16 provinces in Laos participated in the training course. Among them, 17 RTs submitted the required set of CXR films (total: 204 films). A wide range of X-ray machine settings had been used as tube voltage ranged from 40 to 130 kV. The assessment of the CXR films indicated that the training was effective in improving the CXR quality regarding contrast ($P = 0.005$), sharpness ($P = 0.004$), and the total score on the 6 assessment factors ($P = 0.009$). In conclusion, the significant improvement in the total score on the 6 assessment factors, in contrast, and in sharpness, strongly suggests that the training course had a positive impact on the quality of CXR among a sample trainees of RTs in Laos.[6]

- ✔ **Enhancing tuberculosis patient detection and care through community volunteers in the urban poor, the Philippines:** This study aimed to describe the activities of the CHVs and the barriers experienced by patients with presumptive TB in seeking health care to treatment as documented on a master list, and to identify the CHVs' challenges in community TB care implementation. The CHVs contributed approximately 3% (75/2534) to the total TB cases diagnosed at the DOTS facilities. Of the 93% (75/81) initiated on treatment, 92% (69/75) were successfully treated. In conclusion, The CHVs assisted in enhancing access to TB care and case detection. Sustainability of the CHVs' efforts should be explored to retain them in the programme.[7]

- ✔ **The Pathway of Multi-Drug Resistant Tuberculosis Suspects from the Treatment Sites to the Treatment Center in Urban Setting, Philippines:** This study aimed to identify gaps in the referral pathway of presumptive drug-resistant tuberculosis (DR-TB) patients from initial consultation until initiation of treatment. Of the 368 patients referred to the treatment site, 35 (9.5%) were not screened, mainly due to loss to follow-up. Among those screened, 86.4% (288/333) were recommended for anti-tuberculosis treatment, of whom 98.2% (283/288) initiated treatment. The time between sample collection and examination was significantly longer at the laboratories of non-government organisations (NGOs) than at local government units (LGUs) (1 day vs. 0 day; $P < 0.001$). The time to the release of smear examination results to patients was significantly shorter at the NGOs than at the LGUs (4 days vs. 6 days; $P = 0.009$). In conclusion, the development of the presumptive MDR-TB masterlist facilitated tracking of patients for diagnosis and treatment. The NGOs should reduce delays in diagnosis and the LGUs should intensify patient follow-up to ensure early initiation of treatment.[8]

- ✔ **Retrospective Review of the Implementation of Tuberculosis Contact Investigation in Socio-Economically Depressed Areas in Metro Manila, the Philippines[6]:** This study aimed to review the implementation of tuberculosis (TB) contact investigations in the urban poor areas of Manila and Quezon City. The yield of clinically diagnosed TB among children aged < 15 years was 10.2% (127/1245) in the LGUs and 8.4% (63/752) in the NGOs. The yield of isoniazid preventive therapy (IPT) for those aged < 5 years was 23.1% (124/537) in the LGUs and 28.0% (78/279) in the NGOs. The NGOs produced

a high yield of IPT due to a better logistical system that ensured the availability of supplies and systematic home visits. In conclusion, screening of household contacts in poor urban areas appears to be effective; it increased the number of children aged <15 years eligible for IPT and should be expanded as an intervention strategy for TB control in the Philippines.[9]

- ✔ **Characteristics of smokers and non-smokers among tuberculosis patients in a socio-economically underprivileged area in Metro Manila, Philippines[7]:** This study aimed to identify the characteristics between smokers and non-smokers among TB patients in Metro Manila, Philippines. Total respondents were 263 (smoker n=60, non-smoker n=203). Smoking rate in males was 19.0% and 3.8% in females. The smoking rate of the family members (61.7% of smoker and 48.3% of non-smoker) and friend (83.3% of smoker and 61.1% of non-smoker) of smokers were higher than those who are socially close to non-smokers. There were significant differences on their smoking motivation about whether close friend smoker or not ($\chi 2=10.2404$, $p=0.03720$, $p<0.05$). Moreover, the data obtained indicated that low-educational background, low-income in the respondents. In conclusion, the data showed that the smoking behavior tend to influenced by their family's and friend's smoking habits. The comprehensive approaches will be required to quit smoking and also anti tuberculosis activities.[10]

- ✔ **Impact of a training course on the quality of chest radiography to diagnose pulmonary tuberculosis:** This study aimed to assess the performance of radiological technicians (RTs) 3 years after their participation in a training course to improve the quality of chest X-ray (CXR) and to test a monitoring visit after the course. Two assessment sum scores, identification mark or patient positioning, did not show significant differences. However, assessment of density, contrast, sharpness and artefact significantly improved after the training course, and before and after the monitoring visit, compared with before the training. There were no significant differences in any of the assessment factors before and after the monitoring visits. In conclusion, the training course appears to have had a long-term effect on maintaining CXR quality. The post-training monitoring visit did not significantly improve CXR quality.[11]

- ✔ **Prevalence and associated factors of depressive state among pulmonary tuberculosis patients in Manila, The Philippines:** This study aimed to assess depressive state among pulmonary tuberculosis (PTB) patients and to identify factors associated with depressive state in Manila, the Philippines. Depressive state was observed in 16.8% of the participants. Logistic regression analysis indicated that body mass index < 18.5 kg/m(2), marital status of cohabitation compared with married, four or more symptoms, four or more adverse drug reactions, grade 3 or higher on the Medical Research Council dyspnoea scale and low perceived confidant social support were significantly associated with depressive state. In conclusion, depressive state among PTB patients in economically depressed areas is common, and screening for depression in the primary care setting can identify patients who need support and treatment, especially for malnourished patients and those with poor social support.[12]

- ✔ **Factors associated with health-related quality of life among pulmonary tuberculosis patients in Manila, the Philippines:** This study aimed to describe HRQOL among PTB patients and to determine factors that are associated with HRQOL. HRQOL among PTB patients was generally impaired. Factors associated with lower physical component summary were exposure to secondhand smoke (SHS) ($P = 0.038$), positive sputum smear result ($P = 0.027$), not working ($P = 0.038$), lower education level ($P < 0.01$), number of symptoms ($P < 0.01$), number of adverse drug reactions (ADRs) ($P < 0.01$), higher score on the MRC dyspnea scale ($P < 0.01$), and low perceived social support ($P = 0.027$). Lower body mass index ($P = 0.016$), non-SHS exposure ($P = 0.033$), number of symptoms ($P < 0.01$), number of ADRs ($P < 0.01$), low perceived social support ($P < 0.01$), and negative perception for waiting time in the clinic ($P = 0.026$) were identified to be factors significantly associated with lower mental component summary. In conclusion, socioeconomic status including SHS exposure and low perceived social support, in addition to clinical factors, may be associated with poor HRQOL. Further study would be needed to assess our findings.[13]

- ✔ **Effectiveness of Training Course on Quality Assurance of Chest Radiography:** This study aimed to determine the effectiveness of a training course in quality chest radiography (CXR). Forty radiological technologists from 10 facilities in Manila City and nine in Quezon City participated in the training. A total of 36 participants submitted the required set of CXRs. The assessment indicated that the training effectively improved the quality of CXRs in terms of identification marking (Wilcoxon matched-pairs signed-rank sum test, P = 0.00), contrast (P = 0.00), sharpness (P = 0.01), artefacts (P = 0.00), and the total score of the factors (P = 0.00). In conclusion, the significant improvement in the total score of assessment factors strongly suggests a positive impact of the training course on improving the quality of CXRs.[14]

- ✔ **Tuberculosis Diagnostic Committees' Contribution to the National TB Program in Manila City and Quezon City:** This study aimed to determine current TBDC activities, obstacles and possible solutions for improvements in the quality of diagnosis of sn-PTB in Manila City and Quezon City. Of the chest-ray with TB findings evaluated by the TBDC, about 53% (605/1142) in Manila City and 65% (1015/1563) in Quezon City were classified as active TB patients. There were significant variations in the percentage of patients recommended for anti-tuberculosis treatment by the TBDC. The participation of its members is based on their expressed commitment to program sustainability. In conclusion, TBDC activities contribute to TB control in the Philippines by ensuring the judicious use of resources. Further research to assess the contributions of TBDCs in reducing diagnostic and treatment delays, and factors affecting the sustainability of the TBDCs, is recommended.[15]

III. Main Activities of RJPI: Projects implemented

1. 2007-2011 Project: *Quality Tuberculosis (TB) Control Project in Urban Poor Areas of Manila and Quezon City, Philippines*

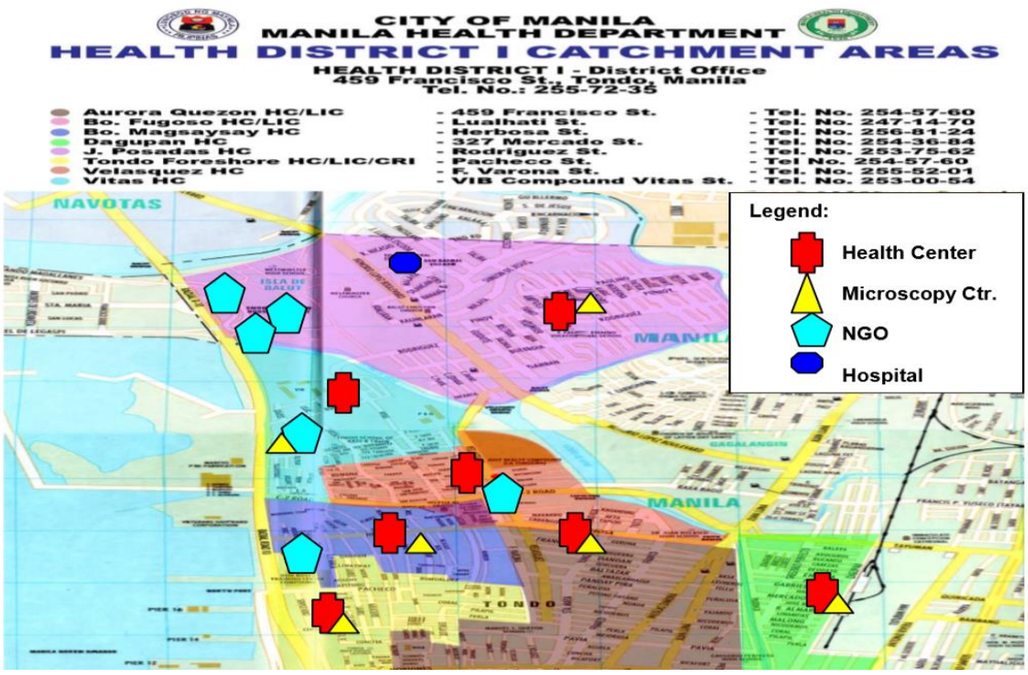
1.1. Source of fund: *Ministry of Foreign Affairs (MOFA) and Japan Anti-Tuberculosis Association (JATA)-Japan)*

1.2. **Preparation to MOFA Project:** After a series of consultations with the Department of Health - National TB Control Program (DOH-NTP) and the DOH- Metro Manila Regional Health Office, the Manila City and Quezon City were selected as sites for the project implementation. Despite the declaration of the 100% coverage of the Directly-Observed Short-Course Treatment strategy in 2003 and the improvements in the TB case detection rate (CDR) of New Smear Positive PTB from 53% (2002) to 97% (2006) in Manila and from 51 % (2002) to 63% (2006) in Quezon City; and improvements in the proportion of New smear positive PTB from 65% (2002) to 83% (2006) in Manila and 70% (2002) to 80% (2006) in Quezon City; still, it was below the program target of 70% case detection in 2007. With regards to the Cure rate among New Smear Positive, although there was slight improvement in both areas, from 77% to 81% in Tondo and from 78% to 82% in Payatas, also still it was below the program target of 85%.

With further recommendations from the DOH-NTP, DOH-Metro Manila Health Office and the Manila Health (MHD) and Quezon City Health Departments (QCHD) with regards to the selection of project sites, District I- Tondo, Manila, and Payatas, Quezon City were selected. The two areas were chosen basically because the case notification rate of District 1 and Payatas health centers were relatively low at 119/100,000 population and 70/100,000 (2006) population, respectively. In a typical urban poor settlement, like Tondo and Payatas, the population was more vulnerable to TB because of overcrowding, substandard of living and working condition, poor nutrition, and other concomitant diseases.

In the 3rd quarter of 2007, a *"baseline survey"* was conducted which aimed to: (1) To identify the non-government organizations which will be partners of the public sector and RIT/JATA Philippines, Inc.; (2) To assess the existing TB case management practices, both for diagnosis and treatment, of the non-government organizations in Tondo and Payatas; (3) To determine the needs of the NGOs which are providing services for TB patients in Tondo and Payatas.

1.3. Demographic Profile: District 1, which is the Tondo 1 area of Manila is situated in the northwestern most part of Manila. The total land area is 5.64 sq.km. with an estimated population of 320,916 and population density of 56,900 per square kilometer as of 2007. It has the highest population in the 6 districts of Manila. District 1 or Tondo 1 has a total of 12 zones with 136 barangays, of which, 40 barangays are depressed with a population of 133,374, about 42% of the population. Tondo 1 is where the famous Smokey Mountain as well as, Isla Puting Bato, Parola, Happy land, Sitio Damayan,Temporary housing, "Tambakan" or the present dumpsite now in Manila and "Ulingan" (charcoal making) are located. Please see below spot map of District I-Tondo, Manila.

