The National Strategic Plan for Tuberculosis Control

Towards Universal Access to Prevention, Diagnosis and Treatment

2015 - 2020

National Tuberculosis and Leprosy Control Programme, Department of Public Health, Federal Ministry of Health, Nigeria

Foreword

This National Strategic Plan for Tuberculosis Control, 2015 – 2020 is a call to action for all stakeholders in Nigeria – political leaders and government officials at all levels, religious leaders, business leaders, public and private health providers, communities and individuals affected by TB – to mount a massive and coordinated response to the challenges that Nigeria faces in eliminating this life-threatening yet curable illness by aligning our strategy with the three pillars of the global post-2015 strategy.[1] Too many Nigerians continue to fall ill with tuberculosis each year – an estimated 591,500 adults and children in 2014 – with many of them unable to access the services they need for a proper diagnosis and prompt treatment. As a result, many fall further into poverty as they search for care and become too sick to work, while approximately half may die if left untreated.

As a disease that primarily affects people in the most productive years of their lives, TB causes the loss of millions of productive work days every year, depriving families and the Nigerian economy as a whole of the fruits of their labour. Simply put, Nigeria cannot afford to ignore this threat to the health, productivity and security of her people.

This Plan, developed by stakeholders representing a wide range of interested parties including those affected by TB, lays out an ambitious agenda to work towards the goal of providing Nigerians with **universal access to high-quality, patient-centred prevention, diagnosis and treatment services for TB, TB/HIV and drug-resistant TB by 2020.** Achieving this goal will require a long-term government commitment to funding and implementing the intensive efforts needed to bring TB under control in Nigeria.

The Plan details approaches to address the priority TB control challenges identified through new surveys and analyses of the TB situation in Nigeria and taking advantage of the opportunities presented by new technologies and innovations in TB care. Programme priorities, based on a thorough analysis of strengths and weaknesses, opportunities and threats, include the following for the next six years:

1. Rapidly increasing detection of TB in adults and children
2. Improving treatment success in specific geographic areas that are underperforming
3. Integrating TB and HIV services
4. Building capacity for diagnosing and treating drug-resistant TB
5. Creating strong and sustainable systems to support these achievements.

The objectives, strategic interventions and activities formulated in this Plan respond to the underlying causes related to these challenges. They seek to strengthen National Tuberculosis and Leprosy Control Programme (NTBLCP) systems to overcome barriers to success, including improvements in procurement and supply management and data management systems. They also address fundamental health systems challenges that are not unique to TB

[1] The three pillars include integrated, patient-centred care and treatment; bold policies and supportive systems; and intensified research and innovation. WHO presentation on the new post-2015 targets, accessed at: http://www.who.int/tb/post_2015_tb_presentation.pdf?ua=1, June 6, 2014.

control, but which threaten the ability to make significant progress in the next six years. Specifically, the Plan will strengthen the linkages between the three levels of the health system - federal, state and local government area (LGA) - to improve accountability and results. Through a renewed partnership with the National Agency for the Control of HIV/AIDS (NACA), National AIDS and Sexually Transmitted Infections Control Programme (NASCP), the National Malaria Control Programme and the National Primary Health Care Development Agency (NPHCDA), it will also support revitalization of the primary health care system, without which services cannot reach the people who need them.

The Plan further recognizes the important contributions that all sectors of civil society and private healthcare providers have to make to TB control in Nigeria. Throughout the Plan, their engagement is incorporated to contribute to the ambitious targets the NTBLCP has set. Working together we shall eliminate TB as a public health threat in Nigeria.

Prof. C. O. Onyebuchi Chukwu
Honourable Minister of Health
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List of Acronyms and Abbreviations

ACOMIN	Civil Society for Nutrition, Vaccination and Eradication of Malaria
ACSM	Advocacy, Communication and Social Mobilisation
ACT! Nigeria	Africa Coalition on Tuberculosis - Nigeria
ADR	Adverse drug reaction
AFB	Acid-fast bacilli
AIDS	Acquired immune deficiency syndrome
ART	Antiretroviral therapy
ASM	American Society for Microbiology
ATM	AIDS, Tuberculosis and Malaria
CBO	Community-based organization
CCM	Country Coordinating Mechanism
CDC	Centre for Disease Control
CiSHAN	Civil Society for HIV and AIDS in Nigeria
CTBC	Community TB care
CPT	Co-trimoxazole preventive therapy
CSO	Civil society organization
CSS	Community system strengthening
CU	Central Unit
CV	Community volunteer
DHIS 2	District Health Information System 2
DOTS	Directly Observed Treatment Short-course
DQA	Data quality assessment
DRS	Drug resistance survey
DR-TB	Drug-resistant tuberculosis (here defined as rifampicin- and multidrug-resistant TB)
DST	Drug susceptibility testing
DV	Data verification
EPI	Expanded Programme on Immunisation
FBO	Faith-based organization
FCT	Federal Capital Territory
FLDST	First-line drug susceptibility testing
FMOH	Federal Ministry of Health
GDF	Global Drug Facility
GDP	Gross domestic product
GF	Global Fund
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GHCW	General Health Care Worker
GLC	Green Light Committee
GON	Government of Nigeria
HIV	Human immunodeficiency virus

HRH	Human resource for health
HSS	Health system strengthening
HTC	HIV testing and counselling
HVAC	Heating ventilation and air conditioning
ICT	Information and Communication Technology
IDPs	Internally displaced persons
IEC	Information, education and communication
ILEP	International Federation of Anti-Leprosy Associations
IMCI	Integrated Management of Childhood Illness
INH	Isoniazid
IPT	Isoniazid preventive therapy
JIMM	Joint International Monitoring Mission
KAP	Key affected population
KAP	Knowledge, Attitude and Practice
KNCV	Dutch Tuberculosis Foundation
LFA	Local Fund Agents
LGA	Local Government Area
LGTBLS	Local government tuberculosis and leprosy supervisor
LPA	Line Probe Assay
MARPS	Most at risk populations
MDR-TB	Multidrug-resistant tuberculosis
M&E	Monitoring and evaluation
NACA	National Agency for the Control of AIDS
NAFDAC	National Agency for Food and Drugs Administration and Control
NARHS	National AIDS and Reproductive Health Survey
NASCP	National AIDS & Sexually Transmitted Infections Control Programme
NGO	Non-governmental organization
NHI	National Health Insurance
NHMIS	National Health Management Information System
NIMR	Nigerian Institute of Medical Research
NPHCDA	National Primary Health Care Development Agency
NPO	National Professional Officer
NPSCMP	National Products Supply Chain Management Programme
NRA	Nitrate reductase activity
NRL	National reference laboratory
NSHDP	National Strategic Health Development Plan
NSP	National Strategic Plan
NSP-TB	National Strategic Plan for Tuberculosis
NTBLCP	National Tuberculosis and Leprosy Control Programme
NTBLTC	National Tuberculosis and Leprosy Training Centre
OR	Operations research
OSDV	Onsite data validation
PAF	Population attributable fraction
PCRP	President's Comprehensive Response Plan for HIV/AIDS in Nigeria

PHC	Primary health care
PLHIV	People living with HIV
PMDT	Programmatic management of drug-resistant tuberculosis
PSM	Procurement Supply Management
PUDR	Progress Update and Disbursement Request
QA	Quality assessment
RIF	Rifampicin
RR-TB	Rifampicin-resistant Tuberculosis
R&R	Recording and reporting
SARA	Service Availability and Readiness Assessment
SLD	Second Line anti-TB Drug
SRL	Supranational reference laboratory
STBLCO	State TB and Leprosy Control Officer
STBLCP	State TB and Leprosy Control Programme
SURE-P	Subsidy Reinvestment and Empowerment Programme
TA	Technical assistance
TB	Tuberculosis
TBL	Tuberculosis and Leprosy
TS	Treatment supporter
TWG	Technical Working Group
UNDP	United Nation Development Programme
USAID	United States Agency for International Development
USD	United States dollars
WHO	World Health Organization
ZN	Ziehl–Neelsen
ZRL	Zonal reference laboratory

1 Executive Summary

Tuberculosis (TB) remains a serious public health threat to the men, women and children of Nigeria. Nigeria ranks third in the world in terms of the numbers of people with TB disease, with a projected 590,000 incident cases of TB in 2013.[2]

The National Tuberculosis and Leprosy Control Programme (NTBLCP), under the Department of Public Health of the Federal Ministry of Health (FMOH) has made great strides in addressing TB since it began implementing the internationally recommended Directly Observed Treatment Short course (DOTS) strategy for TB control in all states and the Federal Capital Territory (FCT) in 2004. As of 2014, 1,602 health facilities are providing acid-fast bacilli (AFB) sputum smear microscopy services and 5,389 health facilities provide treatment services for TB (DOTS centres). TB case notifications to the NTBLCP have increased steadily from 31,164 in 2002 to 100,401 in 2013. Treatment success reached 86% in 2013, surpassing the national target of 85% set for 2015.

More than 85% of people with TB receive HIV counselling and testing and have access to life-saving co-trimoxazole preventive therapy. New diagnostic technologies, including *GeneXpert MTB-Rif*, line probe assay and liquid culture have been introduced that can rapidly detect tuberculosis and drug-resistance and 12 hospitals now have the capacity to treat multidrug-resistant tuberculosis (MDR-TB). Since the programmatic management of drug-resistant tuberculosis (PMDT) began in 2010, a total of 721 patients have been put on drug-resistant TB treatment as of December 2013.[3]

While these gains are impressive, they are not enough. The prevalence survey was a wake-up call to Nigeria: the results showed a burden of TB far higher than had been predicted, doubling the previous WHO estimates for TB prevalence to 323/100,000 population and tripling the estimates of incidence to 338/100,000. As a result of these improved estimates of disease burden, the TB case detection rate of all forms of TB in Nigeria for 2013 was approximately 17%. In other words, for every 100 cases of TB that occurred in Nigeria in 2013, only 17 cases were notified and treated by the Programme. This represents one of the lowest case detection rates in the world and must be addressed with urgency to prevent unnecessary deaths and ongoing transmission of disease from these yet to be diagnosed individuals.

Based on the TB prevalence survey report and the TB drug resistance survey data, an estimated 4,097,114 cases of TB will occur in Nigeria between the beginning of 2015 and the end of 2020. Of these, approximately 901,365 will be co-infected with HIV and 196,661 will have multidrug-resistant TB. Thus, a massive scale-up of effort is required to meet the overwhelming needs of people with all forms of TB.

[2] 2014 Global Tuberculosis Report
[3] 2014 NTBLCP Annual Report

There were an estimated 9 million incident TB cases globally in 2013, out of which 5.7 million cases were both detected and notified, leaving an estimated 3.3 million "missing" TB cases that were either not diagnosed or diagnosed but not reported. Nigeria accounts for 15% (about half a million) of this global gap in TB case notification. Improvements in TB case notification in Nigeria would contribute to a significant narrowing of this gap globally.[4]

The NTBLCP, in collaboration with representatives of all stakeholder groups, has set ambitious targets for 2015 – 2020. These targets were set within the overall context of the Programme's vision and mission:

Vision of the NTBLCP's TB efforts: A Nigeria free of TB.

Mission of the NTBLCP for TB: Save Nigerian lives, reach zero TB deaths and reduce the burden and impact of TB, drug-resistant TB and TB/HIV on Nigeria.

Goal of the NTBLCP: By 2025, to achieve a 50% reduction in TB prevalence rate and 75% reduction in TB mortality (excludes HIV-related TB) rate in Nigeria compared to 2013 figures.

Goal of the National Strategic Plan for TB Control (NSP-TB) 2015 – 2020: To ensure universal access to high-quality, patient-centred TB prevention, diagnosis and treatment services for Nigerians with all forms of TB, regardless of geographic location, income, gender, age, religion, tribe or other affiliation.

Providing universal access to services is a means to an end. By expanding access over the next six years, NTBLCP and its partners aim to increase case notification, increase treatment success, integrate TB and HIV to provide one-stop services for clients, provide rapid diagnosis and treatment for people with drug-resistant TB (DR-TB), address the needs of key affected populations, mobilise domestic resources to sustain the gains made and strengthen the systems that will support these achievements.