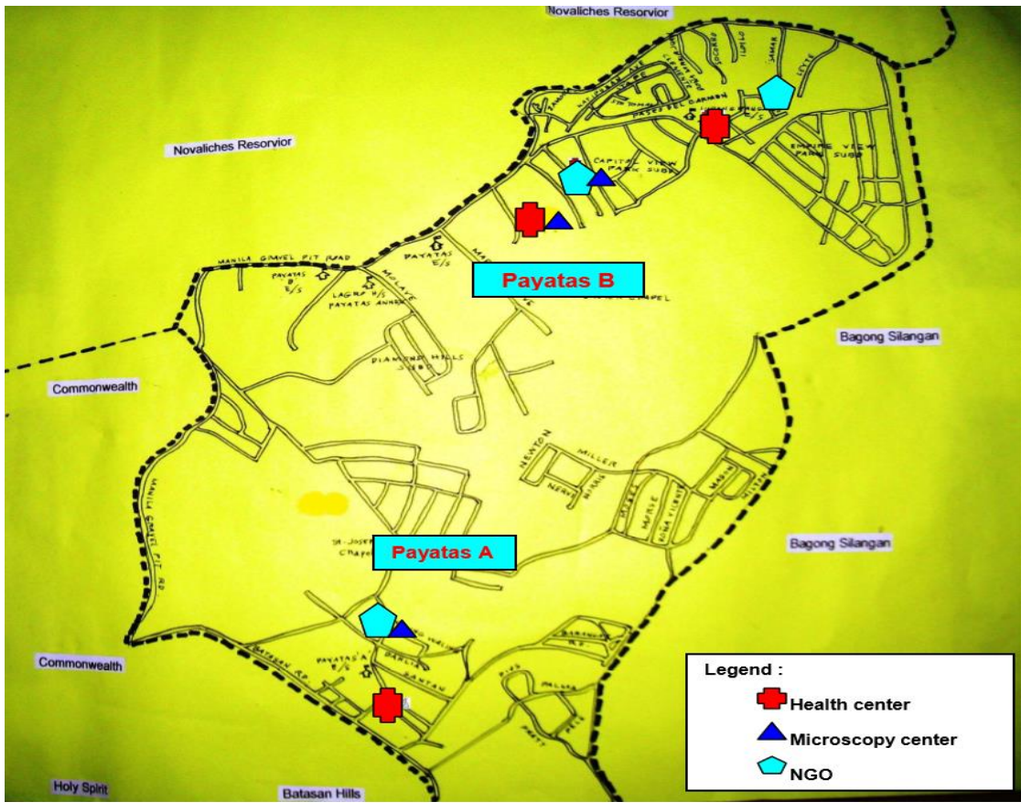


There are 8 health centers, 2 government hospitals owned by the local government, 3 lying -in clinics and six (6) microscopy center in District I-Tondo, Manila. Table 1 shows the name of the facilities in District 1 of Tondo, Manila City.

HEALTH CENTERS	LYING-IN CLINICS	HOSPITALS	MICROSCOPY CENTER
Bo. Fugoso	Aurora Quezon	Tondo General	Bo. Fugoso
Tondo Foreshore	Bo. Fugoso	Gat Andres Memorial Medical Center	Tondo Foreshore
Aurora Quezon	Tondo Foreshore		Aurora Quezon
Dagupan			Dagupan
Velasquez			J. Posadas
Vitas			Bo. Magsaysay
J. Posadas			
Bo. Magsaysay			

Barangay Payatas is located in the northeastern part of Quezon City along the boundary of Montalban Rizal. It has total land area of 7.74 sq.km., with 128,736 population in 2007 comprising about 5% of the total population of Quezon City. It is one of the squatter's relocation areas with the dumpsite located on the northeastern part of Payatas. About 90% of the population of Payatas belongs to urban poor population and majority of the residents are scavengers, construction workers, market vendors, drivers or unemployed.

There are three (3) health centers in Payatas: Payatas A, Payatas B and Lupang Pangako Health center; with only one (1) microscopy center situated in Payatas B health facility. There is no government hospital in the area and those cases which need hospitalization are referred to East Avenue Medical Center, Quezon City General Hospital or Quirino Memorial Medical Center. Please find below the spot map of Payatas, Quezon City.



Out of the 50 existing NGOs/CBOs/Socio-civic organization/people's organization both in District 1 of Tondo, Manila and Payatas, Quezon City, only seven (7) organizations in Manila and five (5) in Payatas were interviewed. These organizations are included based on their cooperation and interest to be partners of the RJPI. The names of the organization are shown below in table 2. Most of the NGOs interviewed were Faith-Based Organizations (or religious groups) whose main thrust programs focus on medical consultations, nutritional feeding and community health advocacies. While the other NGOs 'activities focus on educational scholarships, proving homes for the homeless, and providing vocational courses.

TONDO, MANILA (7)	PAYATAS, QUEZON CITY (5)
Canossa Health and Social Center Foundation, Inc.	I-CAN Foundation Philippines, Inc.
Sto. Nino de Tondo Medical and Indigency Center, Inc.	Payatas Orione Foundation, Inc.
ERDA SaBaNa Philippines	German Doctors
Youth With A Mission (YWAM)	Kapatiran Baptist Church
Social Service Development Ministry of St. John Bosco Parish	Payatas Hope Baptist Church
Gawad Kalinga	
San Pablo Parish	

Canossa Health and Social Center Foundation

Canossa Health and Social Center Foundation Inc. is a non-government organization located at E. Jacinto St. Magsaysay Village, Tondo Manila which is being managed by Canossians sisters. Their mission is: "inspired by the spirit of the greatest Love, they are called to commit themselves to the empowerment of the individual and the family in their participation in the community's economic developments, health promotion and children's educational enrichment on the way to becoming whole and integrated persons growing in faith and love for GOD". Their commitment is to serve the poorest of the poor. The Canossa DOTS facility started taking care of the clients as soon as they consulted as Presumptive TB. The health staff do medical consultation, family screening of Presumptive TBs, home visitation, and as soon as diagnosed the staff provide family and patient orientation and sign admission contract with the patient. During the treatment, the patients are requested to visit the facility for DOT, or for patients who cannot afford to go back and forth to the facility on a daily basis will be boarded and stayed until cured or a treatment partner will visit the house of the patient daily to give the medicines. Feeding, health education and values formation are integral part of their management of TB patients.

STO. NINO DE TONDO MEDICAL CENTER AND INDIGENCY CENTER

Sto Nino de Tondo Medical and Indigency Center, Inc. is a non-government/faith-based organization which is under the Sto Nino de Tondo Parish. Its clinic is located at 600 Lorenzo Chacon St., Tondo, Manila. The operation of the clinic is supervised by volunteer staff. The services that they provide are medical consultation, nutrition and feeding program and TB DOTS program. The TB DOTS program started since 1990 by the Pastorelli Sisters in collaboration with the German Doctors. Since

then, the volunteers started doing treatment of hundreds of PTB patients, doing health education and advocacy campaign and community assemblies.

GERMAN DOCTORS

Committee of German Doctors for Developing Countries popularly known as “German Doctors” is a private non-profit, non-government organization with main office at Phase 8A Bagong Silang, Caloocan City and has 5 satellite clinics, two of which are located in Payatas. They also supported 11 more clinics which are providing services for TB patients, most of them are faith- based organizations like Canossa and Sto Nino de Tondo. The organization’s mission is to provide health services for the poorest of the poor based on humanitarian values towards self-reliance. It was fully supported by some doctors from Germany who renders their services every 6 weeks. The clinic provides different health services as outpatient consultation, immediate care services, laboratory services, immunization for under five children, nutrition and feeding program for malnourished children, and TB program. They also distribute free medicines in diseases as hypertension, diabetes, asthma and TB.

PAYATAS ORIONE FOUNDATION, INC.

Payatas Orione Foundation, Inc. is a non-profit, non-stock, non-government organization which supports not only the physical but also the spiritual, and social welfare of the poor, handicap and underprivileged children and their families. It is operational as an organization since 1991 but as a foundation since March 12,2007 under the patronage of Local Superior of the Sons of Divine Providence, a religious order composed of priests and brothers. The office is situated in #24 San Juan Evangelista St., Payatas A Quezon City. Their Social Services Program promotes education through their learning and computer centers and give scholarships to children of poor families. The organization provides health services to the residents of Payatas through their two clinics: Saint Joseph Community Clinic, which provide daily consultations, laboratory services and low-cost medications; and the Fr. Angelo Fallardi Health Center which caters TB patients. They started TB program in 2003, however, they are not fully adopting yet the DOTS strategy. The sources of organization's funds come from local and international organization as well as from individual donors.

1.4. NETWORK/LINKAGE: Among the NGOs, only German Doctors' and Canossa have good collaboration with both the national and local government as well as other non-government organizations like Philippine Coalition Against Tuberculosis (PhilCAT) and Tropical Disease Foundation Incorporated (TDFI). However, the networking between the other NGOs and the health centers within the area is still weak. Inter-Communication Center for Asia and Nippon (I-CAN) Foundation and Gawad Kalinga are collaborating with the health centers as treatment partners. Other NGOs has either linkage with government sector only, with other NGOs only, or no linkage with the government nor other non-government organization. Below is the result of the consultative workshop which was meant to guide the GO-NGO partnership in providing quality TB Control services.

1.4.1. Consultative Workshop with the Government Organizations and NGOs: conducted on January 28, 2008

Based on the output of the consultative workshop conducted by the RJPI for NGOs, health centers and hospitals the following barriers for DOTS implementation were identified:

1. ***Economic barrier*** – no transportation fare due to poverty and unemployment, lack of funds for equipment for the health facility, lack of funds for supplemental feeding, no transportation allowance or incentives for Volunteer Health Worker (VHW), unstable commitment of VHW:

2. ***Geographical barrier*** – distance of the health facility, highly mobile patients, underestimated population, relocation/demolition, fictitious addresses.

3. ***Socio-cultural barrier*** – negative attitude of TB patients, lack of knowledge about TB in the community, uncooperative TB patients, uncooperative barangay officials, stigma

4. ***Health system barrier*** – insufficient funding from the LGU for TB program, lack of human resource, untrained health staff and volunteers, improper referral among health facilities, lack of networking among NGOs and the public sector, irregular monitoring, initial treatment by non-DOTS clinic, no space for TB program in the health facility, no funds for renovation of the clinic, lack of VHW/BHW as treatment partners, lack of equipment

From the above-mentioned findings, conclusions and recommendations reached during the said GO-NGO consultative workshop noted the following:

District 1 of Tondo Manila and Payatas Quezon City are considered as two of the highly vulnerable areas for Tuberculosis because of the population size, geographical location, environmental sanitation etc. Prevalence of Tuberculosis is almost three to four times higher among this high-risk group than the general population. DOTS maybe failing to reach this population as indicated by the low case notification rate and treatment outcome based on the reports of the District 1 of Tondo and Payatas Quezon City. Several barriers like economic costs of treatment, distance of the health facilities, stigma due to lack of awareness of TB patients, and issues in the health system both from public health facilities and non-government organizations.

Non-government organizations (NGOs) are an important partner of DOH and LGU for TB program especially in the implementation of community - based DOTS in a highly vulnerable urban poor population as Tondo and Payatas. NGOs usually fill the gaps in public health services. Their contribution to the NTP is highly regarded based on the number of cases being diagnosed and treated by the four NGOs, namely, Canossa, Sto Nino de Tondo, German Doctors and ICAN, for adopting DOTS strategy. Their activities should be sustained and supported both by the local and national government. However, some NGOs like Payatas Orione Foundation and San Pablo Clinic which are providing services for TB patients, are not yet adopting fully the DOTS strategy. Other NGOs as St John Bosco, Gawad Kalinga, ERDA SaBaNa, and YWAM are important sources of Presumptive TBs and TB patients. These organizations should be trained and be involved to implement the National TB Control Program strategy at the level of their capacity. Strengthening the capacity of NGOs will help address the barriers to access to quality TB DOTS services by the poor people of Tondo and Payatas. Networking and linkages, though present in some but absent between many NGOs and public sector, needs to be established and strengthened. However, further studies to improve the referral system between the NGOs and the public sector should be conducted to address the gaps and prevent defaulters both from diagnosis and treatment. Engaging the nongovernment organizations will shorten the pathways of TB patients to care due to their access to the community, their motivation and commitment to serve the poorest of the poor.

2. MOFA Project Implementation 2008-2011

2.1. Title of the Project: RJPI Quality TB Control Project in the Urban Poor area in Metro Manila, the Philippines

2.2. Project areas: Tondo Area and Payatas, Quezon City

2.3. Duration: March 2008-March 2011

2.4. Overall Goal: Tuberculosis morbidity and mortality in Tondo and Payatas, are decreased: This aimed to decrease TB mortality rate from 38.2/100,000 in 1990 to 19.10/100,000 in 2015 (decrease by 50%); and TB Morbidity will be decreased (or maintained) as follows: (1) Incidence of new smear positive TB will be decreased (or maintained) from 131/100,000 population to 130/100,000 by 2015; (2) Prevalence of new smear positive TB will be decreased from 3.1/1000 in 1997 to 2.0/1000

by 2015: (3) Prevalence of MDR-TB of new TB Patient will be decreased from 3.5% in 2003 to 3.0% in 2015.

2.5. Project purpose: Access to quality TB DOTS implementation is improved: This was measured through an increase in both the cure and case notification rates among the New Smear Positive Pulmonary TB cases of 85% and more than 100/100,000 population in both project areas, respectively.

2.6. Outputs:

2.6.1. Quality TB DOTS implementation is provided: To ensure that quality TB DOTS will be implemented in both project areas, several trainings was conducted for the HCWs (doctors, nurses, medical technologists, NGO health staff workers) from Basic TB DOTS, management of TB in children, TB infection Control, Appreciation of Quality Chest X-ray, Basic DSSM) while there was a modified training or orientation provided with the Community Health Volunteers which is at par with their knowledge and skill enhancement needs. This meant translating the highly- technical training into a simple one so that CHVS could grasp it easily.

2.6.2. Network among stakeholders of DOTS is established and strengthened: This involved referrals between the GO-NGOs when necessary like transfer of patient's residence. Another referral scheme is the referral from the NGO referring facilities to DOTS facilities. This required the development of CHV referral masterlist/forms to document the referral process and the contribution of CHVs to the DOTS facilities.

2.6.3. Community is empowered through Advocacy, Communication, and Social Mobilization (ACSM): This carried advocacy campaigns through the Lung Month and World TB celebrations. All partner organizations at the national, regional and local government units were invited to attend. This has also showcased the talents of TB patients which only proved that they can still be productive after being successfully treated. Apart from the advocacy campaigns, are the creation of TB Support Group composed of successfully treated patients or their relatives who were oriented to provide health education in the community and refer presumptive TB to DOTS facilities. In addition, a CHV Task Force group was created to guide the TB Support Group in conducting health education and referral of presumptive TB.

2.6.4. Operational researches are conducted to monitor and evaluate the program: Various operational researches were conducted to asses, improve and provide a sound evidence in terms of the GO-NGO model approach implementation, the contribution of TB Diagnostic Committee, the health-seeking pathway of presumptive TB from the referrals of CHV and that of the presumptive MDR-TB from DOTS facilities to treatment sites like Lung Center of the Philippines and the Gat Andres Bonifacio Medical Center, among others.

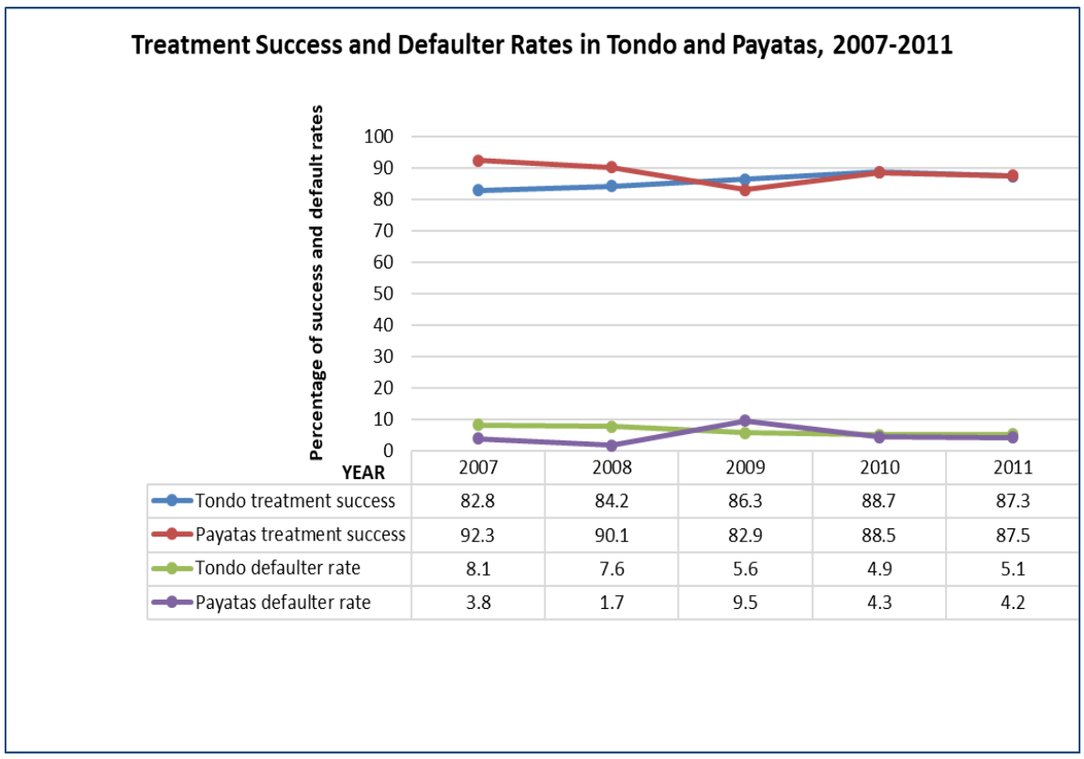
2.7. MOFA PROJECT ACCOMPLISHMENT, 2008-2011

2.7.1. The first part of the MOFA Project (March 2009- March 2010) focused on capacitating the health care workers (HCWs) both from the Government Organizations (GOs) and the NGOs. In addition to the (HCWs), the community health volunteers (CHVs) who can assist in TB case finding and case holding, and laboratory work as microscopist (training to detect AFB bacilli through the microscope) to and smearer were also trained. Moreover, provision of equipment to DOTS facilities was also part of the intervention to completely set-up a complete TB care for the people in the community. This ensured that the community receives utmost TB care from the identification as Presumptive TB, diagnosis and the treatment itself. The summary of accomplishments was as follows:

ACTIVITIES	TARGET	ACCOMPLISHMENT
Trainings/orientation		
Basic Course Training on DSSM for Medical Technologists/microscopists	10	7 (70%)
Basic DOTS Providers Training	60	57 (95%)
Course on DSSM for Laboratory Aide	12	12 (100%)
Baseline Survey for CHS on Knowledge on TB and DOTS Program	86	77 (90%)
Orientation of CHVs on TB DOTS	100	100 (100%)
Turn-over of equipment for setting -up a DOTS Facility		
Provision of equipment/NTP logistics	DOTS Facilities (NGOs-5; GO-1)	6 DOTS Facilities provided with: microscope; glass slides; slide boxes; alcohol lamp; TV/DVD; and Pedicabs
Advocacy Campaigns		
Lung Month Celebrartion in Tondo Area	Community Political Leader	Conducted in August 2008; attended by the City Mayor Alfredo Lim, 2 GOs, and 20 NGOs
World TB Day Payatas	Community, cured TB patients, political leader	Conducted in March 2009; attended y 4 GOs 20 NGOs
Creation of CHV TB Task Force in Tondo and Payatas	2	Task Forces created in both areas which aimed to find TB cases
Creation of TB Crusaders (composed of cured TB patients) in Tondo and Payatas	2	TB Crusaders created in both areas which aimed to motivate other patients to seek TB care and complete their treatment.

2.7.2. The ***second part of the MOFA accomplishment focused*** on its contribution to the NTP program in TB case finding and TB patient care. Below are the accomplishments of the RJPI per indicator:

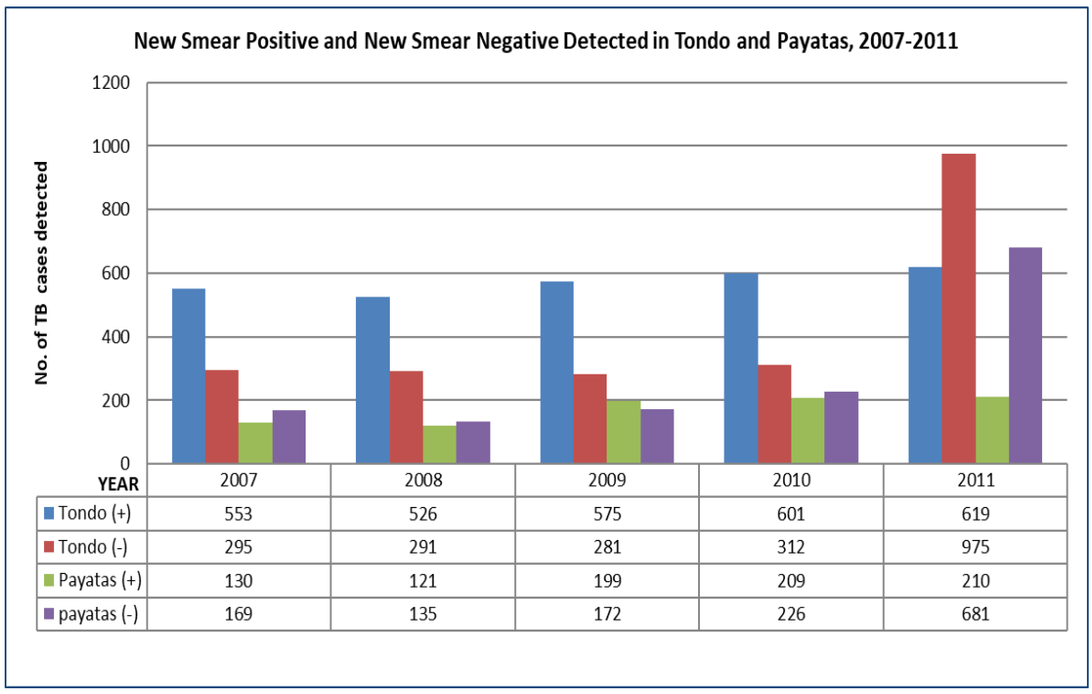
2.7.2.1 Treatment success rate of new smear positive PTB patients has been kept 85% and above with low default rate (below 5%) in both of the sites.



YEAR	2007	2008	2009	2010	2011
Tondo treatment success	82.8	84.2	86.3	88.7	87.3
Payatas treatment success	92.3	90.1	82.9	88.5	87.5
Tondo defaulter rate	8.1	7.6	5.6	4.9	5.1
Payatas defaulter rate	3.8	1.7	9.5	4.3	4.2

The treatment success rates were achieved in both sites with accomplishments of 87% as compared with the 85% program target. While, the default rate of less than 5% was achieved only in Payatas area at 4.2%. The Tondo defaulter rate was at 5%. The target of less than 5% default rate in Tondo was not achieved due to the following reasons: (1) characteristics of residents is very mobile since there this is where the ports are located; (2) busy with work/study; (4) health is not a priority;

2.7.2.2. Number of New TB patients registered (incl. Smear negative patients) is increased



YEAR	2007	2008	2009	2010	2011
Tondo (+)	553	526	575	601	619
Tondo (-)	295	291	281	312	975
Payatas (+)	130	121	199	209	210
payatas (-)	169	135	172	226	681

There were increased number of new smear positive and new smear negative cases in both areas. This may be attributed to the efforts made by the GOs and the additional accomplishment from the NGO DOTS and Referring Facilities.

2.7.2.3. Number of participants to community assembly is increased.

	2010 (MOFA Phase3)	2011
No. of events	7	5
No. of participants	687	324

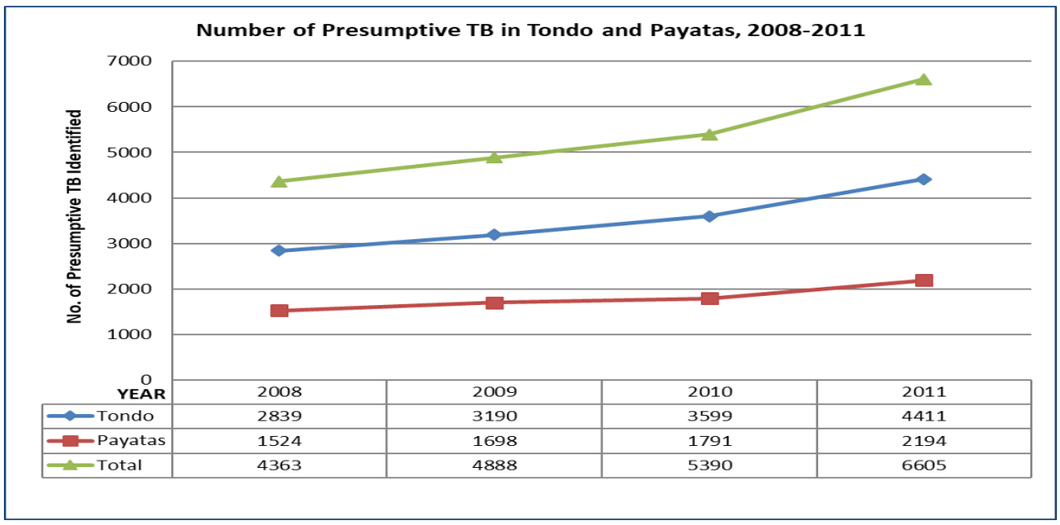
The CHVs from the Referring Facilities started conducting community assemblies from 2010. This was an added activity in the MOFA Phase 3 project. The CHVs took a lead in this activity but with guidance from either the health center or NGO DOTS staff corresponding to their respective catchment area. The idea is the CHV will provide TB health education and those inquiries from the participants will be reverted to the Health Center or NGO DOTS Staff. The decrease in both the number of community assembly events conducted as well as in the number of participants can be attributed to the equally important activities of the NGO referring facilities and the attrition rate of active CHVs which was at 67%. Most of the NGO Referring Facilities were not able to attend the said activity.

2.7.2.4 Number of facilities attended to advocacy campaign is increased.

		2008	**2009**	**2010**	**2011**
World TB Day	# partners	27	28	28	28
	participants	300	300	300	320
Lung month	# partners	27	27	28	26
	participants	300	320	545	450

There are two advocacy campaigns conducted each year- - - the Lung Months celebration in Tondo and the World TB Day in Payatas. In 2008, there were a total of 27 different organizations who participated in both advocacy campaigns. In Tondo, the number of partner organizations who participated the Lung Month Celebration decreased. There were equally important activities in two referring facilities at that time (ENFANCE and YWAM). On the other hand in Payatas, additional health facility (East Avenue Medical Center) participated the said activity. The number of participants for the said advocacy campaigns increased in both project sites.

2.2.7.4. Number of TB presumptive identified is increased.



Overall, there was more than 50% increase in the number of presumptive TB identified by the CHVs from 2008 to 2011. The said increase was 55% in Tondo and 43% in Payatas. This might be attributed to the activities conducted by the CHVs such as health educating the community which could have changed their behavior to seek early consult.

2.7.2.5. Number of treatment failure and other treatment TB patients who take anti-TB drug susceptibility is increased.

Sites	Type of Facility	Indicators	2010	2011
Tondo	HC	referred	97	105
		screened	92	90
		confirmed	12	16
	NGO	referred	55	51
		screened	*58	40
		confirmed	3	3
Payatas	HC	referred	40	42
		screened	40	42
		confirmed	0	3
	NGO	referred	14	36
		screened	14	36
		confirmed	2	5

**three patients from 2009 were only screened in 2010.*

The activity to track the uptake of drug susceptibility tests at the MDR-TB Treatment Sites started during the MOFA Phase 3 project which is from 2010. This aimed to assess the diagnosis and treatment delays of those presumptive MDR-TB (TB patients who remained smear positive at 5 months or over 5 months, or those patients with possible recurring TB disease) who were identified at the DOTS facility and referred to treatment sites for X-pert test. In 2010, there was no existing presumptive MDR-TB referral masterlist to document this pathway which means the RIT/JATA had to review several documents like individual records of patients, TB register, and the laboratory register and the received documents from the MDR-TB facility to compute for delays. In Tondo, about 5%-15% of presumptive MDR-TB were not screened for MDR-TB. This might be due to the distance of the Treatment Sites to the DOTS facilities. While in Payatas, the establishment of treatment satellite at District II- Quezon City has facilitated the referrals of presumptive MDR-TB. Through the treatment satellite (where screening and sputum collection for Xpert testing was done then sent to the Treatment Center), the uptake to Xpert diagnosis is more accessible to presumptive MDR-TB. The Treatment Satellite in Tondo was establish in 2013.

2.8. SUMMARY OF MOFA PROJECT:

First and foremost, the engagement of NGOs by RJPI in TB program has created substantial impact not only at the Local level but at the National level as well. To put things into context, although the RJPI project ended in March 2019, the commitment, active notification of TB cases, provision of TB services by most NGOs have been sustained.