The strategic approaches this NSP-TB has prioritised to move towards universal access include the following:

1. Maintain and expand basic diagnostic and treatment services, with a focus on quality implementation and expand screening and referral activities to all PHC facilities to provide universal access to basic services
2. Integrate TB screening and referral/case-finding into the routine activities of public non-TB service providers, military and paramilitary providers, private providers, faith-based organizations, community providers and community-based organizations to increase case notification at low cost
3. Shift from passive to active case-finding in key affected populations, including People living with HIV (PLHIV), contacts to TB cases, urban slum dwellers, men, prisoners, migrants and internally displaced people, nomadic populations, children, people with diabetes and facility-based health care workers, to target those most at risk for TB
4. Scale up use of rapid TB diagnostic technologies to serve groups at risk for missed or delayed diagnosis, including PLHIV, children, people with smear-negative TB, extra-pulmonary TB or presumptive drug-resistant TB

[4] 2014 Global Tuberculosis Report

5. Work with National Agency for Control of HIV/AIDS (NACA) and National AIDS and Sexually Transmitted Infections Control Programme (NASCP) to scale up integrated TB and HIV services in areas with the highest burden of TB/HIV co-infection
6. Concentrate community-based treatment support in poor-performing areas to reduce loss to follow-up and avoid creation of drug resistance
7. Expand services for DR-TB based on an ambulatory model, with rigorous supervision and community-based patient support
8. Seek cost-savings in routine activities such as training and supervision by partnering with NACA, NASCP and others
9. Improve the procurement and supply management system to assure an adequate stock of drugs and supplies where and when they are needed and integrate the system with other disease Programmes as possible to realize cost savings
10. Design and implement an electronic reporting system that captures and analyses TB data for use in timely Programme monitoring and quality improvement and assure its compatibility with national systems
11. Establish linkages with and coordinate stakeholders to advocate for domestic resource mobilization at federal, state and local levels
12. Leverage existing resources through other government agencies and initiatives to strengthen the health delivery infrastructure at the primary health care level, where TB services should be available

Increasing case detection requires a rapid scale-up of diagnostic capacity, engagement of all health care providers in identifying people with TB, partnerships with community-based organizations to provide outreach and education to key affected populations and to increase knowledge while reducing stigma among the general population and removal of barriers to care-seeking for the poor and vulnerable.

Similarly, diagnosis of TB in children under the age of 15 poses challenges to TB control. As at 2013, children represent only 6% of the cases diagnosed in Nigeria each year, lower than the expected proportion given that children represent almost 44% of the total population in a country where a high burden of disease exists. Expertise and equipment needed to diagnose paediatric TB is lacking. Isoniazid preventive therapy (IPT) to prevent TB in exposed children is not widely used. Efforts to address TB in this vulnerable population must be redoubled through provider training, protocol dissemination and procurement and use of needed equipment and paediatric drug formulations.

While treatment success is on track to reach the new global target of 90% treatment success rate for all TB cases, there are specific states and local government areas (LGAs) in the country that lag behind and are not performing satisfactorily. In addition, while treatment sites have been expanded, facilities and trained personnel are inadequate to match the rapid scale-up in diagnosis that is envisioned under this Plan to address the low case detection issues noted above. Treatment success must be improved in the regions where it is faltering and must be maintained in all other areas as the number of cases diagnosed increases rapidly. Success will require expansion of DOTS centres, training of additional health care workers,

use of community TB care approaches, improvements in procurement and supply management, supportive supervision and strengthening of data management systems.

Addressing TB/HIV co-infection has been a major push of the NTBLCP in collaboration with NACA and NASCP and rapid progress has been made over the past four years. As of 2013, the NTBLCP was providing HIV counselling and testing to 88% of people diagnosed with TB. A total of 19,423 HIV-positive TB patients were notified in 2013. Of those, 87% received cotrimoxazole preventive therapy (CPT) and 67% were put on antiretroviral therapy (ART). These gains are impressive increases from a few years ago, but much remains to be done. TB and HIV services must be better coordinated and co-located to provide patient-friendly care. TB case-finding among people living with HIV (PLHIV) must be intensified within HIV and general services. Provision of ART must be expanded to many more sites for sufficient coverage – currently only 44 percent of the estimated 1.5 million Nigerians who need ART are receiving it. In addition, IPT is reaching less than 2% of the PLHIV who could benefit from it. Reaching the ambitious target of achieving 100% coverage for all TB/HIV-related interventions will require concerted efforts by the TB and HIV Programmes at all levels of the health system to encourage collaborative planning, expand services, train providers and consolidate recording and reporting.

Drug-resistant TB is also a concern in Nigeria. According to new data available from the recent drug resistance survey, approximately 2.9% of new TB cases and 14.3% of retreatment cases have multidrug-resistant TB (MDR-TB) unresponsive to the two most potent anti-TB drugs (isoniazid and rifampicin). This requires a much longer, more toxic and much more expensive treatment regimen with a lower chance of cure.

The programmatic management of drug-resistant TB (PMDT) began in Nigeria when the first MDR-TB patients were started on effective treatment regimens in 2010. By the end of 2013, a total of 551 patients had been started on treatment, new diagnostic technologies have been introduced and 12 hospitals are providing DR-TB care. The magnitude of the challenge becomes apparent, however, when one considers that in 2013, a total of 665 rifampicin-resistant TB patients were diagnosed, out of which only 345 patients were put on treatment. These patients represent only a small fraction of the estimated 5,310 Rifampicin-resistant TB (RR-TB) cases that occurred among the 100,041 TB cases diagnosed in that year alone.

To prevent the spread of drug-resistant TB and provide those who are sick with DR-TB a hope of cure, three elements must be strengthened: more rigorous case-holding of all TB patients until treatment completion to prevent the creation of drug resistance, expanded availability of rapid diagnostic technologies capable of detecting resistance, and prompt DR-TB treatment with quality-assured second-line drugs and comprehensive patient support.

In summary, the fundamental, underlying challenge for controlling TB in Nigeria is an ongoing lack of adequate access to TB diagnosis and treatment for all Nigerians, as identified in the gap analysis process. It is a primary contributor to the five priority areas of Programme underperformance discussed above and addressed in this Plan:

1. Under diagnosis of TB in adults and children
2. Poor treatment success in specific geographic areas
3. Inadequate integration of TB and HIV services
4. Inadequate capacity to diagnose and treat drug-resistant TB (DR-TB)
5. Weak Programme management, human resources, data management and supply systems that are unable to support efficient scale-up of services.

Lack of access to services is a multi-dimensional problem. Individual knowledge and beliefs, cultural norms, technical challenges, management issues, health systems weaknesses and external factors contribute to the barriers Nigerians face in having TB successfully diagnosed and cured, but some sub-populations face greater challenges than others. Key affected populations in Nigeria, based on country or global data on burden of disease, known risk factors and access to services include people living with PLHIV, contacts to TB cases, urban slum dwellers, men, prisoners, migrants and internally displaced people, nomadic populations, children, people with diabetes and facility-based health care workers.

This NSP-TB elaborates and responds to the factors preventing access to TB services, addressing all of the key challenges Nigeria faces in bringing the TB epidemic under control. It uses new data available from the 2012 TB prevalence survey, 2010 drug resistance survey, 2012 knowledge, attitudes and practice survey, mid-term evaluation of the National Strategic Plan for 2010 – 2015 and 2014 Global TB Report to revise the goals and objectives of that previous Plan and craft an intensified response to address the major areas of underperformance in TB control. Table 1 summarizes the changes in approach between the previous National Strategic Plan (NSP) and this new document.

Table 1: Gaps in the previous NSP 2010-2015 and changes in the new NSP to address those gaps.

Identified gaps in NSP 2010 – 2015 approaches and implementation	New NSP 2015 - 2020
TB case detection predominantly through passive case-finding	Targeted active case-finding in key affected populations, in addition to passive case-finding, active engagement of faith-based facilities and private providers in case-finding activities
No emphasis on children	Specific interventions targeting diagnosis and treatment of TB in children through existing entry points to the health system and contact tracing
Diagnosis through sputum smear microscopy	Introduction and scale-up of rapid molecular methods of diagnosis, in addition to strategic expansion of microscopy to improve coverage and expansion of culture and drug susceptibility testing
Standard approach to treatment, with community-based TB care (CTBC) in some areas	Intensified focus on areas where treatment outcomes are poor, including CTBC, additional training and supervision to improve results
TB/HIV activities implemented with little coordination between Programmes	Fully integrated approach including joint planning for scale-up, integrated site selection, joint training, procurement and supply management, data management and supervision
Hospital-based treatment of limited numbers of MDR-TB patients throughout intensive phase, with poor coordination after discharge	Rapid scale-up of MDR-TB treatment capacity through early discharge of MDR-TB patients and shift to community-based care with an emphasis on systems to support patients to completion of treatment
Poorly focused community engagement with results that were difficult to measure	Community engagement focused on achieving specific results related to case finding and treatment success in specific KAPs and geographic locations, more emphasis on CSO capacity-

	building in reporting and M&E, integration of CSO engagement across TB, HIV and malaria
Supervisory visits did not result in performance improvements	Rigorous and regular results-based supportive supervision with clear accountability for follow-up of issues
NSP not well-connected to state and LGA activities, lack of alignment of planning and implementation at lower levels of the system	Emphasis on joint results-based annual planning using the NSP as the basis for prioritization of activities at state and LGA levels, intensive efforts to improve linkages between levels of the health system
Paper-based recording and reporting with little data analysis for Programme improvement, planning for electronic systems but little coordination, separate databases for DR-TB	Implementation of an electronic recording and reporting database harmonized with the national health data system, with HIV and with DR-TB
Poor capacity of state and local staff to manage procurement and supply system, resulting in stock outs and expiration of drugs and supplies	Electronic PSM system managed by adequate numbers of well-trained staff at all levels of the system
Support for basic NTBLCP operations	Focus on building capacity of the NTBLCP central unit for effective management of the Programme
Limited focus on resource mobilization	Integrated advocacy campaign to mobilize resources for universal access to TB, HIV and malaria services at the primary health care (PHC) level
Limited focus on health systems issues affecting performance	Integrated approach to health systems strengthening through an alliance with NTBLCP, NACA, NASCP, Malaria and NPHCDA focusing on primary health care to allow for delivery of services close to the client

The intensified approach in this NSP-TB consists of the goal, objectives and strategic interventions presented in Table 2 below, which are described in detail in part two of this Plan (operational and technical assistance plan). These objectives and interventions are closely aligned with Nigeria's National Strategic Health Development Plan 2010 – 2015 (NSHDP), which focuses on seven key areas including strong leadership and governance for health, integrated health service delivery, adequate and well-trained human resources, adequate and sustainable financing, an effective health management information system, effective community participation in health development and management, and partnerships to enhance implementation of essential health services.

The long-term goals of the NTBLCP, to which this six-year Plan will contribute, are to reduce the prevalence and mortality of TB by 50% and 75% respectively by 2025 relative to the 2013 baseline figures. This means reducing the estimated TB prevalence rate from 326 to 163 per 100,000 population and mortality rate from 94 to 24 per 100,000 population. These ambitious goals are in line with the targets of the new post-2015 global TB strategy. They will require a far greater effort to attain than has been made to date.

To implement the required activities over the next six years and reach the ambitious interim targets, the NTBLCP will require an estimated US$2.53 billion. Financing for activities will be sought from the Government of Nigeria, the private sector in Nigeria, Global Fund and other external donors.

Implementation of these activities is the responsibility of the NTBLCP, but they cannot be accomplished without the active engagement of the whole range of stakeholders in Nigeria,

including other Ministries, Departments and Agencies (MDAs) of the government at all levels of the health system, corporations and businesses, external donors, technical partners, academic institutions, faith-based organizations, all public and private health care providers including community pharmacists, patent medicine vendors, traditional healers, community-based organizations and all people infected and affected by TB, TB/HIV and DR-TB, including children. Their meaningful participation began in the process of developing this NSP and will be supported by the NTBLCP throughout the six years of implementation.

Table 2: Summary of the NSP 2015-2020 goal, objectives and strategic interventions.