During the MOFA project, where there were ingrained gaps identified in economic, geographical, socio-cultural and the health systems, the RJPI had instigated interventions that would promote the access of the community to quality TB services. The MOFA project was seen as a "formative phase" or the setting-up of the GO-NGO partnership. The following interventions were carried-out in order to meet the standards of providing quality TB services: capacity building of HCWs and the NGO staff; provision of equipment for the establishment of the microscopy center; development of recording tools to track, assess and document the TB program implementation; and the joint monitoring visits with representatives from MHD/QCHD/DOH-NCRO.

Through these interventions, there were improvements in the New Smear Positive CNR in Tondo, Manila and Payatas, Quezon City. Part of this accomplishment was attributed to the additional contribution of the NGOs in both sites at a ranged of 25%. With regards, to maintaining the default rate at below 5%, this was not achieved in Tondo area due to the nature of mobility of patients (presence of port areas), patients were busy with work or school, and "health is not a priority "as noted during the monitoring visits. These findings clearly indicate the urgency to develop the skills of HCWs in communicating/counselling TB patients in order to understand and elicit the reasons why patients default to TB treatment. This was a learning curve for the RJPI project and should be considered in the next project.

In line with the evolving strategies of the NTP to find the missing TB cases, various strategies were laid-down by the NTP like the conduct of contact investigation, addressing the need of the vulnerable groups like MDR-TB patients and the PLHIV. With those as a guiding approach based on PhilPACT strategies and the gaps in minimizing the default rate, this was premediated in the conceptualization of the next project which is the JICA project.

3. Japan International Cooperation Agency (JICA) Project June 2011- March 2014: TB Control and Prevention Project in Socio-economically Unprivileged Areas in Metro Manila, the Philippines (Source of fund: JICA/JATA)

The JICA project focused on the same sites--- the urban poor population of District I- Tondo, Manila and Payatas, Quezon City. Additional capacity building provided were trainings on TB Infection Control, Interpersonal Communication and Counselling both at the level of Doctors/Nurses and the CHVs. The other intervention is improving contact investigation activity in both GOs and the NGOs. Additional intervention was to improve the cross-referral mechanism between the TB DOTS Out-Patient-Department and the HIV wards at San Lazaro Hospital. This enhancement of the intra-hospital referral system aimed to treat TB patients promptly and refer HIV reactive cases for the confirmatory test and proper management for TB patients where appropriate to HIV Hub and vice versa for those PLHIV cases to receive proper TB diagnosis, treatment and management. This initiative included development of recording forms and TB/HIV guidelines at San Lazaro Hospital. A Technical Working Group composed of representatives from the DOH-NTP, DOH- Metro Manila Region Health Office, San Lazaro Hospital, MHD, QCHD, and the RJPI was formed. Several series of consultative meetings were conducted prior to the development and launching of the TB/HIV guidelines. The project design matrix during the JICA project is indicated in Annex B.

3.1. Overall Goal: Tuberculosis morbidity and mortality in Tondo, Manila and Payatas, QC is decreased in 2015: This can be translated into the following: (1) TB mortality rate will be decreased from 38.2/100,000 in 1990 to 19.1/100,000 in 2015 (50% reduction); (2) TB Morbidity is decreased (or maintained) as follows: (a) Incidence of new smear positive TB will be decreased (or maintained) from 131/100,000 population to 130/100,000 by 2015; (b) Prevalence of new smear positive TB will be decreased from 3.1/1000 in 1997 to 2.0/1000 by 2015; (c) Prevalence of MDR-TB of new TB Patient will be decreased from 3.8% in 2003 to 3.0% in 2015.

3.2. Project Purpose: Tuberculosis Infection prevention/treatment model is implemented upon maintained quality DOTS programme. This can be measured through the following indicators: (1) Treatment success rate of New Smear Positive PTB patients is 90% with low defaulter rate (i.e., below 5%); (2) No. of registered New Smear positive TB Patients and New Smear negative TB patients has been increased by 5% and 10% respectively in 2013. (baseline 2011); (3) Completion rate of INH Preventive Therapy (IPT) is at least 80% in 2013; (4) treatment success rate among retreatment patients doesn't get worse than the level of 2010(no MDR case); (5) Number of referrals is increased with access rate of 55%.

3.3. Outputs:

3.3.1. Advocacy, Communication, Social Mobilization (ACSM) about TB and treatment among community is strengthened: This focused on the number of community assemblies conducted by the CHVs in the referring facilities. The health education lectures focused on the basic facts about TB and when and where to seek medical attention. In addition, World TB Day and the Lung Month celebrations were held to

gather the partner organizations working to control TB in the country. This included the Department of Health, National TB Reference Laboratory Office, San Lazaro Hospital, East Avenue Medical Centers, the NGOS, and the successfully treated TB patients. An Information, Education, Communication video was produced by the RJPI in collaboration with the QCHD. MHD, NTP and the National Capital Region Health Office. This is usually being played during pre-clinic sessions and moderated by the health or NGO staff.

3.3.2. TB Screening (Contact investigation for contacts) is provided in the project areas: During this time, contact investigation is not yet fully implemented in the LGUs and the NGOs. In the LGUs, contact investigation is being conducted for adult household contacts (15 years old and above). While in the NGOS, Canossa, Sto. Nino, and the German Doctors are doing this for all household contacts. For PAOFI and St. Luigi Orione, this was not conducted at all. In terms of the recording of data, the LGUs have the Masterlist B for listing the adult contacts. On the other hand, in the NGOs, there was no standard recording of household contacts screening activity. Part of the accomplishments here are to track the number of health facilities conducting contact investigation and the development of Modified Masterlist B by RJPI, to document the contact investigation implementation at the NGO DOTS facilities.

3.3.3. TB Screening among HIV Positive Patients is provided and mechanisms for newly diagnosed HIV+/TB patients at San Lazaro Hospital are in place: This intended to develop a guideline which will enhance and harmonize the cross-referral mechanism between the San Lazaro Hospital HIV Ward and the TB DOTS clinic/ward.

3.3.4. Tuberculosis Infection Control is implemented at the health facilities in the project areas: This aimed to establish TB infection control activities in the NGO DOTS as well as among the CHVs who conduct area visits.

3.4. ACTIVITIES: The activities enumerated below are aligned together with the project's overall goal, project purpose and the output. This would help ensure the implementation of the project.

3.4.1. Advocacy, Communication, Social Mobilization (ACSM) about TB and treatment among community is strengthened: This was meant to enhance and continue the ACSM activities during the MOFA Project.

3.4.2. B Screening (Contact investigation for contacts including kids and adults) is provided in the project areas: A training for the GO and NGOs was conducted with the aim of standardizing the implementation of contact investigation.

3.4.3. TB Screening among HIV Positive Patients at San Lazaro Hospital is provided: To ensure the TB screening among PLHIV and HIV screening among TB patients a TB/HIV guideline was developed.

3.4.4. Tuberculosis Infection Control (TBIC) is implemented at the health facilities in the project areas:

The TBIC practices of the HCWs were monitored through the development of the TBIC monitoring tool.

3.5. RJPI ACCOMPLISHMENT DURING THE JICA /JATA PROJECT, 2011 – 2014

3.5.1. Treatment success rate of New Smear Positive PTB patients is 90% with low defaulter rate (i.e., below 5%)

Tondo, Manila	2010	2011	2012	Q1 2013
LGU treatment success	86% (386/449)	82% (379/464)	83% (427/512)	81% (115/142)
NGO treatment success	97% (150/155)	92% (145/157)	88% (109/124)	86% (19/22)
Success rate (Tondo, all)	89% (536/604)	84% (524/621)	84% (536/636)	82% (134/164)
LGU defaulter rate	6% (27/449)	7% (31/464)	8% (41/512)	10% (14/142)
NGO defaulter rate	2% (3/155)	1% (2/157)	3% (4/124)	0 (0/22)
Defaulter rate (Tondo, all)	5% (30/604)	5% (33/621)	7% (45/636)	9% (14/164)

LGU: local government unit, NGO: Non-Government Organization

In Tondo, the treatment success rate decreased from 89% (536/604) in 2010 to 84% (536/636) in 2012. Unfortunately, the defaulter rate increased from 5% (30/604) to 7% (45/636). The treatment success rate in 2010 was 1% short of achieving the program target of 90% and this never achieved since then until the 2012. In addition to the high defaulter rate, failure to achieve the treatment success rate was also attributed with the following unfavorable treatment outcomes in 2012: Death rate:3.6% (23/636); Transferred-out rate: 2.8% (18/636); Failure rate: 2.2% (14/636). In the first quarter of 2013, the treatment success rate was still low at 82% (134/164). This can be attributed to the high defaulter rate of 9% (14/164). This has exceeded the allowable project rate of less than 5%. Findings in one of the monitoring visits noted that high defaulter rate might be attributed to high mobility nature of residents in Tondo since this is where the ports (Pier) are located; work or class schedule of patients, and some discontinue their treatment because of mild hypersensitivity reactions to anti-TB drugs. In addition, low treatment success rate might be further aggravated by the following unfavorable treatment outcomes in both the LGUs and NGOs, in the first quarter of 2013: death rate: 4% (5/144); failure rate : 3% (4/144) ; and transferred-out rate: 5% (7/144).

Payatas	2010	2011	2012	Q1 2013
LGU treatment success	92% (108/117)	92% (93/101)	91% (111/122)	87% (27/31)
NGO treatment success	84% (77/92)	83% (89/107)	82% (85/104)	100% (29/29)
Success rate (Payatas)	88% (185/209)	88% (182/208)	87% (196/226)	93% (56/60)
LGU defaulter rate	2% (2/117)	4% (4/101)	2% (2/122)	0% (0/31)
NGO defaulter rate	8% (7/92)	4% (4/107)	4% (4/104)	0% (0/29)
Defaulter rate (Payatas)	4% (9/209)	4% (8/208)	3% (6/226)	0% (0/60)

LGU: local government unit, NGO: Non-Government Organization

In Payatas, the treatment success rate among LGUs and NGOs was maintained from 88% (185/209) in 2010 to 87% (196/226) in 2012. The defaulter rate also maintained from 4% (9/209) in 2010 to 3% (6/226) in 2012. Although, the treatment success rate was maintained at 87% in 2012, still the program target of 90% was not achieved due to the following unfavorable treatment outcomes in 2012: transferred out rate: 6% (13/226), death rate: 3% (6/226), failure rate:2% (5/226). The success rate indicated above 90% in the 1st Quarter of 2013. There has been a marked improvement in the treatment success rate in the NGO DOTS facilities in Payatas, since there was no unfavorable outcome for the first quarter of 2013.

3.5.2. No. of registered New Smear positive TB Patients and New Smear negative TB patients per annum have been increased by 5% and 10%, respectively in 2013. (baseline 2010)

Tondo	**2010**	**2011**	**2012**	**2013**	**Q1 2014**
LGU	449	464	512	477	117
NGO	155	157	133	99	29
New Smear Positive total	604	621	645	576	146
LGU	188	742 (A:350 C:392)	889 (A:426 C:463)	789 (A:455 C:334)	237 (A:156 C:81)
NGO	124	220 (A:140 C:80)	179 (A:119 C:60)	197 (A:125 C:72)	59 (A:41 C:18)
New Smear Negative total	312	962	1068	986	296

Note: 2010 data: Adult only/ (A:Adult, C:Children)

In Tondo, New Smear Positive (NSP) cases increased from 2010 to 2012 among LGU and slightly decreased from 2012 to 2013.

Payatas	2010	2011	2012	**2013**	**Q1 2014**
LGU	117	101	125	122	30
NGO	92	107	105	85	24
Smear Positive total	209	208	230	207	54
LGU	76	220 (A:120 C:100)	189 (A:102 C:87)	172 (A:143 C:29)	54 (A:38 C:16)
NGO	150	446 (A:286 C:160)	402 (A:294 C:108)	282 (A:149 C:133)	81 (A:34 C:47)
Smear Negative total	226	666	591	454	135

In Payatas, there was a decline in the New Smear Positive Cases among NGOs from 92 in 2010 to 85 in 2013.

The target of 5% increase in the number of New Smear Positive cases was not achieved in both project sites. The following factors may have been attributed to below 5% performance: (1) the catchment population was redefined in the City of Manila and patients who are not part of the catchment area were referred to appropriate health facilities to start treatment; (2) demolition and/or relocation of diagnosed NSP, hence treatment was not initiated (possible initial defaulters); (3) a moratorium of NTP activities to give way to a focused supplemental immunization activity on measles to halt the measles epidemic experienced in most parts of the NCRO and conduct of contact investigation (effort to find the source of TB among children) was not fully implemented in 2013.

The number of New Smear Negative cases increased in both project sites mainly as a result of inclusion of TB in children on the TB register from 2011.

The project conducted a workshop on how to do contact investigation at the community level on February 2014. This workshop intended to intensify screening all households' contacts of index TB cases to find the missing TB cases and improve case finding in the future.

3.5.3. Completion rate of INH Preventive Therapy (IPT) is at least 80% in 2013

Health Facility	2010			2011			2012			2013		
	On IPT	Completed	%	On IPT	Completed	%	On IPT	Completed	%	On IPT	Completed	%
HC (Tondo)	113	97	85.8	171	151	88.3	159	127	80.0	35	34	97.0
NGO (Tondo)	73	70	95.9	94	92	97.9	59	56	95.0	9	9	100.0
HC (Payatas)	7	7	100.0	6	6	100.0	14	12	86.0	6	6	100.0
NGO (Payatas)	19	19	100.0	37	37	100.0	29	27	93.0	7	7	100.0

The 80% target for the IPT completion rate was achieved in both project sites. During the focal group discussion (FGD) conducted among HCWs on October 2012, it was recommended that mothers or guardians oriented on DOT should be the treatment partner of children instead of going to the health facility daily for the supervised drug intake. The hindering factor was some mothers or guardians were uncooperative. The project was able to introduce community DOPT (Directly Observed Preventive Therapy) and empower the most of the mothers or guardian to conduct DOPT.