Goal of the NTBLCP: By 2025, to achieve a 50% reduction in TB prevalence rate and 75% reduction in TB mortality (excludes HIV-related TB) rate in Nigeria compared to 2013 figures. **NSP TB 2015 – 2020 Goal**: Ensure universal access to high-quality, patient-centred TB prevention, diagnosis and treatment services for Nigerians with all forms of TB, regardless of geographic location, income, gender, age, religion, tribe or other affiliations, as a necessary interim step in achieving reductions in TB prevalence and mortality.	
Impact Indicators and Targets This NSP will contribute to the following long-term impact indicators by providing universal access to prevention, diagnosis and treatment of TB: 1. **Prevalence rate of TB** decreases from 326/100,000 in 2013 to 163/100,000 by 2025 2. **TB mortality** rate decreases from 94/100,000 in 2013 to 24/100,000 by 2025	
NATIONAL STRATEGIC PLAN OBJECTIVES, STRATEGIC INTERVENTIONS AND TARGETS	
Objective 1. Rapidly increase case finding activities and diagnostic capacity to achieve increase Case Notification Rate of all forms of TB from 57.3 per 100,000 population in 2013 to 287 per 100,000 population in 2020	
Key Indicators and Targets: 1. Case notification rate of all forms of TB increases from 57.3/100,000 in 2013 to 287/100,000 in 2020. 2. Number of all forms of TB cases notified annually increases from 100,401 (2013) to 625,844 (2020). 3. Ratio of diagnostic centres to population improves from 1:109,285 in 2013 to 1:50,000 or less by 2020.	
1.1	Strengthen and scale up diagnostic capacity strategically, focusing on high-burden areas and areas of poor coverage and maintain quality throughout the laboratory network
1.2	Implement active TB case finding in specific vulnerable populations (e.g. contacts to active TB cases, nomadic populations, migrants and IDPs, prisoners and slum dwellers) Children is in objective 3 and PLHIV in objective 4
1.3	Engage patent medicine vendors and community pharmacists, traditional healers, religious leaders and other first-points-of-contact in identification of people with TB symptoms and referral for evaluation
1.4	Engage all health facilities in intensified case finding through suspect and referral to ensure universal access to TB services
1.5	Engage FBO health facilities and private health facilities in providing TB diagnostic services
1.6	Remove/reduce financial barriers to care-seeking
1.7	Create an informed public who know TB facts, how to access services, how to get cured and what their rights and responsibilities are to support demand for universal access to services
Objective 2. Align treatment capacity scale-up with increased diagnostic capacity to reach a treatment success rate of 90% by 2020.	
Key Indicators and Targets: 1. Treatment success rate for new of drug-susceptible TB increases from 86% (2013) to 90% or more (2020).	
2.1	Maintain existing services and expand availability of treatment at facilities with diagnostic services to provide a one-stop shop for TB diagnosis and treatment
2.2	Engage FBOs and private health facilities in providing treatment services
2.3	Strengthen the referral system to minimise loss to follow-up
2.4	Maintain an adequate supply of quality-assured anti-TB drugs

2.5	Maintain existing services and expand availability of treatment at facilities with diagnostic services to provide a one-stop shop for TB diagnosis and treatment
Objective 3: Implement new strategies to improve the control of TB in children in line with the global road map for childhood TB.	
Key Indicators and Targets: 1. Proportion of total cases notified represented by paediatric TB cases increases from 6% (2013) to 12% (2020). 2. Paediatric cases achieve a treatment success rate of 90% by 2020	
3.1	Integrate TB services into other child survival strategies (Paediatric associations, department of IMCI, thoracic associations, unicef and other bi- and multilateral agencies)
3.2	Strengthen and scale up diagnostic capacity to diagnose TB in children, while maintaining quality, ensuring safety and reducing financial barriers
3.3	Align treatment capacity scale-up with increased diagnostic capacity to reach a treatment success rate of 90% in children by 2018.
3.4	Strengthen the referral system between the peripheral facilities and tertiary institutions to improve case management of complications and more severe forms of TB in children
Objective 4: Provide access to high-quality integrated services for all people co-infected with TB and HIV by 2020**.**	
Key Indicators and Targets: 1. Percentage of TB patients who had an HIV test result recorded in the TB register increases from 88% in 2013 to 100% in 2020. 2. Percentage of HIV-positive registered TB patients given anti-retroviral therapy during TB treatment increases from 67% in 2013 to 100% in 2020. 3. Percentage of HIV-positive registered TB patients given co-trimoxazole preventive therapy during TB treatment increases from 87% in 2013 to 100% in 2020. 4. Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings increases from 85% in 2013 to 100% in 2020. (NACA/NASCP target) 5. Percentage of PLHIV without active TB who receive isoniazid preventive therapy increases from 1.7% % in 2013 to 80% or more by 2020. (NACA/NASCP target)	
4.1	Strengthen mechanism for coordination of TB/HIV collaborative activities at all levels
4.2	Use the TB system to expand accessibility of HIV services and expand DOTS services to all facilities providing HIV services to enhance patient-centred treatment (one stop shop)
4.3	Build the capacity of health care workers to deliver integrated TB/HIV services
4.4	Increase TB case-finding among PLHIV, including children, through universal implementation of TB screening tools within HIV sites and in community-based care
4.5	Support provision of IPT to PLHIV through the HIV control Programme
4.6	Implement infection control in facilities that treat TB and HIV
4.7	Continue expanding HCT services to all people with TB symptoms and TB disease
4.8	Provide CPT to all TB/HIV patients
4.9	Provide ART for all TB/HIV patients
4.10	Provide routine TB and HIV screening for health workers in TB/HIV facilities
4.11	TA for TB/HIV collaborative activities
Objective 5: Provide access to DR-TB diagnosis to all Presumptive DR-TB cases by 2020.	
Key Indicators and Targets: 1. Proportion of presumptive DR-TB cases who receive testing for DR-TB increases from 48% in 2013 to 100% by 2020. 2. DR-TB cases notified annually increases from 665 in 2013 to 29,469 in 2020.	
5.1	Strategically expand DR-TB diagnostic sites
5.2	Institute a standardized specimen transport system from the point of collection from presumptive DR-TB cases to DR-TB diagnostic centres for DR-TB diagnosis and treatment follow up
5.3	Increase DR-TB case finding skills among health care providers
5.4	Strengthen the DR-TB Surveillance system
Objective 6: Enrol 100% of diagnosed DR-TB patients on appropriate treatment between 2015 and 2020.	
Key Indicators and Targets:	

1. Proportion of notified DR-TB patients on appropriate treatment increases from 65% in 2013 to 100% in 2020. 2. Number of DR-TB cases enrolled on treatment annually increases from 432 in 2013 to 29,469 in 2020. 3. Treatment success rate increases from 61% in the 2010 cohort to 70% in 2020.	
6.1	Provide prompt, appropriate treatment & care to all diagnosed DR-TB cases.
6.2	Assure adequate supplies of second-line and ancillary drugs and supplies
6.3	Institute appropriate infection control measures to prevent transmission of DR-TB in facilities and the community
Objective 7. Strengthen the collaboration with and capacity of community-based organizations and networks to support NTBLCP objectives and activities.	
Key Indicators and Targets: 1. Proportion of suspects identified by a CV/CBO increases from 11% to at least 30% 2. TSR among TB patients supported by TS is ≥ 90% 3. Proportion of LGAs with formal community TB care services is >25%.	
7.1	Build on the existing community systems strengthening (CSS) AIDS, TB and malaria (ATM) activities under Global Fund to coordinate activities of CBOs engaged in HIV, TB and malaria control at community level.
7.2	Build the technical, managerial and administrative capacities of CBOs to provide effective support to the implementation of the National Strategic Plan of NTBLCP.
7.3	Strengthening community monitoring and evaluation system in planning, managing and improving Programme performance
7.4	Strengthen the administrative functions of civil society organisations working on TB control
Objective 8. Strengthen political commitment and mobilize domestic resources at all levels to fund essential TB services in Nigeria.	
Key Indicators and Targets: 1. Domestic funding for TB control accounts for 50% of the total funding available for implementing the National Strategic Plan. 2. TB is included in major national health strategies and initiatives, including the national health insurance scheme.	
8.1	Plan and implement the 100% Campaign, a coordinated and sustained multi-disease advocacy campaign designed to mobilize public support and political commitment for TB, HIV and malaria control as an integral part of essential primary health care services, in collaboration with NACA, NASCP, Malaria, PHCDA, the Stop TB Partnership and civil society organizations
8.2	Provide advocacy training to key stakeholders, including Programme managers, campaign ambassadors, civil society organizations and Stop TB Partnership members
8.3	Support civil society organizations at national, state and local levels to institute targeted advocacy campaigns for funding of TB control activities
8.4	Strengthen the Nigeria Stop TB Partnership to be functional, effective and responsive to the challenges of TB control in the country
8.5	Promote accountability and transparency of government and partners commitment to TB
Objective 9. Strengthen NTBLCP systems and capacity to support full implementation of the National Strategic Plan at all levels.	
Key Indicators and Targets: 1. Availability of well-equipped office with functional infrastructure for optimal performance of the central unit of NTBLCP. 2. Proportion of identified job positions filled by trained personnel is >90%. 3. Availability and accessibility of an electronic recording and reporting system capable of generating timely and quality data. 4. NTBLCP financial team capable of effectively and efficiently managing the finances of the TB Programme. 5. Proportion of DOTS facilities that reported a stock-out in first line drugs (patient kits) that resulted in interruption of treatment during the year out of all DOTS facilities in the country is <5%. 6. NTBLCP complete and publish at least 4 research articles in international and/or local journals.	
9.1	Provide adequate infrastructure to support efficient NTBLCP functions

9.2	Develop and implement an HR development plan addressing technical skills, managerial skills and staff recruitment and retention to ensure long-term sustainability
9.3	Upgrade the existing Monitoring and Evaluation system to be more robust and be able to meet up with the increasing demand for the TBL Programme at all level
9.4	Further develop the NTBLCP financial management system
9.5	Develop an efficient Procurement Supply Management system for all products at all levels
9.6	Develop an effective advocacy, communication and social mobilization system and provide adequate staff and resources for an ACSM unit at NTBLCP
9.7	Develop an effective information and communications technology system and unit for the Programme
9.8	Develop and implement an operations research agenda to support attainment of TB control targets
9.9	Engage professional bodies, academic institutions and others to support training, task shifting and/or other HSS activities
Objective 10. Strengthen linkages between levels of the health system to improve management and accountability.	
Key Indicators and Targets: 1. Proportion of states with TB strategic plan (target of 100% by 2015) 2. Proportion of states with annual TB work plan (target of 100% annually from 2015)	
10.1	Conduct joint results-based action planning at federal-state and state-local levels
10.2	Maintain federal-level NTBLCP liaisons for each zone to facilitate communications, planning and supervision with zones and states
10.3	Standardize the composition and mandate of the State and LGA TBL teams to include all relevant stakeholders, especially CSO representatives and improve team function
10.4	Institute rigorous supportive supervision at all levels
10.5	Provide a results-based incentive scheme (monetary or non-monetary) to high-performing State, LGA and facilities
10.6	Programme review at all levels
Objective 11. Contribute to the strengthening of the health care system, especially primary health care, in collaboration with other disease Programmes and agencies for integrated delivery of prevention, diagnosis and treatment services for TB, HIV and malaria.	
Key Indicators and Targets: 1. Number and proportion of primary health care facilities providing TB diagnostic and treatment services 2. Proportion of states experiencing TB service disruptions as a result of industrial actions is <5%.	
11.1	Strengthen the existing interagency partnership with NTBLCP, NACA/NASCP, Malaria and PHCDA to coordinate and implement efforts for health system strengthening, including PHC
11.2	Develop and implement a plan for PHC system strengthening in geographic areas critical for the three diseases
11.3	Develop and implement a plan to prevent or address service disruptions
11.4	Develop and implement a plan to provide access to TB services in areas of civil unrest

With full implementation of the Plan, the NTBLCP aims to achieve key interim targets in TB control performance summarised in Table 3 and presented in full in part three of this document, the Monitoring and Evaluation plan. These targets support the country's commitment to each person's human rights to the highest attainable level of health. They are ambitious and represent the desire of all stakeholders in the process to hold Nigeria to the highest standards of TB control. Together, stakeholders will work toward reaching global targets for performance, some of which are within reach within the six years covered by this Plan and others of which will require longer-term efforts, through an intensified but step-wise process that emphasizes accountability, quality and collaboration.

Table 3: Key NSP-TB 2020 targets.

Key Indicators	2013 performance[5]	2020 target
Case notification (all forms)	100,451	625,844
Case notification rate (all forms)*	57/100,000	287/100,000
Treatment success rate, bacteriologically confirmed new TB cases	86%	>90%
Paediatric cases as a proportion of total notifications	5.8%	12%
Proportion of eligible under-six child contacts placed on IPT	NA	100%
Percentage of TB patients who had an HIV test result	88%	100%
Percentage of HIV-positive registered TB patients receiving CPT during TB treatment	87%	100%
Percentage of HIV-positive registered TB patients receiving ART during TB treatment	67%	100%
Percentage of PLHIV who were screened for TB at last visit to an HIV care or treatment setting	68%	100%
Percentage of PLHIV without active TB placed on IPT	1.7%	>80%
DR-TB: diagnostic evaluation for presumptive cases	48%	100%
DR-TB: Number of cases diagnosed per year (RR- and MDR-TB)	665	29,469
MDR-TB: Number of cases diagnosed per year	NA	18,526
Proportion of confirmed DR-TB (RR- and MDR-TB) patients enrolled on treatment	65%	100%
DR-TB: treatment success rate (Preliminary treatment outcome)	61% (2010 cohort)	70% (2018 cohort)
DR-TB: cure rate (Preliminary treatment outcome)	52% (2011 cohort)	60% (2018 cohort)

*Based on an estimated total population of 218,263,539 in 2020. NA = Not available

[5] 2013 NTBLCP Annual Report

2 Introduction

2.1 Purpose and organization of the NSP-TB 2015 - 2020

This NSP-TB is developed to focus the efforts of the NTBLCP and all of its partners in achieving the ambitious goal of universal access to high quality, patient-centred TB prevention, diagnosis and treatment services for all in Nigeria by 2020. The NSP-TB frames its goals and objectives within the context of Nigeria's National Health Strategic Development Plan 2010 – 2015. It describes the current challenges to TB control and the Programme's approach to addressing them. It also sets ambitious targets for this six-year period and describes in detail the activities that will be required to reach these targets.

Unlike previous NSPs, this document does not integrate the discussion of other diseases that fall under the purview of the NTBLCP, namely leprosy and Buruli ulcer. Those two conditions will be addressed in a separate document to take into account the fact that they require public health approaches that may be significantly different from the approach to TB control as laid out in this document.

The NSP-TB comprises of four related components:

1. The **core plan** which describes the current situation of TB control in Nigeria, presents a gap analysis, prioritizes key challenges and describes the goals, objectives, and strategic interventions the NTBLCP will use to address those challenges
2. The **operational and technical assistance plan** which describes the activities and sub-activities, what organization(s) will be responsible for specific activities, timeline for implementation and funding sources(s) of the activities
3. The **monitoring and evaluation (M&E) plan** which describes how the NTBLCP will assess progress toward each of the targets set in the core plan
4. The **budget plan**, which estimates the costs for implementing the NSP over the next six years.

2.2 Rationale for update of the NSP-TB

Nigeria is currently implementing a 2010 – 2015 NSP-TB. However, much has happened in the three years since the commencement of implementation of that plan including the introduction and endorsement of new rapid diagnostic technologies for TB, a mid-term review of the NSP that revealed areas of weakness that need to be addressed, a recent prevalence survey that showed an alarmingly high prevalence of TB in the general population – double the previous WHO estimates – and a drug resistance survey in 2012 which provided updated data on drug resistance among new and retreatment TB cases.

In light of all this new information and in recognition of fundamental health system challenges that contribute to the difficulties of reaching targets for TB and other disease control Programmes, the NTBLCP convened its stakeholders to develop a new strategy and mount a massive effort to fight TB in Nigeria.

2.3 The NSP-TB development process

This NSP-TB was developed through an inclusive and transparent process in response to the new information available to the NTBLCP and its desire to aggressively address urgent issues related to TB control in Nigeria. There were a number of steps in this process, beginning with the mid-term review and continuing through the finalization of this document and beyond. The steps are summarised in Table 4.

All processes undertaken by the NTBLCP in the development of this NSP reflect the Programme's commitment to engaging all stakeholders, including people with TB, PLHIV), community-based organizations (CBOs), faith-based organizations (FBOs), technical partners, donors, NACA, NASCP and MDAs, state TB control officers, LGTBLS, the Country Coordination Mechanism (CCM), Global Fund representatives, academia and others. More than 90 participants representing these constituencies participated in an intensive three-day workshop in November 2013 to launch the process, perform a thorough gap analysis, identify root causes of Programme underperformance with a focus on case detection, propose solutions and set provisional targets for the new NSP based on the current epidemiological information available.

A subset of the larger group worked together to develop the NSP outline, drafted the first version of the document and circulated it for comments to the wider group. During this process, additional consultations were held with key constituencies to further obtain their input to the NSP. These constituencies included TB patients, CSOs and community representatives, NACA, NASCP, state level officers, WHO, donors, CCM and technical experts.

Table 4: Key steps in developing the NSP-TB 2015 – 2020.

NSP Development Activity	Dates
Mid-term evaluation of NSP-TB 2010 - 2015	8th -18th April, 2013
Mid-term evaluation debrief	19th April, 2013
NSP broad stakeholder engagement workshop	11th – 15th November, 2013
NSP draft zero workshop	18th – 22nd November, 2013
Engagement of STBLCO's forum on the zero draft NSP	26th – 28th November, 2013
Broad stakeholder feedback on the zero draft NSP	January, 2014
Engagement of CSOs on the zero draft NSP	29th – 31st January, 2014
Development of the first draft of the NSP based on inputs	3rd – 7th February, 2014
Broad stakeholder feedback on the first draft NSP	March, 2014
Development of the revised draft of the NSP based on inputs	8th – 18th April, 2014
Final adjustments of targets and activities based on final expert review	July, 2014

PART ONE: The Core Plan

3 Situation analysis

3.1 Background information

3.1.1 Country profile

Nigeria is a country in West Africa, sharing borders with Benin, Niger, Chad and Cameroon, as well as a coastline on the Gulf of Guinea. It has an area of 923,768 square kilometres and is the most populous country in Africa, with an estimated population of 175 million in 2013[6]. The official language of Nigeria is English, although there are more than 250 ethnic groups with diverse languages and religious faiths.

Although Nigeria is relatively stable, intergroup violence fuelled by a complex mix of religious, ethnic, political and economic tensions remains a major concern for the country. Along with other fundamental health systems challenges, the civil unrest affects the ability of the health system to function effectively in certain regions, particularly the North East.

3.1.2 Governance structures

There are three levels of government: federal, state and local government area (LGA). There are 36 states and a Federal Capital Territory (FCT), which are organized into six geopolitical zones. The number of LGAs in each state is variable, ranging from 8 to 44. There are a total of 774 LGAs in the country.

Figure 1: Geo-political zones of Nigeria.

[6] Projected 2006 national population census figure

3.1.3 Economy and economic indicators

Nigeria is categorized as a lower middle income country. Its Gross Domestic Product was 262.6 billion US dollars (USD) in 2012, but a recent re-basing of the economy has adjusted the GDP upwards to 400 billion USD, which surpasses South Africa and places Nigeria as the largest economy in Africa.

Nigeria's economy is heavily dependent on oil exports, which currently makes up more than two-thirds of the government's total revenue. Oil price fluctuations have significant impacts on Nigeria's income and affect the government's ability to budget effectively. There are ongoing efforts to diversify the country's income base to provide better economic stability. Despite the challenges noted above, the economic growth rate is estimated at a very robust average of seven percent per year, but not all Nigerians are benefiting from the booming economy. Approximately 46 percent of the population was still living below the poverty line as of 2010.

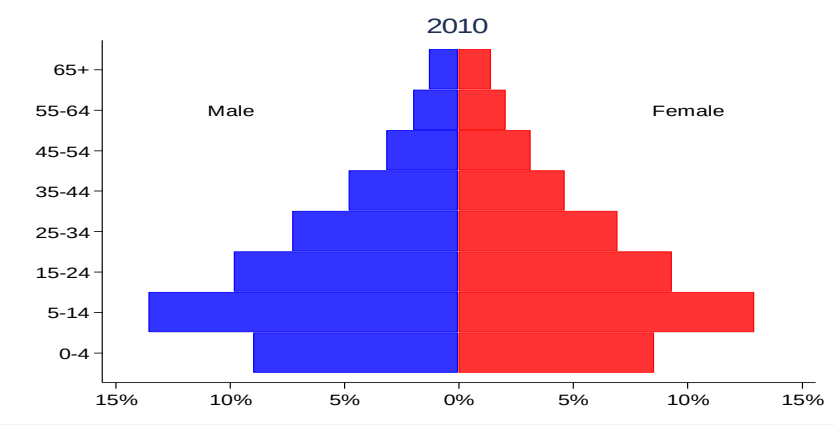
Health expenditure represented 5.3 percent of GDP in 2011, the lowest proportion since 2003. This amounts to an outlay of 80 USD per capita. The majority of this is derived from out-of-pocket payments by individuals.

3.1.4 Demography

Nigeria's population is young and growing rapidly, as shown in the population pyramid in Figure 2. The population growth rate is estimated at 3.2 percent per year. An estimated 43.9 percent of the population is under the age of 15, with an additional 19.3 percent between the ages of 15 and 24. This population distribution has implications for the dynamics of TB transmission and for the approaches to TB education, case-finding and case holding. This emphasizes the need for more intensive efforts to diagnose paediatric TB and use of modern communication methods to reach young people at risk of TB, with appropriate messages.

Approximately half of Nigeria's population live in urban areas where TB is also concentrated, according to the prevalence survey data,. From 2010 to 2015, the annual rate of growth in urbanization was estimated at 3.5 percent. The major cities in the country include Lagos, Kano, Ibadan, Abuja and Kaduna, which account for a population of approximately 20 million.

Figure 2: Population pyramid, 2010.



(Source: UNDP Database)

3.1.5 Organization of the health system

Health system organization mirrors the governance structure of the country. Health is in the concurrent list and functions at and is the responsibility of the respective level of governance. With some exceptions, the federal level oversees and operates tertiary care facilities, the state level oversees and operates secondary care facilities, and the local government area (LGA) level oversees and operates primary care facilities.

From the NSHDP:

> "The public health service is organized into primary, secondary and tertiary levels. While the Constitution is silent on the roles of the different levels of government in health services provision, the National Health Policy ascribes responsibilities for primary health care to local governments, secondary care to states and tertiary care to the federal level. At the same time, a number of parastatals based at the federal level, for example, the National Primary Health Care Development Agency (NPHCDA), are currently engaged in primary health care services development and provision; the latter is evidently part of its mandate. Although national policies formulated by the Federal Ministry of Health provide some level of standardization, each level is largely autonomous in the financing and management of services under its jurisdiction."[7]

3.1.6 Health system infrastructure

According to the National Health Plan:

> "Nigeria operates a pluralistic health care delivery system with the orthodox and traditional health care delivery systems operating alongside each other, albeit with hardly any collaboration. Both the private and public sectors provide orthodox health care services in the country. In 2005, FMOH estimated a total of 23,640 health facilities in Nigeria of which 85.8% are primary health care facilities, 14% secondary and 0.2% tertiary. 38% of these facilities are owned by the private sector, which provides 60% of health care in the country. While 60% of the public primary health care facilities are located in the northern zones of the country, they are mainly health posts and dispensaries that provide only basic curative services. The Private Out-Of-Pocket-Expenditure (OOPE) in Nigeria accounts for over 70% of the estimated $10 per capita expenditure on health, limiting equitable access to quality health care.
>
> "The health system is in a deplorable state with an overall health system performance ranking 187th out of 191 member States by the World Health Organization (WHO). Primary Health Care (PHC), which forms the bedrock of the national health system, is in a prostrate state because of poor political will, gross under funding and lack of capacity at the LGA level, which [is] the main implementing body.
>
> "The health system remains overstretched by a burgeoning population; physical facilities are decaying, equipment are obsolete and there is scarcity of skilled health professionals. In addition, the roles of stakeholders are misaligned and coordination systems are weak. These are further compounded by the dearth of data which renders evidence based planning, policy formulation and health systems management weak."[8]

[7] TWG-NSHDP/Health Sector Development Team. (2009). The National Strategic Health Development Framework (2009 – 2015), p. 17.

[8] TWG-NSHDP/Health Sector Development Team. (2009). The National Strategic Health Development Framework (2009 – 2015), pp. 15-26.

3.1.7 Health system financing

Financing of the health system at the federal level is through an annual ministerial budget approved by the national assembly. Within the Federal Ministry of Health (FMOH), each department and Programme, including the NTBLCP has a specific budget line for TB within the FMOH budget. To utilise the appropriated funds, NTBLCP develops a proposal in line with the appropriated funds stating clearly what it intends to do and achieve. Funds are later disbursed after approval from the Ministry authority. However, there are often delays in fund disbursement and instances of non-disbursement are not uncommon.

State funding for all health services is allocated through a similar process as at the federal level. State funding for health is derived from two sources: a federal monthly allocation to each state from the consolidated federation account and the state internally generated revenue. In the majority of states, there is no line item in the budget for TB control.

LGAs are also allocated funds from the federation account but their monies go through the states who then disburse them to the LGAs. Most states have a system of joint accounts with their LGAs. Funds for health at this level are in the form of a lump sum allocation for primary health care, which includes staffing, facilities and basic commodities. Delays in disbursement, non-disbursement of the LGAs' funds by the states and weak capacity at the LGA level, have weakened the ability of the primary health care system to provide needed services. As a result, it is reported that many patients seek first-line care at secondary or tertiary facilities instead.