3.5.4. Treatment success rate among retreatment patients (non-MDR cases) doesn't get worse than the level of 2010

Project Sites	2010	2011	2012	Q1 2013
Tondo	77% (75/98)	81% (13/16)	80% (107/133)	83% (29/35)
Payatas	89% (17/19)	83% (20/24)	76% (19/25)	79% (11/14)

Although, the retreatment success rate from 2010 - 2012 improved in Tondo, the following unfavorable treatment outcomes were noted in 2013: lost to follow up (LTFU)- 6% (8/133), transferred-out- 3% (4/133), Failed- 4% (5/133), and died- 7% (9/133). The patients LTFU due to: side effects- 3, temporary resident/moved out without prior notice- 3 and stigma-2.

Declining retreatment success rate from 2010 - 2012 in Payatas was due to: LTFU rate: 4% (1/25) because the patient refused treatment, transferred out rate: 12% (3/25) 3- i.e., preferred to continue treatment in the province, and death rate: 8% (2/25).

In the first quarter of 2013, the treatment success rate target has been achieved in Tondo. While in Payatas, although there was an improvement from 2012, i.e., 76 % (19/25) in 2012 to 79% (11/14) in 2013, still it was not able to achieve the 85% target due to death (1/14), defaulter (1/14), and transfer out (1/14).

After the conduct of FGD in October 2012, the recommendations on conducting community DOT and the involvement of the Barangay Officials on community TB activities (in terms of tracing LTFU patients and a stricter policy on the issuance of Barangay clearance) were made and they may eventually improve treatment outcomes.

3.5.5. Number of presumptive TB referrals is increased with access rate of 55%.

Indicators	TONDO			PAYATAS		
	Child	Adult	Total	Child	Adult	Total
2010						
Refer	52	263	315	9	33	42
Access	24	138	162	6	20	26
%	46	53	51	67	61	62
2011						
Refer	136	218	354	23	74	97
Access	72	119	190	9	43	52
%	53	54	54	39	58	54
2012						
Refer	113	161	274	24	49	73
Access	57	107	164	19	27	46
%	50	66	60	79	55	63
2013						
Refer	208	171	379	12	21	33
Access	99	101	200	10	16	26
%	48	59	53	83	76	79
Q1 2014						
Refer	36	29	65	2	8	10
Access	17	19	36	2	8	10
%	47	66	55	100	100	100

In Tondo, there was an increase in the number of presumptive TB identified from 2010 to 2013 and the access rate, i.e., the proportion of the accessed presumptive TB to any of the health facilities among those who were identified as Presumptive TB, remained as 53% in 2013. In the first quarter of 2014, the number of Presumptive TB was 65 and access rate was achieved at 55%. The number of Presumptive TBs to be identified this year may be far less than that of last year, e.g., 65 x 4 = 260. The main reasons why these happened were the following: (1) CHVs and three NGO referring facilities became inactive in the community TB activities due to security concerns in their catchment areas and internal problems experienced within their organizations.

In Payatas, the number of referrals decreased from 2010 to 2013 while access rate improved from 62% in 2010 to 79% in 2013. There is only one referring facility in Payatas. One of the hindering factors that led to the low number of Presumptive TB referred in Payatas was the resignation of the nurse and a smaller number of CHVs doing TB activities. In the first quarter of 2014, the number of Presumptive TB referrals was at 40 with access rate of 100%. The Barangay Management Council (BTBMC) organized in Payatas composed of LGUs, Barangay and NGOs working in the said area fostered coordination among them which facilitated the marked improvement in the access rate. For instance, the CHVs of the BTBMC accompanied the Presumptive TBs identified to ensure that they were able to access the DOTS facility.

The hindering factor experienced by the project was the drop-out of CHVs in doing community activities either because they find a job or they just prefer to stay at home to take care of their kids or grandchildren. There are only 160 active CHVs against the 485 trained in 2010. The achievement of the project was it was able to contribute to the additional number of presumptive TB identified in MHD and QCHD by 4% (188/5351) in 2010 and 3% (226/6998) in 2013. There was a 2% (46/1890) contribution in the first quarter of 2014. The following are the achievements of the project: (1) oriented the NGO heads to mainstream NTP into their organizational system none the less they provided health services or not (e.g., "ERDA Sabana" thrust of program is education but incorporated TB program, "Gawad Kalinga" thrust of program is livelihood but incorporated NTP program); (2) capacitated the CHVs; (3) institutionalized a referral mechanism between the referring facility and DOTS facility; and (4) facilitated the development of recording forms. These activities strengthen the linkage between the NGOs/ GOs and documented the significant contribution of the CHVs to the NTP.

3.5.6. Advocacy, Communication, Social Mobilization (ACSM): No. of Participants to community assembly is 1, 500 for three years.

	2011 (2011.6-2012.3)	**2012** (2012.4-2013.3)	**2013** (2013.4-2014.3)
# of event	5	8	17
participants	324	1085	956

The number of participants to the community assemblies initiated by the project was 2,365 which more than the expected target. The achievement of the project was it was able to pass through to the health facilities the conduct of the said activity and subsequent community assemblies will be spearheaded by the health facilities to continuously educate the patients and their families on basic facts about TB.

3.5.7. Contact Investigation: No. of facilities that contributed to contact investigation is more than 25 for three years.

At present there are 25 facilities contributing to contact investigation and seven (7) of which are referring facilities. The project's achievement is the development of contact investigation tool such as Modified Masterlist B and engagement of the referring facilities in

assisting the DOTS Facility to do contact investigation. After the workshop on how to do contact investigation in the community among the HCWs last March 2014, this is expected to improve.

3.5.8. Tuberculosis Infection Control is implemented at the health facilities in the project areas.

Level of TB Infection Control	**2012**		**2013**		**Q1 2014**	
	Tondo LGU	Tondo NGO	Tondo LGU	Tondo NGO	Tondo LGU	Tondo NGO
Managerial	0	0	10	2	5	0
Administrative	0	0	10	2	4	0
Environmental	0	2	10	2	5	0
Personal Protective Equipment	0	2	10	2	5	0

Level of TB Infection Control	**2012**		**2013**		**Q1 2014**	
	Payatas LGU	Payatas NGO	Payatas LGU	Payatas NGO	Payatas LGU	Payatas NGO
Managerial	0	0	2	3	2	2
Administrative	0	0	2	3	2	2
Environmental	0	3	3	3	2	1
Personal Protective Equipment	0	0	3	3	2	2

Almost all of the health facilities visited improved their health practices on TBIC from 2012 to 2014. The frequent joint monitoring/evaluation visits have facilitated the improvement of TB infection health practices by HCWs. The achievements of the project were the development of TBIC M/E tool and the ownership of the district supervisors to utilize this in their subsequent visits.

3.5.9. Guideline about TB Screening and IPT for HIV positive Patients at San Lazaro Hospital is made.

This was taken during the formal launching of the SLH Guideline on the intra-referral between the HIV Ward and TB DOTS Clinic/Ward. This was held on September 17, 2012 and attended by 70 participants. In addition, partners from the DOH-NTP and HIV departments attended the said activity. During the said launching, an orientation to the said guideline for the nurses was conducted by Dr. Rosario Tactacan, Head HIV Department (lower photos).

The San Lazaro Hospital (SLH) protocol/guideline was developed in 2012 to improve the intra-cross-referral mechanism between the TB DOTS and HIV Ward.16 This guideline has provided a platform for the free provision of INH to PLHIV with TB Infection and the development of TB/HIV Masterlist/IPT Masterlist.

3.5.10. Number of New TB patients offered and accepted Provider Initiated Counseling and Testing (PICT) is increased.

	Indicators	2010	2011
Tondo	Offered PICT	ND	647
	Accepted PICT	ND	228
	Tested	ND	185

This was not part of the original plan but the idea came as part of the recommendations of the NCRO. This intended to increase the uptake of the HIV screening and eventually reduce delays in the diagnosis and treatment of TB patients with HIV. There is no accomplishment yet for Payatas area since the PICT training only started 1st quarter of 2012.

3.5.11. Solid Culture and Drug Susceptibility Testing for Mycobacterium tuberculosis is developed.

This training module was developed in partnership with the RJPI, DOH and the National TB Reference Laboratory. This was funded by the Global Fund through the Philippine Business Social Progress. This module serves as a guide for the supervisors and medical technologists in terms of performing the solid culture and DST for TB cases. This project started from 2012 and was completed in 2014. This involved a series of consultative meetings and workshops before an initial draft was developed. The said draft was field tested in the last quarter of 2013. Then, technical reviews were conducted by the NTRL, DOH, PBSP and the other LGUs like the QCHD and MHD. After which, a final copy was reproduced in the last quarter of 2014. 17

3.6. SUMMARY OF THE JICA PROJECT:

The JICA project was the scale-up phase, where the lessons learned from the MOFA project (formative phase) were levelled-up and continued. Similar activities were implemented with add-on activities like IPCC training; development of the tracking-tool to monitor those TB patients who opted to keep their TB treatment in another facility (transferred-out); development of the contact investigation masterlist to ensure that all household contacts (which means children are also screened for TB); development of the presumptive MDR-TB masterlist to enlist the referral pathway of presumptive MDR-TB from identification as presumptive, access, diagnosis, MDR-TB treatment initiation and completion. Other activities included the TB Infection Control (TBIC) training to re-orient the HCWs that to "take care" of TB patients is the core aspect of service delivery but another thing should focus on their welfare as well, like consistently practicing TBIC measures. HCWs are ten times at risk of contracting TB disease than that of the general population. Cognizant of this fact, TBIC should be in place in order for HCWs to continuously provide TB care. The development of TB/HIV guidelines at San Lazaro Hospital facilitated the provision of free Isoniazid tablets for PLHIV with TB infection. Prior to the development of this guideline, PLHIV with TB infection requires 6-month of Isoniazid Preventive Therapy (IPT) which resulted to out-of-pocket expenses. This guideline has sort of lessened the financial expense of the PLHIV. Moreover, the enhancement of the cross-referral mechanism within the hospital was able to provide prompt access of TB and ARV treatment for the PLHIV and TB patients. Another activity is the referrals from the CHVs. The CHVs were able to assist the DOTS facilities in finding TB cases in their respective areas. In fact, CHVs extended beyond finding TB cases because most of them even accompanied presumptive TB to DOTS facilities to be certain that they were screened for TB and received the necessary treatment.

There is no perfect project even with appropriate interventions. TB as a disease is complex and a result of a compendium of factors from poverty, knowledge, and the disease itself. Our interventions were not absolute and there were things above are expectations that necessitates further improvement. For instance, the development of the transferred-out tracking tool seemed to work well in the beginning. Unfortunately, the out-pocket-pocket expense of the HCWs (cellphone load or the snail load expense) took its toll and put an end to this activity. Now, in the era (from year 2018) of unlimited texts and mobile data at lower rates, this can materialize--- meaning there is a way to know if patients who transferred-out were able or not to successfully complete their TB treatment. In the long run, this could

also indicate prompt diagnosis and management not only of the drug susceptible TB cases but of the MDR-TB as well.

With regards to the re-orientation of HCWs to TBIC, it was able to remind them to consistently practice TBIC. On the other hand, TBIC is not only limited to the awareness of HCWs on infection control practices but requires meeting the health facility standard for infection control (i.e., high ceiling facility, big windows, exhaust fan). Despite the knowledge gained through the TBIC training, working in an environment not conducive for maintaining infection control likewise predispose the HCWs to contract TB disease. The RJPI project cannot fund for either health facility infrastructure either through establishment or renovation. In order to at least reduce the TB transmission, the use of electric fan from the back of HCW pointing towards the exit doors (environmental level of infection control) and if and when available the use of N-95 masks for HCWs, and surgical masks for TB patients (Use of personal protective equipment) were recommended. The use of masks was not sustained because it was dependent on LGU supply. The long-term solution is renovating the health facility (which is included in the first level of TBIC—the administrative control). Since this was part of RJPIs limitation, basically a plan to change the physical structure of the health facilities were recommended in the future. To date, there were several health centers in Manila which were knocked-down through the LGU fund and TBIC recommendations were carried-out (high ceiling, big windows, and others, biosafety cabinet for microscopy centers).

In the light of high attrition rate of CHVs due to mainly finding job opportunities, a linkage with government agencies should be considered in order to provide them with sustainable earnings and keep them in the TB program. In addition, we cannot underestimate the capacity of CHVs to give themselves freely in doing community service but recruitment of CHVs should also look into other aspects like age, health condition of CHVs in order to avert the possibility of acquiring diseases or worsening their condition.

4. Technical Assistance Project Services (TAPS) to Capacitate Community-Based Organizations (CBOs) as Rural Health Units (RHUs) Partners (TB) Control 2015-2016 (Source of Fund: USAID/JATA)

This TAPS project is almost the similar with the previous projects in Tondo, Manila and Payatas, Quezon City, which focused on engaging and capacitating the existing organization in selected municipalities of Bulacan, establishing referral mechanism, between the GOs and CBOs; conducting joint monitoring and evaluation activities.

In Bulacan province, the report of 2015 showed about 103% TB cases detected and about 90% were successfully treated. Although Bulacan has already achieved its TB program target, variations in achieving the target per municipality existed. In our project site, the following municipalities need to improve their accomplishment in case detection: Calumpit (70%), Paombong (62%), Plaridel (65%), San Ildefonso (69%) and San Miguel (79%); while, Baliwag which reached more than 90% in both program targets need to enhance their contact investigation activities to find missing cases.

The current TB control efforts in the said municipalities then necessitates further involvement of Community-Based Organizations (CBOs) to assist the Rural Health Units (RHUs) in their TB case finding (including contact investigation) and case holding activities.

Through the "Technical Assistance Provider" scheme of PBSP/IMPACT, CBOs and RHUs have been linked to improve access of the community to quality TB services. The RIT/JATA Philippines, Inc. as commissioned by PBSP/IMPACT has engaged CBOs on TB response, has improved their capabilities as TB educators, referrers and treatment partner; and has established a referral system between the CBOs and RHUs.

4.1. Project activities and expected outputs from March 2015 to April 2016

4.1.1. Consultative meetings with partner organizations from March 2015 to June 2015:

After the identification of the six municipal intervention sites based on low case detection rates (Baliwag, Calumpit, Paombong, Plaridel, San Ildefonso, and San Miguel) at the Bulacan Provincial Health Level (PHO), a series of consultative meetings was conducted together with Region 3 Health Office, Municipality Health Offices and the Barangay League to orient them on the current TB burden in their barangays and municipalities. After which, the barangay leaders and MHOs recommended the CBOs which could possibly assist in increasing TB case finding.