3.1.8 Health indicators

Nigeria has seen steady improvements across key health indicators, but at a rate that is too slow to achieve national and global targets. As presented in table 5, Nigeria still has a very high rate of under-five mortality at 128 per 1000 live births, twice the national target for 2015 of less than 64 deaths per 1000 live births. As a useful indicator of health system performance, the under-five mortality rate underscores the challenges of delivering care in Nigeria through the primary health care system. This is a key challenge for the delivery of all health services, including TB diagnosis and treatment and has been well-described in numerous government plans and assessments.[9]

Table 5: Trend of basic health indicators 1990 - 2013[10]

Indicator	1990	1999	2003	2008	2013
Total fertility rate/woman aged 15-49	6.0	5.2	5.7	5.7	5.5
Infant mortality per 1000 live births	87	75	100	75	69
Under 5 mortality per 1000 live births	192	140	201	157	128
Women accessing antenatal care (%)	57.7	63.6	62.6	57.8	60.6
Births attended by skilled personnel (%)	32.0	41.6	36.3	39.0	38.1
Children 12-23 months with all basic vaccinations (%)	29.6	16.8	12.9	22.7	25.4
BCG coverage for children aged 12-23 months (%)	60.7	53.8	48.3	49.7	51

[9] The National Strategic Health Development Plan and Saving One Million Lives document the health system challenges.

[10] *Nigeria Demographic and Health Survey*, http://dhsprogramme.com/Publications/Publication-Search.cfm?ctry_id=30&country=Nigeria

There are significant variations in the indicators related to women's reproductive health. Consistently, women with higher levels of education and those who live in urban areas access reproductive health services far more frequently than their less educated and more rural counterparts. As would be expected, total fertility rate is also lower in urban areas and amongst more educated women than in the rural and less educated population.

3.1.9 Relevant health sector policies, strategies, plans and initiatives

There are a number of health sector policies and initiatives that have relevance for the approaches developed as part of the NSP-TB. The potential synergies with or effects on the NSP-TB are described briefly below.

National Strategic Health Development Plan

The National Strategic Health Development Plan 2010 – 2015 (NSHDP) describes Nigeria's overall approach to improving the health of its people and forms the health sector component of the government's Vision 20:2020 for Nigeria, which aims to elevate Nigeria to one of the top 20 economies in the world by the year 2020. As stated in the Plan, "The overarching goal of the NSHDP is 'to significantly improve the health status of Nigerians through the development of a strengthened and sustainable health care delivery system'."

The NSHDP provides the umbrella framework that should guide and inform approaches to all disease-specific Programmes, including TB. It outlines eight strategic priority areas for action based on a thorough analysis of health system challenges in Nigeria. These priority areas include leadership and governance, health service delivery, human resources for health, health financing, national health management information system, community participation and ownership, partnerships for health and research for health.

These priority areas are very much in line with the priorities identified for the new NSP-TB, which reflects the need to consider the larger health systems challenges as an integral part of addressing issues specific to TB control. Well-defined actions are articulated in the NSP-TB that operationalise the broad objectives and interventions presented in the NSHDP. The explicit relationship between the NSHDP priorities and the NSP-TB objectives and strategic interventions is presented in table 6 below.

The NSHDP specifically includes several TB control activities as part of the essential package of care:

1. TB case detection and treatment with DOTS
2. Treatment of previously treated TB patients
3. Management of multidrug-resistant TB

Table 6: The NSHDP priorities and NSP-TB responses.

NSHDP priority	NSP-TB response
LEADERSHIP AND GOVERNANCE	**Objectives 8, 9, 10 and 11**
• To provide clear policy directions for health development • To facilitate legislation and a regulatory framework for health development • To strengthen accountability, transparency and responsiveness of the national health system • To enhance the performance of the national health system	• Joint strategic planning at federal-state and state-local levels • Advocacy for incorporation of TB considerations in all major health policy documents • Civil society monitoring of Programme performance, annual reviews by the Programme and external evaluations • Institute rigorous monitoring and evaluation and continuous quality improvement processes
HEALTH SERVICE DELIVERY	**Objectives 1, 2, 3, 4, 5, 6 and 11**
• To ensure universal access to an essential package of care • To increase access to health care services • To improve the quality of health care services • To increase demand for health care services • To provide financial access especially for the vulnerable groups	• Inclusion of TB in the essential package of services and in the national health insurance scheme • Incorporation of TB services (screening and referral or diagnosis and treatment) in all health facilities • Integrated training (TB, HIV and malaria) and rigorous supportive supervision of health facilities • Education, outreach, screening, referral and treatment support services for TB, HIV and malaria through community-based organizations • Financial support for indigent clients to access TB services including chest x-rays
HUMAN RESOURCES FOR HEALTH	**Objectives 7, 9, 10 and 11**
• To formulate comprehensive policies and plans for HRH for health development • To provide a framework for objective analysis, implementation and monitoring of HRH performance • Strengthen the institutional framework for human resources management practices in the health sector • To strengthen the capacity of training institutions to scale up the production of a critical mass of quality, multipurpose, multi skilled, gender sensitive and mid-level health workers • To improve organizational and performance-based management systems for human resources for health • To foster partnerships and networks of stakeholders to harness contributions for human resource for health agenda	• Formulate and implement a human resources development plan for TB • Develop specific job descriptions and monitor performance of all NTBLCP staff • Strengthen the management capacity of the NTBLCP central and state units • Develop integrated training for health care workers in TB, HIV and malaria • Evidence-based planning for expansion of services to achieve universal coverage • Supportive supervision at all levels with results-based incentives • Engage other health providers in the public sector, in the private sector, faith-based organizations and community-based organizations in TB control activities
HEALTH FINANCING	**Objectives 1, 2, and 8**
• T0 develop and implement health financing strategies at Federal, State and Local levels in line with the National Health Financing Policy • To ensure that people are protected from financial catastrophe and impoverishment as a result of using health services • To secure a level of funding needed to achieve desired health development goals and objectives at all levels in a sustainable manner • To ensure efficiency and equity in the allocation and use of health sector resources at all levels	• Advocate at the federal level for increased allocation of resources for essential TB control functions • Provide financial support for indigent clients and make use of national and community health insurance schemes • Advocate with state and local governments for appropriate allocations for TB control • Strengthen financial management capacity at the NTBLCP central unit

NATIONAL HEALTH INFORMATION SYSTEM	Objective 9
• To improve data collection and transmission • To provide infrastructural support and ICT of health databases and staff training • To strengthen sub-systems in the Health Information System • To monitor and evaluate the NHMIS • To strengthen analysis of data and dissemination of health information	• Develop an electronic data management system aligned with the NHMIS • Procure equipment and provide training for health workers at all levels • Increase the capacity of NTBLCP staff at all levels to analyse data and use for Programme improvement
COMMUNITY PARTICIPATION AND OWNERSHIP	**Objective 7**
• To strengthen community participation in health development • To empower communities with skills for positive health actions • To strengthen the community - health services linkages • To increase national capacity for integrated multisectoral health promotion • To strengthen evidence-based community participation and ownership efforts in health activities through researches • To increase national capacity for integrated multisectoral health promotion	• Build on existing CSS activities under Global Fund projects to develop a strong network of community organizations working on AIDS, TB and malaria (ATM) • Provide ATM organizations with comprehensive integrated training on the three diseases to support outreach and care provision activities • Provide training and supportive supervision for monitoring and evaluation of community-based activities and conduct related operational research • Develop clear mechanisms for community-health facility interactions and activities • Support community participation in local, state and federal decision-making processes
PARTNERSHIPS FOR HEALTH	**Objectives 1, 2, 3, 4, 7, 8 and 11**
• To ensure that collaborative mechanisms are put in place for involving all partners in the development and sustenance of the health sector	• Public-public and public-private mix activities to increase TB case-finding and treatment in adults and children • Alliances with NACA/NASCP, Malaria and NHPCDA to strengthen and integrate care delivery systems • Intensified community engagement • Advocacy to and engagement with the corporate sector and media to support TB control interventions
RESEARCH FOR HEALTH	**Objective 9**
• To strengthen the stewardship role of governments at all levels for research and knowledge management systems • To build institutional capacities to promote, undertake and utilize research for evidence-based policy making in health at all levels • To develop a comprehensive repository for health research at all levels (including both public and non-public sectors) • To develop, implement and institutionalize health research communication strategies at all levels • To develop a comprehensive repository for health research at all levels (including both public and non-public sectors)	• Develop a TB research agenda • Engage professional bodies, academic institutions and others to support research • Provide NTBLCP central unit staff with training on operational research

National Health Bill

The National Health Bill 2011 was passed by the National Assembly in 2014 but had not been signed by the President as at the time of conclusion of the NSP-TB. The bill seeks to establish a framework for the development and management of the national health system. It lays out the roles and responsibilities of the three levels of the health system, required health personnel and facilities to follow set national standards, establishes a National Council on Health, establishes a national primary health care development fund and sets other provisions to govern the functions of and relationships between the various levels of the health system. If enacted, the bill will help strengthen the linkages between the three levels of the health system and will provide the resources and structures for the much needed health system strengthening.

National Health Insurance Commission Act

This act seeks to repeal the existing National Health Insurance Scheme Act, Cap. N42, LFN 2004 and to enact the National Health Insurance Commission Act. This is to ensure a more effective implementation of a national health insurance policy that will enhances access to healthcare services for all Nigerians, as well as promote and effectively regulate health insurance schemes in Nigeria. The act is yet to be passed by the legislature as at the time of completion of this NSP. The act would establish various health insurance schemes and funds to increase access to health care for Nigerians. Of note, it would establish a National Vulnerable Groups Health Insurance Fund to provide subsidised and or free health insurance to disadvantaged Nigerians. At present, the act contains no language on TB. The companion National Health Insurance (NHI) operational guideline specifically excludes TB, giving the rationale that TB control activities are covered under the NTBLCP.

Saving One Million Lives

Saving One Million Lives is an initiative launched in 2012 with the objective of addressing preventable causes of maternal and child mortality. The approach encompasses many of the same health systems strengthening activities envisioned in this new NSP-TB. For instance, it focuses on results-based planning, strengthening of accountability, engagement of private providers and community outreach as activities to support reductions in mortality. While TB is not specifically included in this initiative, there are a number of potential synergies with the NSP-TB and it will be important for the NTBLCP to seek coordination with activities at the primary health care level to increase the efficiency of interventions.

Ward Minimum Health Package

The Ward is the lowest level of the health care delivery system in Nigeria, being subsidiary to the LGA. The National Primary Health Care Development Agency (NPHCDA) articulated the elements of the basic health care delivery package in a document entitled *Ward Minimum Health Care Package 2007 – 2012*.

The minimum health care package at primary care level includes six elements, one of which is “control of communicable diseases of public health importance,” including HIV, TB and malaria. The document places responsibility for infrastructure, equipment and financial inputs on the LGA. Anti-TB drugs are to be provided through the NTBLCP.

In the document, the minimum health package for the control of tuberculosis is described as follows:

1. Provision of basic laboratory infrastructure and equipment in all ward health centres for case identification of tuberculosis. {microscope, slides and slide covers, stains, swabs, sterile sputum receptacles, disposable gloves}
2. Ensure the availability of drugs and infrastructure for Direct Observation Treatment Short Course (DOTS) {Rifampicin, INH, Pyrazinamide, Streptomycin, Ethambutol etc for all identified cases}[11]

President's Comprehensive Response Plan (PCRP) for HIV/AIDS in Nigeria

According to the executive summary of the PCRP:

> "The goal of the PCRP is to accelerate the implementation of key interventions over a two year period to bridge existing service access gaps, address key financial, health systems and coordination challenges and promote greater responsibility for the HIV response at Federal and State levels. Specifically, the plan aims to avail 80 million men and women aged 15 and older knowledge of their HIV status; enroll an additional 600,000 eligible adults and children on ART; provide ART for 244,000 HIV pregnant women for PMTCT, provide access to combination prevention services for 500,000 MARPS and 4 million young person's and activate 2,000 new PMTCT and 2000 ART service delivery points across the country."[12]

The PCRP is an interim plan to catalyze an intensified response while a longer 2015-2020 strategy is prepared. TB/HIV collaboration is listed as a priority in the PCRP.

HIV NSP

The National Strategic Plan for HIV was reviewed at its mid-term in 2014. As a result of the review, NACA and NASCP will adjust the strategy presented in the plan to address the challenges noted and will incorporate new approaches into the Global Fund concept note. This process is ongoing as the NSP-TB is being finalized. NTBLCP will work closely with NACA and NASCP to ensure consistency in approaches for TB/HIV interventions.

SURE-P

One of the pillars of the Transformation Agenda of Nigeria's Federal Government is the progressive deregulation of the petroleum industry. In January, 2012, the decision to remove the subsidy on Premium Motor Spirit was announced by government. The funds that accrue to the Federal Government from the partial withdrawal of the subsidy are directed toward social Programmes through the Subsidy Reinvestment and Empowerment Programme (SURE-P). SURE-P funds support social safety net Programmes (vocational training, mass transit, maternal and child health and community service/women and youth empowerment) and infrastructure development (roads and bridges, Niger Delta projects and railways). SURE-P is envisioned to run from 2012 – 2015, the timeframe set for the transformation agenda.[13]

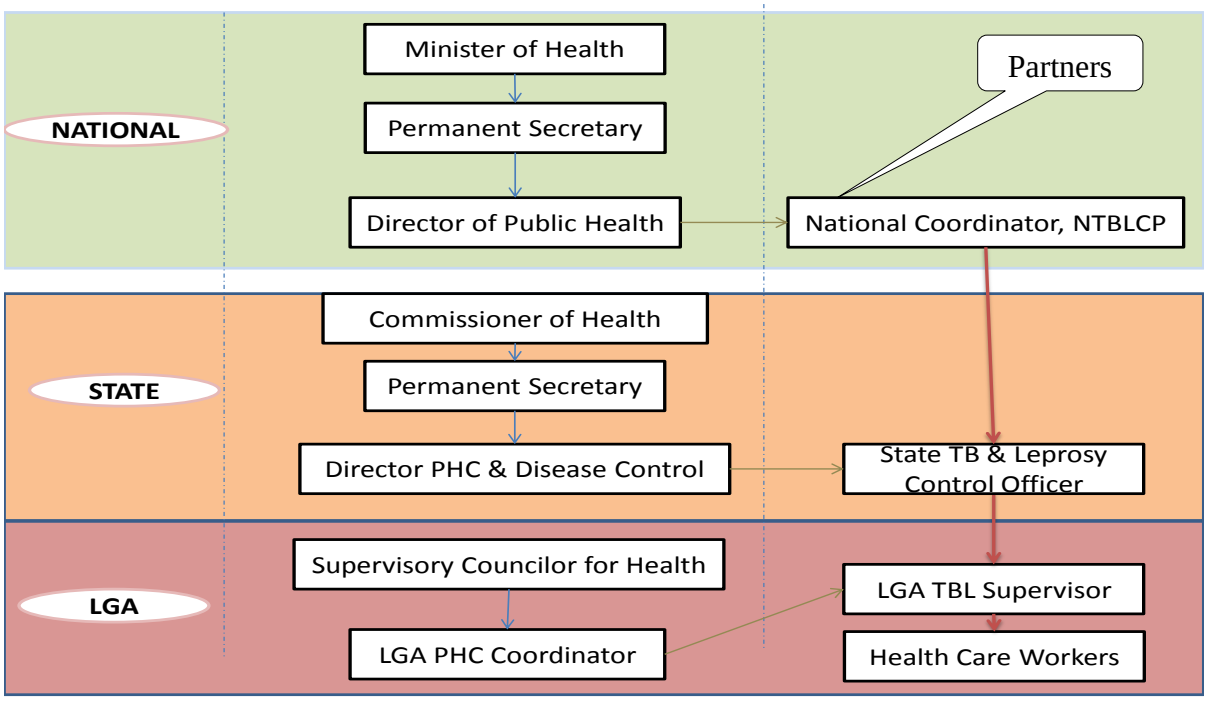
[11] National Primary Health Care Development Agency. 2007. Ward minimum health care package. p. 18.
[12] Government of Nigeria, National Agency for the Control of AIDS. (no date) President's comprehensive response plan for HIV/AIDS in Nigeria. Accessed on June 30, 2014 at: http://www.zero-hiv.org/wp-content/uploads/2013/09/PCRP-2013-2015-real-2-Aug-2013.pdf
[13] SURE-P website. Accessed on July 30, 2014 at: http://www.sure-p.gov.ng/main/index.php/about-sure-p/sure-p-secretariat/history-and-mandate

3.2 The National Tuberculosis and Leprosy Control Programme

3.2.1 Organizational units of TB control, their functions and staffing

The National Tuberculosis and Leprosy Control Programme (NTBLCP) was established in 1989 by the Government of Nigeria to coordinate TB and leprosy control efforts in Nigeria. Its mandate was further expanded to include Buruli ulcer control in 2006. The operations of the NTBLCP are in line with the three levels of governance in the country: national, state and local government area (LGA).

Figure 3: Organisational chart showing relationships of the operational levels of the NTBLCP.



The Central Unit

The NTBLCP at the national level is referred to as the Central Unit. The Central Unit of the NTBLCP is a division in the Department of Public Health of the Federal Ministry of Health and is headed by a national coordinator, responsible for the entire Programme in the country. The National Tuberculosis and Leprosy Training Centre (NTBLTC), Zaria is the human resource development arm of the NTBLCP. The centre also incorporates a referral hospital with a 140-bed capacity for management of leprosy and drug-susceptible TB patients, with an additional 20-bed capacity for the treatment of drug-resistant TB patients. Furthermore, one of the two National TB Reference Laboratories (NRL) is located in NTBLTC, Zaria.

Functions

The central unit of the NTBLCP is responsible for the following functions:

- Facilitates the development of policies on TB, TB/HIV, Leprosy and Buruli Ulcer control in the country.

- Coordinates all activities of TB, Leprosy and Buruli Ulcer control in the country.
- Provides oversight to the National TB and Leprosy Training Centre (including the National Reference Laboratory) in Zaria as an arm of the NTBLCP
- Provides managerial and technical support to the Zonal TBLCP Coordinators and the State TBL Control Officers.
- Procures and distributes equipment and supplies of the NTBLCP (anti-tuberculosis, anti-leprosy and anti-lepra reaction drugs, laboratory equipment and reagents, stationery and transport, etc.).
- Mobilizes resources for Programme implementation.
- Ensures adequate human resources for the Programme at the federal level and advises sun-national level on staffing needs.
- Organises periodic reviews and evaluations of the TB, leprosy and Buruli ulcer control Programme.
- Maintains active collaboration with national and international non-governmental organizations and voluntary agencies including private health establishments.

Staffing

The National Coordinator is the head of the NTBLCP central unit and is supported in his/her duties by technical and operational staff. The central unit is currently comprised of 42 persons, including 23 technical (10 medical doctors, 2 pharmacists, 3 laboratory scientists, 7 scientific officers and 3 nurses) and 19 administrative staff. These positions are located at the central unit office in Abuja. The National TB and Leprosy Training Centre in Zaria is also considered part of the central unit, but functions as a training centre and NRL.

State Level

At the State level, the TB and Leprosy Control Programme functions under the State Department of Disease Control and is known as the State TB and Leprosy Control Programme (STBLCP). The STBLCP headed by a State TB and Leprosy Control Officer (STBLCO) coordinates TB and leprosy control activities in their respective states and provides secondary care and technical assistance to the LGA level.

Functions

The STBLCP is responsible within its jurisdiction for the following activities:

- Managing TB, TB/HIV, Leprosy and Buruli Ulcer activities at the State level.
- Managing, coordinating and supervising all Programme activities at State and Local Government level.
- Assisting in the diagnosis and management of difficult TB and leprosy cases.
- Ordering and distributing supplies to LGAs.
- Collecting, collating and analysing data on leprosy and TB activities in the State and disseminating reports to the Federal and Local Governments, as well as other organizations and institutions as appropriate.
- Maintaining active cooperation with NGOs supporting the State Programmes.
- Setting up and maintaining a laboratory quality assessment (QA) system in the State

- Maintaining adequate procurement supply management to prevent stock-outs of commodities.

Staffing

The STBLCP is headed by a State TB and Leprosy Control Officer, supported by a complement of staff including a TB laboratory quality assurance officer, M&E officer, DR-TB focal persons and logistic officers, among others.

LGA Level

The LGA is the basic management unit of the NTBLCP. At this level, the Local Government TB and Leprosy Supervisor (LGTBLS) coordinates TB and Leprosy control activities. S/he oversees all health facilities within their respective LGAs, where TB and leprosy activities are carried out including primary, secondary and tertiary health facilities in public, private, (FBO sectors, as well as military and para-military health facilities.

Functions

The LGTBLS is responsible for the following activities at LGA level:

- Managing and coordinating TB, TB/HIV and Leprosy control activities in the LGA.
- Assisting the STBLCO in planning, organizing and conducting training Programmes.
- Ensuring proper sputum collection and prompt transportation to the laboratory.
- Assisting in diagnosis and management of difficult TB and leprosy cases.
- Supervising treatment by other health workers throughout the LGA and ensuring that the national guidelines are followed.
- Keeping an up-to-date and accurate record of activities of TB and leprosy control activities in the LGA, including the LGA Central Registers. Ensuring that patient record cards are properly filled and kept by the health unit staff.
- Ordering supplies (drugs, laboratory supplies, records cards and forms) from the State level for the LGA and ensure their distribution to all health units.
- Liaising with the PHC Coordinator in carrying out health education activities
- Undertaking activities for disability prevention and rehabilitation.

Staffing

Each of the 774 LGAs in the country is headed by a LGTBLS, who is often the only staff at the LGA level that supports TB and leprosy control activities.

Health facility level

The health facilities are the points of delivery of TB and leprosy services. It is the operational level, where different cadres of health workers provide diagnostic and treatment services for TB and leprosy depending on the level of care (primary, secondary and tertiary) available. The health workers include medical doctors, pharmacists, laboratory scientists, nurses, Community Health Officers, Community Health Extension Workers, health assistants and others. Their roles in identification and examination of presumptive TB cases as well as diagnosing, treating and follow up of TB cases vary according to their training and qualifications.

Functions

The Medical Officer at the referral hospital is responsible for:

- Attending to all referrals from the peripheral facilities
- Attending to non-referral patients coming to the Hospital
- Ensuring that patients receive the treatment necessary for their disease conditions (both medical and surgical)
- Giving feedback to STBLCO on referred patients as well as new patients detected in the Hospital
- Ensuring both medical and surgical general supplies are available at all times as allowed in the budget
- Supervising the various hospital departments for effective functioning
- Holding departmental and management meetings regularly
- Cooperating with other health institutions in the state
- Performing any other duties that may be assigned.

DOTS Providers

Several cadres of staff make up General Health Workers, including pharmacists, registered nurse, community health officer, community health extension workers and health assistants. The general health worker's responsibilities include:

- Identifying TB suspects.
- Ensuring TB diagnosis through sputum examination.
- Diagnosing leprosy.
- Classifying TBL patients for treatment.
- Administering and monitoring TBL treatment.
- Carrying out examinations of household contacts of patients.
- Filling completely and accurately all forms, cards and registers used in patient management
- Identifying and referring all smear negative patients and children suspecting to be having TB to Medical Officers.
- Tracing and retrieving patients who interrupt treatment.
- Carrying out patient education on TBL.
- Undertaking public education and outreach.

AFB Microscopists

The laboratory workers at the health facility level include registered medical laboratory scientists, technologists and/or technicians other paramedical professionals who have attended an orientation course in TB microscopy or in other relevant technologies. They are responsible for:

- Observing all standard operating procedures and basic safety measures for efficient and effective TB microscopy, in all cases, as designed by the Programme.
- Advising patients and other health workers on correct, safe sputum collection.

- Preparing, staining and examining sputum and slit skin smears.
- Ensuring prompt dispatch of results to the clinic within 72hrs from the receipt of specimen.
- Recording findings and reports using the NTBLCP Information System.
- Storing slides for quality control.
- Creating and facilitating the practice of Internal Quality Control as an integral part of standard laboratory practice.
- Maintaining effective communication with reference laboratory for the purpose of Quality Control and cooperating with them by preserving serially, all read AFB smears on quarterly basis.
- Maintaining adequate stock of reagents and supplies to avoid stock-outs.
- Ensuring effective utilisation and care of reagents, equipment and materials meant for the Programme.
- Taking part in all laboratory feedback and information dissemination meetings.

Staffing

Health facility staff are generalists and TB control activities are included as part of their overall roles and responsibilities for delivering preventive and curative services to the population who access their facilities. Each health facility is staffed according to its functions. However, frequent industrial actions leave a number of facilities without the full complement of staff. In addition, staff turnover and lack of sufficient training have been identified as contributing factors to weak performance of the primary health care sector in delivering TB control services.

3.2.2 Programme infrastructure & processes

Diagnosis

Diagnosis of TB in Nigeria continues to rely primarily on passive identification of presumptive TB cases and examination by sputum smear microscopy. As of 2013, AFB microscopy services were available in 1,602 sites located within primary, secondary and tertiary health facilities in both public and private sectors, with an estimated coverage of one smear microscopy facility for every 109,000 people. However, the distribution of diagnostic centres is uneven, with high coverage in some areas and low coverage in others.[14]

TB diagnostic services have been expanded to hospitals and health centres within the Nigerian Prison Services, armed forces and police as well as para-military services (i.e., other uniformed services). Additional scale-up of LED fluorescent microscopy is planned as part of this NSP-TB to reach a microscopy centre to population ratio of 1:50,000 or less, working toward universal access to quality diagnosis. The target for this NSP-TB is to establish an additional 2,450 centres by 2020 for a total of 4,052 facilities offering sputum smear microscopy nationwide.