4.1.2. Engagement of CBOs June 2015:

The CBOs recommended by the Barangay Leaders and MHOs were visited, interviewed and oriented on the project concept. Among the 20 CBOs identified, only 14 signed the memorandum of agreement. Unfortunately, only 9 CBOs remained active for the entire year of engagement such as:

- ✔ **Baliwag:** Day Care Workers (DCW) and Bayanihang Bulakenyo Foundation, Inc. (BBFI)
- ✔ **Calumpit:** BBFI
- ✔ **Paombong:** BBFI
- ✔ **Plaridel:** Solo Parents
- ✔ **San Ildefonso:** BBFI
- ✔ **San Miguel**: BBFI

*BBFI: is a Bulacan Provincial wide organization wherein an incentive ranging from 40USD-60 USD is provided to its members depending on the Internal Review Allotment per municipality. This also the Municipal Leader (ML) and Local Leader for Nutrition (LLN) are also members of this organization.

* Solo Parents: is also a Bulacan Provincial wide organization but there is no incentive regularly provided to its members since there is no provision in the Solo Parents'by- laws.

4.1.3. Training:

A two-day training was conducted per municipality from July to August 2015. The first day of training constituted the basic facts about TB, TB situation per barangay, rationale for the intervention. In the second day of training, the monitoring indicators and the use of recording forms were introduced and written exercises were done.

4.2. Implementation of the project: The project started from August 2015 to March 2016.

4.2.1. Monitoring and evaluation visits: The monitoring visits were conducted monthly with representative from Region 3 Health Office and Bulacan Health Office.

The following indicators were used based on the recommendations from PBSP/IMPACT:

- ✔ **No. of individuals reached through TB education:** This means conduct health education in the community and 20% of the identified target population should be reached by TB education focusing on basic facts about TB, symptoms of TB, when and where to seek help.
- ✔ **No. of presumptive TB identified:** Alongside he TB health education is the identification of the presumptive TB. Those identified presumptive TB were referred to designated RHUs using the referral form and this should be reflected to the presumptive TB referral masterlist at once.
- ✔ **No. of presumptive TB who accessed the RHU:** This refers to the presumptive TB who was able to reach the DOTS facility and complied with the sputum examination. The cut-off is 50% the identified presumptive should access the RHUs.
- ✔ **No. of diagnosed TB cases and initiated to treatment:** These are the referrals of the CBOs diagnosed as TB case and were started on TB treatment. 100% of the diagnosed TB cased should be started on TB Treatment.
- ✔ **No. of TB cases under the supervision of a CBO member:** This indicator is flexible which means it depends on the prerogative of the TB patient or in the context of the "patient-centered approach". Some patients preferred the anti-TB drug supervision by the healthcare worker while some preferred the CBO member instead.

4.2.2. Creation of municipal ordinance per municipality: This aimed to sustain the activities of the CBOs after the project.

4.3. Accomplishment of the CBOs per municipality: Please find the accomplishment of CBOs below.

Summary of Accomplishment of CBOs from July 2015 to March 2016

Municipalities	No. of Individual reached by TB Education		No. of Presumptive TB cases identified		No. of Presumptive TB cases successfully referred to DOTS facility		No. of TB All Forms diagnosed and initiated treatment		No. of TB patients under treatment with a CBO partner	
	Annual Target	*Acc.	Annual Target	Acc.	Annual Target	Acc.	Annual Target	Acc.	Annual Target	Acc.
Baliwag	1175	1543	811	61	811	17	203	13	Depends on patients' preference and RHUs' decision	0
*Calumpit		505		55		28		22		2
*Paombong		792		51		47		13		5
Plaridel		949		85		29		20		0
San Ildefonso		616		206		109		12		2
San Miguel		951		113		99		44		0
Grand Total		**5356**		**571**		**329**		**124**		**9**
% Accomplishment		**46%**		**70%**		**41%**		**61%**		

*Acc.: Accomplishment or quantitative measure of performance of each municipality per project indicator.

The 20% target to reach the individuals though TB health education was achieved by two-fold. This may be attributed to the strategy of each CBOs to gather the individuals and conduct a group health education. Another factor was the joint efforts of the RHU staff and the CBOs to conduct this kind of activity. Usually, the CBOs gather the community, conduct the health education and all the inquiries raised by the participants will be handled by the RHU staff.

Of the 70% presumptive TB identified, only 41% successfully reached the RHU for diagnostic examination. One of the gaps identified was there was no follow-up home visits to those presumptive TB identified. Simultaneous municipal activities prevented the CBOs to conduct follow-up visits. Since this is "local election time" most of the CBOs were utilized during graduation ceremonies, medical missions, dengue fogging activities to name a few. Monitoring from the RHU side was likewise affected since there were left and right medical missions conducted in each municipality but this was more evident in Calumpit and Baliwag. Also, the RHUs focused in the Supplemental Immunization Activity from August to October 2015.

Only 61% of the diagnosed TB cases were started on TB treatment. Some of the reasons noted were: (1) TB patients already transferred residence prior to the initiation of TB treatment; (2) insufficient supply of streptomycin injection, distilled water and syringe; (3) lack of TB medicines for children.

4.4. General Monitoring and Evaluation Findings:

- ✓ No follow-up done to those presumptive TB who were not able to access the RHU.
- ✓ TB case from CBO referrals were reflected by RHU nurse under public health facility column instead of under community contribution.
- ✓ Good coordination of community activities between CBOs and RHUs.
- ✓ Monitoring and evaluation of CBO activities which is initiated by MHO/RHN/RHM was not done at the RHU and BHS levels.
- ✓ Regular meeting with CBOs initiated by San Miguel MHO needs to be replicated in the other 5 municipalities.
- ✓ There were supplemental activities carried-out by RHUs which has affected their participation in the project (trainings, Dengue Vaccination Activity for two weeks, medical mission, etc.) and which also resulted to delays in project activities.
- ✓ CBOs are utilized by politicians (Provincial/municipal) to attend political assemblies from December 2015, assist in graduation rites. This greatly affected the TB activities of CBOs, as well as monitoring and observation visits of RIT/JATA.

4.5. PROGRAM IMPLEMETATION REVIEW: February 9-11,2016

- ✓ Baliwag had the lowest contribution (3/364 or 0.1%) of TB cases from July 2015 to January 2016 (CBO versus RHU actual accomplishment). This was followed by San Ildefonso with 5% (6/121) TB cases contributed to RHUs. Paombong had 8% (8/96) and Calumpit at 9% (14/150). The two municipalities who reached more than 10% target for contribution of TB cases are Plaridel and San Miguel.
- ✓ The sustainability plan was developed by MHOs along with CBOs to address concerns, to improve and to continue their TB activities after the termination of the RIT/JATA project with IMPACT.

4.6. CREATION OF THE MUNICIPAL ORDINANCE:

Municipal ordinance was approved in Paombong, Plaridel, San Ildefonso and San Miguel. To date, the municipal ordinance is not yet approved in Calumpit and Baliwag due to political disunity among the Sanggunian Bayan members. The status is as follows:

Calumpit- There was no quorum on March 9, 2016 since majority of councilors did not attend. On April 18, the municipal ordinance was taken up but majority of councilors recommended another committee hearing for this.

Baliwag- after its second reading, majority of councillors requested for another committee hearing.

4.7. SUMMARY OF THE TECHNICAL ASSISTANCE PROVIDER PROJECT BY USAID/JATA:

The following led to the smooth implementation of the project (all activities were approved): (1) The initial consultative meeting with the Provincial health Officer during the proposal making to USAID and courtesy visit with relevant partner organizations (PO, RHO- 3, MHO< DILG, Barangay League); (2) Inputs about development of training and activity designs from PHO were solicited; and (3) Prompt feedback and submission of progress reports to RHO/ PHO. In addition, the conduct of community assemblies during observation visits together with the RHU doctor, nurse, medical technologists, informal laboratory workers, NDP's in the far-flung barangays has helped a lot, people have become aware not only about TB disease but also on the services provided by the RHU. The affirmation of CBOs on how observation visit has given them confidence to conduct health education class and handle inquiries from families during area visit is something that should be replicated in other areas. Moreover, on the program implementation review workshop conducted, the CBO volunteers realized their importance in TB control program; they learned good lessons in other municipalities that they can replicate in their area. Accordingly, the said activity has motivated them because they felt accepted by the PHO in the TB program.

On the other hand, there are a lot of things that should be improved in this project. A one-year project seemed to be short to elicit drastic change or changes if we want the LGUs and the CBOs to have a sense of program ownership. To illustrate, engaging CBOs who are new to TB program warrants considerable time (unlike BHWS who have been in the program for more than a decade) to be able to internalize and integrate TB program into their routine activities; hence, expectation should be minimal during the first year of the project (baseline accomplishment). A mechanism to integrate TB program into their regular program thrust should be reviewed so that it is taken as a system rather than a separate program.

A one-year project is too short to see the impact of CBOs' contribution (who are new to TB program). We hope that the first year could be taken up as baseline accomplishment or performance; second year, full implementation with adjustments on target-setting and activities; and the third year, CBOs and RHUs are looking at sustainability and scaling-up this model in the other areas of Bulacan.

CBOs who did not perform well are still important actors who could assist in TB control activities. A different method or approach needs to be studied further to determine how they could get involve more effectively and efficiently in community-based TB control activities. In the same way, a different approach to those organizations dominated by men might be needed to optimally use them in advocacy activities rather than as referrers (i.e. difficult to maintain records/reports). Those organizations dominated by women should be looked at to know how they can be sustained.

BBFI is the most active and promising CBO to integrate TB activities into their routine activities. It is suggested to expand the TB educators' training with the other committed members of BBFI. More so, include refresher courses every one or two years and provide training (communication) to improve their skills as health educators.

Since we are pushing for volunteerism, training on values formation should be conducted to really set their minds about the nature of their work and the value of helping others.

One-day training is not enough to cover several topics. The schedule is too tight for 8 topics. The quality of every session suffered because of limited time to explain each topic. On observation, most of the participants looked so exhausted only 30- minute break was observed for the whole day training). The training design seems inadequate to hone the skills of CBOs as TB educator. Skills on how to look for presumptive TB (i.e. how to start conversation, establish rapport, respond to inquiries of presumptive TB based on the scenario) could be better internalized if role playing was used as one of the methods of learning .Also, return-demonstration on how to use the flip chart should be included to assess and them guide as TB educator.

It is important to have the support and guidance of the Municipal Health Office to the CBO volunteers in order that their eagerness to do their roles and responsibilities will be sustained.

5. INTEGRATION OF SMOKING CESSATION - A PILOT STUDY IN THE CITY OF MANILA (Source of fund: RIT/JATA and JSPS KAKENHI Grant, Japan)

5.1.1. Title of the study: How effective is the systematic integration of smoking cessation into tuberculosis control programme in creating smoke-free environments? --- A pilot study in urban setting in the Philippines

5.1.2. Background: Tuberculosis (TB) is still one of the biggest health burdens in the Philippines, with the high incidence among the high TB burden countries in the world. Tobacco smoking is the biggest single cause of death in the world, which annually causes approximately 7 million deaths. Tobacco smoking is known as one of the risk factors for active TB, relapse, and TB mortality. The number of smokers in the Philippines was estimated approximately as 17.3 million with overall and male smoking rate were 28.3% and 47.6%, respectively. Tobacco smoking rate is high among the socio-economically depressed and those whose education level are low. The Union published a guide book on "Smoking Cessation and Smoke-free Environments for Tuberculosis Patients in 2010 and introduced the ABC (**A**sk, **B**rief advice, and **C**essation support) approach. The ABC approach was piloted within the regular TB control mechanism in several developing countries in Bangladesh, China, Nepal, Indonesia, and Sudan, which showed favorable results in reducing smoking rate among TB patients while maintaining TB treatment success.

5.1.3. Objective: To assess the effectiveness of the systematic integration of smoking control programme and TB control programme at health center level in creating smoke-free environments in urban settings in the Philippines.

5.1.4. Study design: Prospective observational study comparing measurements of the intervention group (I) and of the control group (C).

- **Intervention group (I): District I in Manila**
  - ✓ All TB patients (PTB and EP; new, relapse, and previously treated; >=18 years old)
  - ✓ To receive the modified ABC Smoking Cessation approach in systematic way in addition to routine health education at health centers.
- **Control group (C): District VI in Manila**
  - ✓ All TB patients (PTB and EP; new, relapse, and previously treated; >=18 years old)
  - ✓ To receive only routine health education at health centers.

5.1.5. Results: High smoking rate was noted to be significantly high in the intervention site at Month 0. Then, significantly low smoking rates were observed in the intervention site from months 2 to 12. Similar tendency was noted with regards to the exposure to second-hand smoke. There was no significant difference of the second-hand smoking rate between the sites at Month 0. Then, significantly low second hand smoking rates in the Intervention site from months 2 to 12. The treatment outcome showed no significant difference of TB Treatment Outcomes between the intervention and control sites.

5.1.6. Conclusion: The ABC Smoking Cessation works to reduce the smoking rate in TB patients from Month 2 through 12. In addition, the ABC Smoking Cessation also works to reduce the SHS at home rate in TB patients from Month 2 through 12. ABC Smoking Cessation did not negatively affect to TB treatment outcome.

In line with this study, ***we also conducted a qualitative study*** wherein 25 TB patients from that non-randomized control trial have agreed to participate in the focus group discussion. The details are as follows:

5.2.1. Title: "They say smoking is bad for health…yes, I know!"- a qualitative study on the perceptions of TB patients on smoking cessation advice given at health centers in Manila, Philippines.

5.2.2. Background: Smoking doubles the risk of tuberculosis (TB) disease and TB mortality. Considering the strong association of tobacco smoking with TB, brief cessation advice by health center nurses during TB treatment provides a unique opportunity to encourage TB patients to quit tobacco smoking. A trial has commenced in 2017 to evaluate the effectiveness of ABC approach developed by the UNION to smoking cessation, and this qualitative study was conducted as part of it, to explore how TB patients perceived the advices they received at health centers in Manila.

5.2.3. Design/Methods: Twenty-five TB patients (13 current smokers, 12 quitters) from the health centers were purposively selected to participate in focus group discussions. Discussions were recorded and transcribed verbatim, and analyzed using a qualitative content analysis method to explore TB patients' perception of cessation advices.