[14] NSP 2010-2015 mid-term review report.

As at the time of finalising this NSP, 87 *GeneXpert MTB-Rif* machines were in use, supported by numerous partners and placed in all 36 states plus FCT, as shown in Table 7. While the majority of these machines have been used to date for the diagnosis of DR-TB, an increasing number of tests are expected for PLHIV, children and presumptive TB cases with smear-negative sputum results (see table 8). An additional 185 *GeneXpert* machines will be introduced as part of an existing Global Fund HIV grant to NACA to support diagnosis of TB in PLHIV. Additional strategic scale-up of *GeneXpert* is planned as part of this NSP to support universal access to high-quality diagnosis.

Table 7: *GeneXpert* MTB-Rif four-module machines available as time of conclusion of the NSP-TB.

No.	States	*GeneXpert* sites	Supporting Partner
1	Akwa Ibom	University of Uyo Teaching Hospital	TB CARE I
2	Akwa Ibom	Immanuel General Hospital Eket	GFATM
3	Adamawa	Specialist Hospital, Yola	TB REACH
4	Anambra	Anambra state University Teaching Hospital, Awka	Agbami Partners
5	Anambra	Nnamdi Azikiwe University Teaching Hospital, Nnewi	FHI_{360}
6	Abia	Federal Medical Centre, Umuahia	TB CARE I
7	Abia	Abia Specialist Hospital & Diagnostic Centre, Umuahia	Agbami Partners
8	Benue	45 Nigeria Air force Hospital Makurdi	EPIC/DOD
9	Benue	Federal Medical Centre, Makurdi	APIN/IHVN
10	Benue	General Hospital, Otukpo	CIHP
11	Benue	Benue State University Teaching Hospital, Makurdi	Agbami Partners
12	Benue	General Hospital, Vandekeiya	CIHP
13	Bauchi	Tafawa Belewa University Teaching Hospital, Bauchi	TB CARE I
14	Bauchi	Federal Medical Centre, Azare	GFATM
15	Bayelsa	Leprosy and TB Hospital, Igbogene	Agbami Partners
16	Borno	University of Maiduguri Teaching Hospital	FHI_{360}
17	Cross River	St Benedict Catholic Hospital, Ogoja	FHI_{360}
18	Cross River	University of Calabar Teaching Hospital	GFATM
19	Delta	Central Hospital, Agbor	IHVN
20	Delta	Federal Medical Centre, Asaba	TB CARE I
21	Delta	TBL Referral centre, Eku	Agbami Partners
22	Ebonyi	St Patrick Hospital, Abakaliki (Mile 4)	TB CARE I
23	Ebonyi	Federal Teaching Hospital, Abakaliki 1	CCCRN
24	Edo	Central Hospital, Benin	TB CARE I
25	Edo	General Hospital, Auchi	Agbami Partners
26	Enugu	Annunciation Specialist Hospital Enugu	CCCRN
27	Enugu	District hospital Enugu Ezike	CCCRN
28	Enugu	University of Nigeria Teaching Hospital, Enugu	CCCRN
29	Ekiti	State Specialist Hospital, Ado Ekiti	TB CARE I
30	Ekiti	Oba Adejuyigbe General Hospital Agric Road Ado-Ekiti	Agbami Partners
31	FCT	Zankli Medical centre, Abuja	TB CARE I
32	FCT	Kwali General Hospital	Agbami Partners
33	FCT	Defence Head Quarters	DOD
34	FCT	Bwari General Hospital	TB REACH
35	FCT	Gwagwalada Teaching Hospital	TB REACH
36	FCT	Abaji General Hospital	TB REACH
37	FCT	Kuje General Hospital	TB REACH
38	FCT	Kwali General Hospital	TB REACH

39	Gombe	Specialist Hospital, Gombe	TB CARE I
40	Gombe	General Hospital, Zambuk	Agbami Partners
41	Imo	Imo state University Teaching Hospital	CCCRN
42	Imo	Federal Medical Centre, Owerri	Agbami Partners
43	Jigawa	General Hospital, Hadeja	TB CARE I
44	Kaduna	National TB and Leprosy Training Centre, Zaria	TB CARE I
45	Kaduna	General Hospital, Kafanchan	Agbami Partners
46	Kaduna	44 Nigeria Army Reference Hospital, Kaduna	DOD
47	Kaduna	Gwamna Awan Hospital	CIHP
48	Kano	Infectious Disease Hospital, Kano	TB CARE I
49	Kano	Aminu Kano Teaching Hospital	TB CARE I
50	Kano	General Hospital, Bichi	IHVN
51	Katsina	General Hospital, Funtua	IHVN
52	Katsina	Federal Medical Centre, Katsina	TB CARE I
53	Kebbi	Federal Medical Centre, B/Kebbi	TB CARE I
54	Kwara	Sobi Specialist Hospital Ilorin	Agbami Partners
55	Kogi	Kogi state Specialist hospital, Lokoja	Agbami Partners
56	Kogi	Kogi state University Teaching Hospital, Ayingba	GFATM
57	Lagos	National Institute of Medical Research, Lagos	TB CARE I
58	Lagos	Mainland Hospital Yaba, Lagos	TB CARE I
59	Lagos	68 Nigeria Army Reference Hospital, Yaba	EPIC/DOD
60	Lagos	Lagos state University Teaching Hospital	TB CARE I
61	Lagos	Alimosho General Hospital	Agbami Partners
62	Lagos	Police Hospital Falomo	WHO
63	Lagos	Nigerian Navy Reference Hospital Ojo	GFATM
64	Nasarawa	Dalhatu Araf Specialist Hosp. Lafia	TB CARE I
65	Nasarawa	Federal Medical Centre, Keffi	IHVN
66	Nasarawa	Evangelical Reformed Church of Christ, Akwanga	Agbami
67	Niger	General Hospital,Minna	WHO
68	Niger	Federal Medical Centre, Bida	MSH
69	Niger	Umaru Musa Yar'adua Memorial Hospital, Sabon Wuse	Agbami
70	Oyo	Government Chest Hospital, Jericho Ibadan	TB CARE I
71	Oyo	University College Hospital, Ibadan	APIN
72	Ondo	State Hospital Akure	TB CARE I
73	Ondo	State Specialist Hosp Okitikupa	Agbami Partners
74	Ogun	Hansen Disease Centre, Iberekodo, Abeokuta	Agbami Partners
75	Ogun	Olabisi Olabanjo University Teaching Hospital, Sagamu	IHVN
76	Osun	Obafemi Awolowo University Teaching Hospital, Ile-Ife	IHVN
77	Osun	Specialist Hospital, Asubiaro	TB CARE I
78	Osun	General Hospital, Iwo	Agbami Partners
79	Plateau	Jos University Teaching Hospital, Jos	APIN
80	Plateau	Church of Christ in Nation Hospital, Mangu	GFATM
81	Rivers	Braithwaite Memorial Specialist Hospital, Port Harcourt	FHI_{360}
82	Rivers	University of Port Harcourt Teaching Hospital	GFATM
83	Sokoto	Murtala Mohammed Specialist hospital, Sokoto	Agbami Partners
84	Taraba	State Specialist Hospital, Jalingo	WHO
85	Taraba	Hon. Haruna Tsokwa Memorial General Hospital Takum	WHO
86	Yobe	Federal Medical Centre, Nguru	FHI_{360}
87	Zamfara	Federal Medical Centre, Gusau	TB CARE I

Based on WHO recommendations and the results of TB REACH projects, a diagnostic algorithm for use of *GeneXpert* has been developed for the country. At present, groups eligible for *GeneXpert* testing are listed below in Table 8.

Table 8: Priority groups for *GeneXpert* testing, 2014.

Testing group	Purpose
PLHIV with symptoms of TB	First diagnostic test
Children with symptoms of TB	First diagnostic test
Health care workers with symptoms of TB	First diagnostic test
All smear-negative presumptive TB cases who require further evaluation	Follow-up diagnostic test
Suspected extra-pulmonary TB cases	Follow-up diagnostic test
Symptomatic contacts of DR-TB cases	Evaluation for DR-TB
Failure of Regimen 1 treatment (i.e. treatment for Rifampicin-susceptible TB)	Evaluation for DR-TB
Failure to convert (smear positive to smear negative) after repeat AFB microscopy follow-up examination at the end of the 3rd month of Regimen 1 treatment	Evaluation for DR-TB
All patients who have been previously treated for TB (Treatment after failure, Treatment after loss to follow-up and Other previously treated patients)	Evaluation for DR-TB

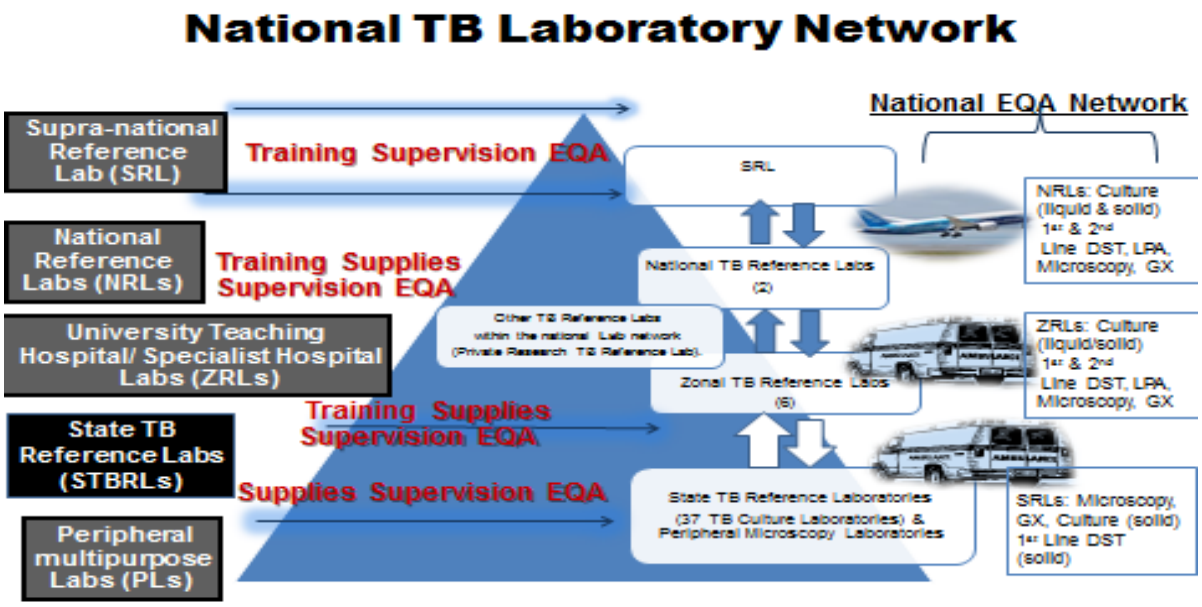
Higher level diagnostic services, including solid and liquid culture, identification, line probe assay (LPA), *GeneXpert*, drug susceptibility testing (DST) for first and second-line anti-TB drugs and External Quality Assessment (EQA) services are available at the state, zonal and national levels, as described in the next section.

TB Laboratory Network

Prompt diagnosis of both drug-susceptible and drug-resistant TB cases is the first step to achieve TB control. A strong and efficient laboratory network, providing diagnosis according to the established diagnostic algorithm and under quality assured procedures is the key component for this task. The role of laboratories at different levels includes services for the management of individual patients (diagnosis of TB and DR-TB, treatment follow up, DST for regimen) and programmatic activities (TB prevalence surveillance, monitoring trends of drug resistance). The laboratory network is coordinated at the central level by the laboratory team of the NTBLCP.

The laboratory network is divided into four levels, with a pyramidal setup: two national reference laboratories (NRLs), six Zonal Reference Laboratories (ZRLs), a state level laboratory in each state and peripheral facilities (see Figure 4). This classification is based on administrative division, geographic location, population coverage and type of activities implemented at various levels.

Figure 4: The Nigeria laboratory network structure.



At the top of the pyramidal structure are the two NRLs, located at the National TB and Leprosy Training Centre (NTBLTC), Zaria and the Nigerian Institute of Medical Research (NIMR) in Lagos, in the northern and southern parts of the country, respectively. The Zaria NRL is structurally located within the NTBLCP and as such reports directly to the NTBLCP central unit. NIMR, however, is a parastatal within the Federal Ministry of Health that does not report directly to the NTBLCP.