5.2.4. Results: Analysis revealed a spectrum of "specificness" of the advices given, ranging from advice telling patients to "just quit" or "quit because it's bad for health", to advices based on the association between tobacco smoking and "poor lung health", "lowered immunity", "TB" and "recurrence of TB", and "poor TB treatment outcomes". Patients voiced that they were not affected by the general messages, many of which were obvious to them – "I know smoking is bad for health". On the other hand, they were more responsive to specific pieces of information, especially the effects of secondhand smoke on them and their families. Other information they did not receive, but they wanted, included exactly how to quit, possible consequences of quitting (both benefits and downside, such as withdrawal symptoms) and the specific effects of tobacco smoking to TB.

5.2.5. Conclusion: Smoking cessation advice is beneficial to TB patients. However, improvements in key messages and a tailored-approach is needed to make the services more responsive to the needs of the TB patients.

5.3. EXPANSION OF THE TB/ SMOKING CESSATION CONCEPT AMONG NGOS IN DISTRICT- I TONDO, MANILA

The concept of *integrating smoking cessation into TB Control Program was have been expanded to the NGO DOTS I (Canossa and Sto. Nino De Tondo) Tondo, Manila.* The project is under the RIT/JATA and Terumo fund. This is a one-year project which started from April 2018 and will end this April of 2019.

So far, the total TB patients enrolled to smoking cessation from April 2018 to February 2019 was at 243 out of the eligible TB patients (18 years old and above). About 32% (79/243) of the enrolled TB patients were current smokers; ex- smokers were at 26% and never smokers were at 38%. About 26% (63/243) of the TB patients claimed that there are smokers inside their homes; hence, might be exposed to second-hand smoke.

In the second to 6thn month of TB treatment, the smoking rate dropped to 2.3% (4 smokers/179 TB patients) and 1.3% (1 /72 interviewed at 6^{th} month) respectively. This might be attributable to the high smoking quit rate at 33% (59/179) and 28% (22/79) at months 2 and 6, respectively.

There were some challenges encountered during the implementation, Canossa stopped enrolling TB patients into smoking cessation activity because of lack of human resource. The nurse assigned went on leave from January 2019 and started working in 4th week of March. This has also affected their performance.

The findings from the pilot study once it is completed (by December 2019) can be a relevant basis to improve the integration of smoking cessation into TB control.

5.4. REFLECTION ON THE PILOT STUDY:

Since the study is still on-going, we could not make any generalizations at this point. Based on the current data, the ABC approach seemed to work in reducing smoking quit rate among TB patients and reducing exposure to secondhand smoke at home. This was supported by the significant increase in the smoking quit rate among TB patients and fewer patients or household members who smoke in their homes from months 2 to 12. In this partial report, the ABC approach did not negatively affect the treatment outcomes of the TB patients.

IV. Main Outcomes of the RJPI Projects implemented

The methods utilized in working for the "TB for the Urban Poor" such as engaging other health providers, capability building, establishment of the network and linkage, establishment of referral mechanisms, and development of recording forms have accelerated TB service points in the community in District I- Tondo, Manila and Payatas, Quezon City. The project engaged various NGOs working in both project sites regardless of their thrust programs whether health-related or not which means that those NGOs where the main focus were education or livelihood projects were likewise engaged by the project to mainstream TB program in their systems. To date, out of the five (5) NGO DOTS previously engaged by the project, there are a total of four (4) NGO DOTS which are still actively providing TB care from diagnosis, TB treatment and management to TB patients and are still submitting reports to the MHD and the QCHD. Only one NGO DOTS was dissolved in 2012 due to internal concerns. While, among the 14 engaged NGO referring facilities, only two (2) organizations are still referring presumptive TB and acting as TB treatment partners in Tondo, Manila and Payatas Quezon City. Although, only some organizations have remained active (those NGOs with health service component are still active) in providing TB services, it cannot be argued that one of the main outcomes of the RJPI project is bringing quality TB services through engaging NGO DOTS and the referring facilities; and sustaining partnerships with the Local Government Units, the DOH- NTP and the DOH-Metro Manila Health Office. Even the RJPI project ended in 2012, continuous updates and trainings have been provided by the said government agencies to the NGO partners.

Another thing, with the capacity building strategy, access to quality TB services has been achieved. There were improvements observed in the accomplishment as we involve the NGO and CHVs in both sites. In Manila, the New Smear Positive CNR increased from 118/100,000 in 2010 to 142/100,000 in 2013, and in Payatas, the CNR increased from 98.5/100,000 in 2010 to 101/100,000 in 2013. The New Smear Positive additionality of NGOs to the GOs in both sites ranges from 25% to 30% from 2010 to 2013.

In addition, the development of TB/HIV guidelines in San Lazaro Hospital served as a relevant reference for the DOH- NTP and the DOH- Philippine National AIDS Council (PNAC) to improve the services provided to the PLHIV. Previously, provision of free Isoniazid tablets for those PLHIV who should undergo Isoniazid Preventive Therapy (IPT) was not part of the DOH budget but with the said TB/HIV guidelines the PLHIV are now enjoying this IPT service. Right now, the DOH-NTP, the DOH-Metro Manila Health Office and the Manila Health Department is looking at the progress of the integration of smoking cessation into the TB Control Program (pilot study) for possible policy change in the future. As far as we know, there is no data yet on the smoking rate and the smoke-free home assessment in the Philippines. The findings that will be derived from this study would be a significant reference for the Smoking Cessation and TB Control Program guidelines that is in the pipeline plan of the NTP to End TB in the Philippines.

With the aforementioned accomplishments much has to be improved. The sustainability aspect comes first. Although the project was able to keep most of the NGOs by providing recognition awards/encouragement during monitoring visits, on assessment this was not enough to maintain partnerships specially with the NGO referring facilities. The sustainability aspects of keeping the NGOs and other private organizations should be carefully examined both at the National and Local levels. As organizations like RJPI runs on a project basis, the sustainability mechanism following engagements of either NGOs or private organizations should be initiated and propagated by the Government organizations.

In as much as we would want to provide the most suitable care or patient-centered approach to the patients, the tailored-need approach to motivate private organizations should be dealt with appropriately. This could be one significant operational study to support the TB case finding and case management activities of the DOH.

Another thing, the project has introduced several recording forms which actually work in documenting and analyzing the program implementation as a whole. In 2015, the NTP reduced the original 21 TB recording forms to 14 and even improved the reporting of TB case from the Electronic TB register to Integrated TB Information System. Simplifying recording forms is a good thing to lessen the work of the nurses. On observation during monitoring visits, the electronic register has become redundant since the nurses were still asked to maintain paper-based records and reports and adding-up additional workload at their end. The recommendation of RJPI is to create an electronic -based system that links each program to each other while lessening the use of paper-based forms; hence, avoiding duplication of work.

Lastly, all enhancements should be coordinated to the NPT and guided by the Philippine Plan of Action to Control TB guidelines.

V. Conclusion

The increase in the TB case notification rate showed that the GO-NGO intervention (an intervention that ensures that TB patients has accessed and received the necessary TB care in accordance of the NTP guidelines) was able to improve access to TB urban poor in the Philippines; hence, the engagement of NGOs has complemented the work of GOs in TB control activities to reach more people at the grass roots level. A different strategy should be employed in order to sustain the commitment of NGOs with program thrusts other than health services.

References:

1. **Philippines Department of Health. Manual of Procedures of the National Tuberculosis Control Program. 5th ed., Manila, Philippines: DOH, 2014.**
   Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5753779/.
2. **Guidance on Tuberculosis Patient Care for the Urban Poor: The RJPI Experience 2014.**
   Available at https://www.scribd.com/document/228806316/Guidance-on-TB-Patient-Care-for-the-Urban-Poor-The-RJPI-Experience-2014.
3. **Querri A, Ohkado A, Kawatsu L, Remonte MA, Medina A, and Garfin AMC. The challenges of the Philippines social health insurance program in the era of Universal Health Coverage.**
   Public Health Action 2018; 8(4): 175–180.
   Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6361486/.
4. **Date T and Ohkado A. The role of continuing education in improving the quality of chest radiography images based on experiences in three Asian countries. Health and Technology. 2018; 8(5): 411–418.**
   Available at https://www.researchgate.net/publication/326211118_The_role_of_continuing_education_in_improving_the_quality_of_chest_radiography_images_based_on_experiences_in_three_Asian_countries.
5. **Querri A, Ohkado A, Yoshimatsu S, and Shimouchi A. Strengthening the link between government and non-government organizations in tuberculosis control in the urban poor of Metro Manila, Philippines: A retrospective descriptive study.**
   Kekkaku 2018; 93(10): 529–536.
   Available at https://www.kekkaku.gr.jp/pub/vol93%282018%29/vol93_10p529.pdf.
6. **Ohkado A, Mercader M, and Date T. Does a quality assurance training course on chest radiography for radiological technologists improve their performance in Laos?**
   Int J Mycobacteriol 2017; 6: 302–6.
   Available at **https://www.ncbi.nlm.nih.gov/pubmed/28776531.**
7. **Querri A, Ohkado A, Yoshimatsu S, Coprada L, Lopez E, Medina A, Garfin A, Bermejo J, Tang F, and Shimouchi A. Enhancing tuberculosis patient detection and care through community volunteers in the urban poor, The Philippines.**
   Public Health Action 2017; 7(4): 268–74.
   Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5753779/.
8. **Lopez E, Yoshimatsu S, Querri A, Coprada L, Bermejo J, Paulino MR, Medina A, Garfin AMC, and Ohkado A. The referral pathway of presumptive drug-resistant tuberculosis in an urban poor setting, The Philippines.**
   Public Health Action 2016; 6(4): 237–241.
   Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5176047/.
9. **Coprada L, Yoshimatsu S, Querri A, Lopez E, Agujo P, Paulino MR, Medina A, Garfin AMC, and Ohkado A. A review of tuberculosis contact investigations in the poor urban areas of Manila, The Philippines.**
   Public Health Action 2016; 6(4): 220–225.
   Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5176044/.

10. **Suzuki M, Perngparn U, Ohkado A, and Yoshimatsu S. Characteristics of smokers and non-smokers among tuberculosis patients in a socio-economically underprivileged area in Metro Manila, Philippines.**
J Health Res 2016; 30: S153–160.
Available at **https://www.tci-thaijo.org/index.php/jhealthres/article/view/80738.**

11. **Ohkado A, Luna P, Querri A, Mercader M, Yoshimatsu S, Coprada L, Banares R, Garfin AMC, and Date T. Impact of a training course on the quality of chest radiography to diagnose pulmonary tuberculosis.**
Public Health Action 2015; 5(1): 83–88.
Available at **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4525364/.**

12. **Masumoto S, Yamamoto T, Ohkado A, Yoshimatsu S, Querri A, and Kamiya Y. Prevalence and associated factors of depressive state among pulmonary tuberculosis patients in Manila, The Philippines.**
Int J Tuberc Lung Dis 2014; 18(2): 174–179.
Available at https://www.ncbi.nlm.nih.gov/pubmed/24429309.

13. **Masumoto S, Yamamoto T, Ohkado A, Yoshimatsu S, Querri A, and Kamiya Y. Factors associated with health-related quality of life among pulmonary tuberculosis patients in Manila, the Philippines.**
Qual Life Res 2014; 23(5): 1523–33.
Available at https://www.ncbi.nlm.nih.gov/pubmed/24264802.

14. **Ohkado A, Poblete R, Mercader M, Querri A, Agujo P, Tang F, Medina A, Vianzon L, Lagahid J, and Date T. Effectiveness of a training course on the quality assurance of chest radiography in the Philippines.**
Int J Tuberc Lung Dis 2012; 16(3): 379–383.
Available at https://www.ncbi.nlm.nih.gov/pubmed/22640452.

15. **Querri A, Ohkado A, Poblete R, Agujo P, Tang F, Arias E, Medina A, Mantala M, Vianzon L, Lagahid J, and Shimouchi A. Tuberculosis Diagnostic Committees' contribution to the National TB Program in Manila and Quezon Cities.**
Public Health Action 2012; 2(3): 82–86.
Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4463044/.

16. **Solid Culture and Drug Susceptibility Testing for *Mycobacterium tuberculosis*.**
RITM/PBSP/RJPI.
Available at http://ritm.gov.ph/training/laboratory-training/training-on-drug-susceptibility-test-for-m-tuberculosis/.

17. **Standard Operating Procedures on TB and HIV – Approach in San Lazaro Hospital, San Lazaro Hospital, Manila, 2012.**

For more information, please contact: Akihiro Ohkado, MD, MSc, PhD

Department of Epidemiology and Clinical Research, The Research Institute of Tuberculosis (RIT),

Japan Anti-Tuberculosis Association (JATA), Matsuyama 3-1-24, Kiyose, Tokyo 204-8533

http://www.jata.or.jp/rit/ekigaku/en

Email: ohkadoa@jata.or.jp

(Published in July 2019)

ANNEX A: MOFA PROJECT DESIGN MATRIX

PROJECT NAME: RJPI Quality TB Control Project in Urban Poor area in Metro Manila Philippines		DURATION : April 2009 to March 2011	DATE: March 2009- March 2011
PROJECT AREAS: Tondo Manila and Payatas, Quezon City, Philippines		TARGET GROUP: TB patients and residents	
		of urban poor areas of Manila and Quezon City	
NARRATIVE SUMMARY	**OBJECTIVELY VERIFIABLE INDICATORS**	**MEANS OF VERIFICATION**	**IMPORTANT ASSUMPTIONS**
OVERALL GOAL			
Tuberculosis morbidity and mortality in	1. TB mortality rate will be decreased	DOH Statistics 1990 (MDG)	Continous support of government
Tondo and Payatas, QC is decreased	from 38.2/100,000 in 1990 to 19.10/100,000 in 2015 (decrease by 50%)		health services at all levels to TB program
	2. TB Morbidity is decreased (or maintained) as follows:	DOH/CHO Statistics 1990 (MDG)	HIV/AIDS will not spread so rapidly
	2.1 Incidence of new smear positive TB will be decreased (or maintained)	WHO report	
	from 131/100,000 population to 130/100,000 by 2015		Standard living condition of the population
	2.2 Prevalence of new smear positive TB will be decreased	WHO TB prevalence investigation	will not drastically worsen
	from 3.1/1000 in 1997 to 2.0/1000 by 2015	NPS 2007 (DOH)	
	3. Prevalence of MDR-TB of new TB Patient will be decreased from 3.5% in 2003 to	National Drug Resistance Survey Data, 2003-2004 (DOH)	
	3.0% in 2015.		
PROJECT PURPOSE			
Access to Quality DOTS implementation is improved	At the end of 2010, the following indicators will be attained:	NTP report	Continous support of government
	1. Cure rate of New smear Positive PTB is more than 85% in both project areas	(Annual and quarterly)	health services at all levels to
	2. Case notification rate of New Smear Positive Pulmonary TB cases is more than 100/100,000 population in both project areas		TB program
NARRATIVE SUMMARY	**OBJECTIVELY VERIFIABLE INDICATORS**	**MEANS OF VERIFICATION**	**IMPORTANT ASSUMPTIONS**
OUTPUTS			
1. Quality DOTS implementation is provided.			Continous support of government
1.1 Human resource development is	No. of trained staff(doctors, nurses, midwife)	Training attendance sheet	health services at all levels to
provided.	No. of trained med tech/microcoscopist		TB program
	No. of trained community health volunteers		
			NGOs and community volunteers
1.2 Provision of quality services for TB	No. of DOTS facilities implementing Quality	QAS report	will cooperate and support the
patients is established and maintained	Assurance for Sputum Microscopy		project
	No. of DOTS facilities which referred Smear	TBDC report	
	Negative-Cxray suggestive patients to TBDC		Private organizations will implement
			the program
1.3 Monitoring and evaluation are conducted	No. of monitoring and supervisory visits conducted	RJPI program accomplishment report	
regularly.	by RJPI in collaboration with DOH/CHD-NCR/MHD/QCHD	Monitoring feedback sheet	
	Evaluation of the program is conducted semi-	RJPI program accomplishment report	
	annually and annually.		
2. Network among stakeholders of	Quarterly meeting of the different stakeholders established	Referral logbook	
DOTS is (established and) strengthened.	No. of referrals received by the DOTS facilities	NTP Referral forms	
	1. For diagnosis	NTP registry	
	2. For continuation of treatment		
	No. of referrals being fedback about arrival and treatment outcome to the referring units		
3. Community is empowered through ACSM	Adovocacy campaign held at least two times a year	RJPI program accomplishment report	
	Establishment of community organizations (CO) which can be advocates for TB per area	Minutes of the meeting	
	CO conducted at least 1-2 meetings/year	Minutes of the meeting	

ACTIVITIES			
1. Quality DOTS			Precondition:
1.1.1 Conduct training for health staff of NGOs and public health facilities on TB program:	INPUT:		The health department at all levels
a. Basic TB DOTS Providers Training for untrained	Japanese side:		
Health Staff of NGOs/Public Hw	1. Dispatch of Japanese experts including a radiology technician to develop training modules on CXR taking and to assist conducting trainings		
b. Training on MDR-TB (TOT/Implementors)	2. Training of health workers in the Philippines		
c. TB in Chidren	3. Provision of training modules		
d. Orientation of CHVs on "Tutok Gamutan"	4. Provision of equipment		
e. Orientation of Program Coordinators of NGO Referring Units	5. Provision of IEC materials		
f. Orientation on Monitoring/Supervision			
1.1.2 Conduct laboratory training in collaboration with NTRL			
a.DSSM for Medical Technologists/Microscopists			and the NGOs in the project sites
1.1.3 Conduct surveys on present TBDC activities and the practice of CXR taking	Philippines side:		will continuously support the project.
1.1.4 Develop training modules on CXR taking			
1.1.5 Orientation training of radiology technicians/radiographer	1. DOH and LGU personnel		
	2. NGO staff and volunteers		
1.1.6 RJPI staff development	3. Provision of facilities		
1.1.6.1 Seminar Update for RJPI staff	4. Provision of drugs and other consumables		
1.2.1 Establish EQA for smear examination for all NGOs			
1.3.1 Supervision and Monitoring			
1.3.1.1 Conduct visits to Health Centers,NGO DOTS Facilities,NGO Referring Facilities and			
hospitals in Tondo and Payatas together with the NTP Coordinators			
1.3.1.2 Mentoring of Health Workers on proper recording/reporting.			
1.3.1.3 Validation of Data			
1.3.1.4 Feedbacking of Findings after each visit			
1.3.2 Evaluation			
1.3.2.1 Conduct Program Implementation Review			
1.3.2.1.1 Semi- Annual			
1.3.2.1.2 Annual			

ACTIVITIES			
2. Networking			
2.1 Conduct community assemblies			
2.2 Establish and institutionalize support group/task force			
2.3 Regular meeting of task forces every other month			
2.4 Re-implement two-way referral system (develop NTP TB Symptomatic Referral Form)			
2.5 Quarterly meetings of different stakeholders			
2.6 Assist the NTP coordinators to schedule regular TB Diagnostic Committee meetings			
for improvement of diagnosis for smear negative Chest X-ray suggestive cases			
3. Advocacy Communication and Social Mobilization (ACSM)			
3.1 Advocacy campaign during the World TB Day and Lung Month			
3.1.1 Development/Reproduction of IEC Materials			
3.1.2 Provision of IEC materials			
3.2 Conduct workshops/regular meetings (CO) for CHVs to address problems, encourage Income Generating Projects (IGP) for sustainability			
4. Operational Research			
4.1 Development of the OR protocol			
4.1.1 Chest X -ray survey			
4.1.2 TBDC Survey			
4.1.3 Additional Baseline Survey			
4.1.4 Patient Referral System			
4.1.5 Delay analysis in the diagnosis and management of PTB patients with cost analysis component			
4.1.6 Risk factors why TB patients default			
4.1.7 Contributing factors which can affect the Case Notification and Cure Rate of smear positive PTB patients			

4.2 Implementation of the Research			
4.2.1 Conduct the Chest x-ray baseline survey			
4.2.2 Conduct the TBDC survey			
4.2.3 Conduct an additional baseline survey on present situation including TB patient			
referral/transfer practice and cost analysis component			
4.2.4 Conduct an OR on the situation on diagnosis delay with regards to possible			
attributable factors with cost analysis component			
4.2.5 Prepare to conduct an OR on strenghtening the patient referral system between			
the NGOs, private organizations and the health centers in Tondo and Payatas			
4.2.6 Prepare to conduct an OR on possible risk factors related to become defaulters			
in Tondo and Payatas			
4.2.7 Prepare to conduct on the contributing factors on case notification rate and cure			
rate of new smear positive PTB patients			

ANNEX B: JICA PROJECT DESIGN MATRIX

Project Name: TB Control and Prevention Project in Socio-economically Unprivilegded Areas in Metro Manila, the Philippines

Project Areas: Metro Manila, Philippines

Beneficialies

1. Number of all Tuberculosis patients in Tondo, Manila and Payatas in Quezon city :1200 TB cases per year
2. Number of people who have close contact to the above (no. of family contacts 4 per new smear positive patient assuming 800/year burden) : 3200 per year
3. Number of Treatment Failure/Retreatment patients in Tondo, Manila and Paytas in Quezon City : 160 retreatment cases per year
4. No. of HIV positive outpatients at San Lazaro Hospital : 600 HIV positive patients

Ver.1 Date: Jan 13, 2011
Ver.2 Date: Feb 17 2012
Ver.3 Date: Dec 6, 2012

Duration: June 2011-May 2014

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
OVERALL GOAL			
Tuberculosis morbidity and mortality in Tondo, Manila and Payatas, QC is decreased in 2015	1. TB mortality rate will be decreased from 38.2/100,000 in 1990 to 19.1/100,000 in 2015 (50% reduction)	WHO Report	Continous support of government health services at all levels to TB program HIV/AIDS will not spread so rapidly Standard living conditions of the population will not drastically worsen
	2. TB Morbidity is decreased (or maintained) as follows: 2.1 Incidence of new smear positive TB will be decreased (or maintained) from 131/100,000 population to 130/100,000 by 2015	WHO report NTP Report (DOH)	
	2.2 Prevalence of new smear positive TB will be decreased from 3.1/1000 in 1997 to 2.0/1000 by 2015	WHO Report TB prevelance survery report (DOH)	
	3. Prevalence of MDR-TB of new TB Patient will be decreased from 3.8% in 2003 to 3.0% in 2015.	National Drug Resistance Survey Data (DOH)	
Project Purpose			
Tuberculosis Infection prevention/treatment model is implemented upon maintained quality DOTS programme	1. Treatment success rate of New Smear Positive PTB patients is 90% with low defaulter rate (i.e., below 5%) 2. No. of registerd New Sm+ TB Patients and New Sm- has been increased by 5% and 10% respectively in 2013. (baseline 2011) 3.Completion rate of INH Preventive Therapy (IPT) is at least 80% in 2013 4.treatment success rate among retreatment patients doesn't get worse than the level of 2010(no MDR case) 5.Number of referrals is incleased with access rate of 55%.	City Health Department Report Project activities report Monitoring report	Continous support of central and local government health services at all levels to TB program

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs			
1. Advocacy, Communication, Social Mobilization (ACSM) about TB and treatment among community is strengthened	1. No of Participants to community assembly is 1, 500 for three years 2. No of Facilities attended to Advocacy Campaign is at least 30 per advocacy campaign 3. No of Participants to Advocacy Campaign is at least 400 per event 4. No. of TB suspects identified is increased by 10 % in 2013 (Baseline 2011) 5. Knowledge on TB through CHV Training is improved (80% participants will get score 17 and above. (full score is 25))	Project Activity report	
2. TB Screening investigation for contacts) is provided in the project areas	1. No. of facilities that contributed to contact investigation is more than 25 for three years 2. No. of identified TB patients by contact tracing is at least 200 for three years 3. No. of patients on INH Preventive Therapy (IPT) is 700 for three years.	Project activities report	Sufficient TST kits and INH for IPT are provided to the project sites by DOH/NTP
3. Treatment failure and other Retreatment TB patients take anti-TB Drug Susceptibility Test (DST)	No. of (referred) retreatment TB patients who access the treatment center is at least 90%	Project Activities Report	Sufficient number of second line anti-TB Drugs are provided to the project sites by GF through DOH
4. TB Screening among HIV Positive Patients is provided and mechanisms for newly diagnosed HIV+/TB patients at San Lazaro Hospital are in place	1. Guidline about TB Screening and IPT for HIV positive Patients at SLH is made 2. No. of TB Patients identified by TB Screening among HIV positive patients is available 3. No of HIV positive patients with IPT and IPT completed HIV positive patients is available	San Lazaro Hospital Project Report Project activities report	· Cooperation and support from NGO and CHVs are maintained · Governmental Budget for PPD, INH and TB drugs are allocated and stably distributed by DOH
5. Tuberculosis Infection Control is implemented at the health facilities in the project areas	1. Facilities implementing the Infection Control Policy of DOH achieveed at least 50% per level of infection control	Project activities report	DOH will endorse the DOH TB Infection Control Guidelines to LGUs

ACTIVITES:

Advocacy, Communication, Social Mobilization (ACSM) about TB and treatment among community is strengthened	
1 Conduct training on Interpersonal Communication Course (IPCC, VCT, PICT)	
2 Strengthen networking	
i. Conduct TB Support Group Meeting (Cured TB Patients Meeting)	
ii. Facilitate TB Task force meeting (CHVs Meeting)	
iii. Facilitate Barangay chair and committee on health advocacy on TB	
3 Conduct Advocacy Campaign	
i. Lung Month (August)	
ii. World TB Day (March)	
4 Conduct Health Education to community members	
5 Program Evaluation Workshop with all TB Stakeholders in the project areas	
6 Disseminate IEC materials on TB care in the community	
TB Screening (Contact investigation for contacts including kids and adults) is provided in the project areas	
1 Conduct workshop for situation analysis for TB contact investigation	
2 Conduct Training on Contact investigation and IPT	
3 Conduct Chest radiography Training	
i. Conduct Training on Quality Chest radiography Taking	
ii. Conduct appreciation course on QCXR reading for primary health care physicians	
iii. Establish a monitoring and evaluation mechanism with a checklist on quality chest radiography taking	
4 Conduct monitoring and Evaluation on Contact Tracing and IPT for contacts	
Treatment failure/Retreatment TB patients take anti TB Drug Susceptibility Test in the direction of the NTP/PMDT policy and strategy	Input
1 Conduct Analysis Workshop based on the case study of Treatment failure / Retreatment TB patients	Japan
2 Conduct Workshop on developing a system that treatment failure / Retreatment TB patients take drug susceptibility test for the early treatment	1. Dispatch of Japanese Experts
3 Conduct orientation on recording of referral of MDR suspects to treatment center	2. Provide Training Materials
4 Develop Logbook for tracking Treatment Failure / Retreatment patients	
5 Conduct Monitoring and Evaluation on care of treatment failure/ Retreatment TB patients	
6 Conduct training on management including TB Diagnostics and care of MDR TB patients	
i. Basic TB DOTS Training	
ii. DSSM Training for Med Tech/Lab-aid	
iii. CHV/Service provider Training for PMDT referral/coordination and networking	
TB Screening among HIV Positive Patients at San Lazaro Hospital is provided.	Philippines
1 Develop TB Screening and IPT guidelines and its training modules among HIV Positive Patients at San Lazaro Hospital	1.DOH or Health Office Personnels
2 Conduct Training on TB Screening and IPT for HIV/AIDS Patients	2 NGO Staffs and CHVs.
3 HIV/TB Training	3. Provide the facility
4 Conduct Chest radiography Training (same as 2.3)	
5 Conduct Monitoring and Evaluation on TB Screening and IPT for HIV Positive Patients (Consultative program review)	
Tuberculosis Infection Control is implemented at the health facilities in the project areas	
1 Conduct workshop on developing infection control guidelines (including NTRL/DOH-NTP - UPCPH) in health facilities in Manila City and Quezon City	
2 Develop IEC materials on Infection control in health facilities	
3 Conduct training on Infection Control in health facilities	
i. Facilities with only outpatients	
ii. Facilities with capacities of hospitalization	
4 Develop Monitoring and Evaluation Checklist	
5 Conduct Monitoring and Evaluation after TB Infection Control Training	