The activities implemented at the NRLs include microscopy (LED and/or light), culture (solid and liquid), identification of *MTB complex* by immunochromatographic methods and the most common species of non-tuberculous *Mycobacteria* (NTMs) by LPA; molecular methods for detection of drug resistance (LPA and *GeneXpert*); and DST according to the WHO guidelines for first-line anti-TB drugs (FLDs) and second-line anti-TB drugs (SLDs). FLDs tested include isoniazid, rifampicin and ethambutol (streptomycin was discontinued early 2014). SLDs tested include capreomycin, kanamycin, amikacin, aminoglycosides, levofloxacin, ofloxacin, ethionamide and cycloserine, with plans to add moxifloxacin and pyrazinamide). Trainings, panel testing, supervision of ZRLs, preparation of media and research activities are also regularly performed. The NRLs are affiliated with the supranational reference laboratory (SRL) in Milan, Italy. The SRL provides support in programmatic and technical aspects related to laboratory network implementation, in particular to support DR-TB diagnostics activities and EQA. Both NRLs have successfully performed EQA and DST for first-line drugs (2012-2013) and one of them is under validation for second-line DST by the SRL as of June 2014.

As at early 2014, the NRLs have commenced accreditation process according to the WHO African Region Stepwise Laboratory Improvement Process Towards Accreditation. Other

laboratories, University College Hospital (UCH) Ibadan, Dr. Lawrence Henshaw Hospital (DLHMH), Calabar and Zankli Medical Centre (a privately owned laboratory in Abuja) are at different stages of accreditation, but they all plan to achieve accreditation within the period of this NSP.

The next level is the ZRLs, strategically located in the six geo-political zones of Nigeria. These laboratories are sited within university teaching hospitals and are meant to carry out the following activities: culture (solid and nitrate reductase activity-NRA-method) and identification; DST for first-line TB drugs on solid media; TB molecular methods (LPA and *GeneXpert*); TB microscopy (LED and/or ZN), trainings, supervision of state reference laboratories, panel proficiency testing, preparation of reagents for smear microscopy and research activities. These laboratories are in varying stages of completion and functionality. As of 2014, two of them are able to perform all the mentioned activities, one is under validation, another, fully equipped and ready to start the validation process. The remaining two will be fully functional by the end of 2016. The population coverage per ZRL is approximately 29 million persons.

State laboratories (the third level) perform AFB smear microscopy and EQA for AFB with the exception of one state laboratory, DLHMH, Calabar which is also equipped to perform culture, DST for first-line TB drugs and molecular assays (LPA and *GeneXpert*). There is a plan to gradually upgrade the diagnostic services provided by all of the state labs to include culture, DST and molecular tests. According to this plan, a second laboratory located in FCT will be providing the services by 2015 and the number will increase to nine by 2020. The population coverage per laboratory at full implementation, with one laboratory per state, would be approximately 3,000,000 persons (still insufficient to cover the needs of the country for these diagnostic services).

Peripheral laboratories are at the base of the pyramidal structure and are located within primary health centres, general hospitals, specialist hospitals and local government health clinics. Activities implemented at this level include sputum collection, sputum smear microscopy with conventional or LED fluorescent microscopes, recording/reporting of smear results, TB molecular diagnosis (*GeneXpert* in a few facilities only) and slide storage for EQA. Personnel requirements are for 1-2 lab staff for a workload of $\leq$ 25 smears per day.

Zankli Medical Centre contributes to the diagnosis of tuberculosis, providing microscopy, culture and DST services and supporting research projects. It is integrated in the laboratory network through a memorandum of understanding with the NTBLCP.

Treatment

As at 2014, there are 5,389 DOTS centres providing TB treatment services in Nigeria. All LGAs have at least one DOTS treatment facility. The target of the NTBLCP in the NSP-TB 2015 - 2020 is to achieve a DOTS centre to population ratio of 1:25,000. This would amount to a total of 8,731 DOTS centres in the country by 2020. The number of DOTS treatment facilities has steadily increased since 2009 and the Programme is on track to reach its previous 2015 target of 5,805 DOTS centres.

The standard TB treatment regimen was recently changed from eight months to six months using fixed-dose combination drugs procured through the Global Drug Facility in patient-wise boxes. The Programme provides out-patient treatment using a combination of health facility staff, family members and community volunteers to support directly observed treatment.

Community TB care (CTBC) is being implemented in Nigeria, but does not cover all of the country at this point and relies heavily on the engagement of technical partners to manage community-based organizations and volunteers involved in CTBC. Linkages between CBOs and the local health system remain relatively weak.

TB/HIV services

The NTBLCP, NACA and NASCP coordinate the provision of joint TB/HIV services through the National TB/HIV Working Group. National policy supports universal HIV counselling and testing for all individuals suspected of or diagnosed with TB, provision of CPT and ART to HIV-positive TB patients, regular screening for TB among PLHIV and provision of IPT to PLHIV without active TB.

According to government policy, TB/HIV services provided at DOTS centres are aimed at reducing the burden of HIV among TB patients. These include HIV counselling and testing for all presumptive and diagnosed TB cases as well as linking or providing CPT and ART for HIV-positive TB patients. At HIV service delivery centres, the services are aimed at reducing the burden of TB among PLHIV. These include screening all PLHIV for TB, provision of TB diagnosis and treatment for co-infected patients, IPT for PLHIV without active TB and infection control measures are also put in place to reduce the transmission of TB to PLHIVs at service delivery points.

As at 2013, there were 802 facilities providing ART services[15], 85% of these were co-located at facilities offering TB services. The ratio of DOTS services to ART services is 7:1, limiting access of HIV- positive TB patients to ART services. The existing 5,389 DOTS centres provide opportunity for rapid decentralisation of ART services across the country.

Procurement and supply management

Most Anti-TB drugs and other commodities are currently procured from the Global Drug Facility, through grants and funding from the Global Fund, United States Agency for International Development (USAID) and Government of Nigeria (GON). The procurement process is coordinated by the NTBLCP in partnership with the Global Fund Principal Recipients and other partners. The NTBLCP oversees quarterly distribution to the zones, from where they are further distributed to the states and facilities based on reported case load and consumption data. A third party logistics system is used to transport the commodities.

The NTBLCP had recognized the weaknesses in the procurement and supply management (PSM) system and has taken steps to strengthen management of commodities, particularly at the state and facility levels. It has built a sophisticated access database called "PICKnPACK"

[15] National validated HIV service data, 2013

to improve pipeline visibility and drug management at lower levels. An excel-based tool and the e-TB manager is used for tracking the utilization of 2nd line anti-TB medicine.

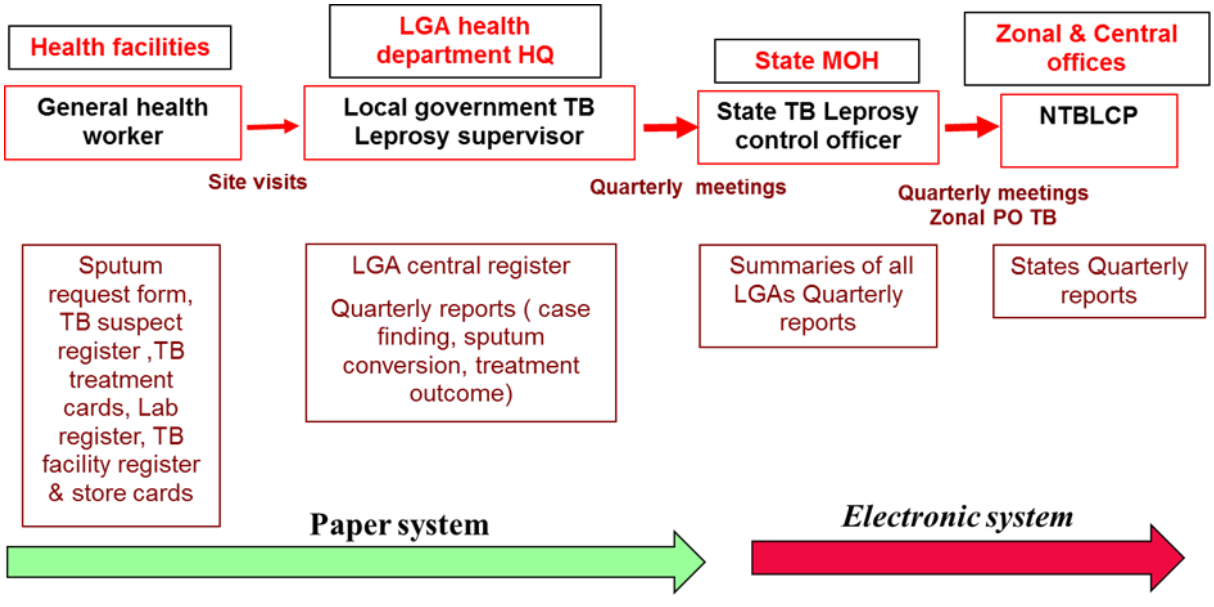
Though stock outs have been greatly minimized, poor recording and reporting and therefore management for drugs and related commodities have however been observed. This may not be linked to the fact that most GHCWs are yet to be trained on use of basic logistics management information system tools. The storage system at lower levels for some facilities, need to be upgraded to meet minimum standards of storage. The logistics system for the management of *GeneXpert* cartridges is not well coordinated because of parallel systems of procurement and supply management however the NTBLCP has begun to harmonise the processes and a web-based tool known as the Gxalert system is used to monitor and manage the use of cartridges.

DR-TB patients in the community are not sufficiently monitored for adverse drug reactions (ADRs). The Programme in collaboration with the National Agency for Food and Drugs Administration and Control (NAFDAC), is currently building the capacity of GHCWs to be able to report any suspected ADRs. At the moment, the country has no quality assurance Policy but this is being developed by the National Products Supply Chain Management Programme (NPSCMP). Quality assurance testing is not done in-country because there is no laboratory certified for this purpose yet.

Information management system

Currently the NTBLCP information management system is built on both a paper-based and an electronic recording and reporting system that uses the WHO-recommended recording and reporting formats. The system permits timely flow of information from the basic management unit of the Programme to the central unit of the NTBLCP as described in Figure 5.

Figure 5: Current transmission path of TB data in Nigeria.



Standardized paper-based recording tools are used to capture information directly from patients and are maintained and protected at the facilities. The LGTBLS during site visits, transfers patient level information from the primary tools into the LGA central register using a unique identification number for each patient. At the end of every quarter, the LGTBLS uses standardized quarterly summary forms to aggregate and collate each data set in line with the NTBLCP indicator reference booklet. These quarterly reports are made available to the state M&E officer after verification and validation by the State TBL team members during the state quarterly review meetings.

Similarly, the state team through its M&E officer collates all the submitted LGA reports into a single state data using an automated excel-based quarterly summary reporting format. These state summarized data are equally transferred to the NTBLCP zonal officers and the zonal WHO National Professional Officers (NPOs) during the quarterly zonal review meetings. At the CU of the NTBLCP, all state data are entered into an automated standardized excel-based quarterly summary form (which is identical to that used at the state level). All collated data are verified and feedbacks provided to the states as appropriate. Data quality checks through quarterly on-site data validation (OSDV) and bi-annual data quality assessment (DQA) are put in place to improve data quality at all levels.

As part of the efforts to improve current information flow and analysis, the NTBLCP and stakeholders have concluded plans to migrate fully to an electronic reporting system from the LGA level upwards. This plan is based on the progress made so far on the use of the e-tb manager (a web based electronic system currently used to capture patient level data for the management of DR-TB) and the Gxalert systems. With the proposed system, it is expected that all patient information captured on the paper-based reporting tools will be transferred by LGTBLS into the e-tb manager which allows for real time patient management and availability of patient data for Programme use. A national plan has been developed to ensure that this transition is achieved within the first two years of implementation of the NSP. The newly instituted information system will be augmented with the already existing data quality management system which is built into the routine Programme supervision and quarterly meetings at all levels where feedback is provided on identified data challenges.

The entire TB surveillance system is also expected to key into the current District Health Information System 2 (DHIS 2) national instance to ensure the timely availability of a harmonized data for the country.

DR-TB diagnosis and treatment

Diagnosis of DR-TB patients (defined here as rifampicin-resistant and multidrug-resistant TB) is currently based on examination of presumptive DR-TB cases using *GeneXpert MTB-Rif (GeneXpert)* or LPA. The categories of patients currently recommended for drug resistance testing (presumptive DR-TB cases) include patients who; fail Regimen 1 treatment (i.e. treatment for Rifampicin-susceptible TB), remain sputum smear positive after repeat AFB microscopy follow-up examination at the end of the 3rd month of Regimen 1 treatment, have been previously treated for TB (Treatment after failure, Treatment after loss to follow-up and Other previously treated) and symptomatic contacts of DR-TB cases (table 8).

Sputum specimens from presumptive DR-TB cases are collected from DOTS centres and transported to a *GeneXpert* sites for examination. Currently, all 36 states and the FCT have at least one *GeneXpert* machine for diagnosis of TB and/or resistance to rifampicin. Logistics for transporting of specimens from the DOTS centres to the *GeneXpert* sites is the responsibility of the LGTBLS.

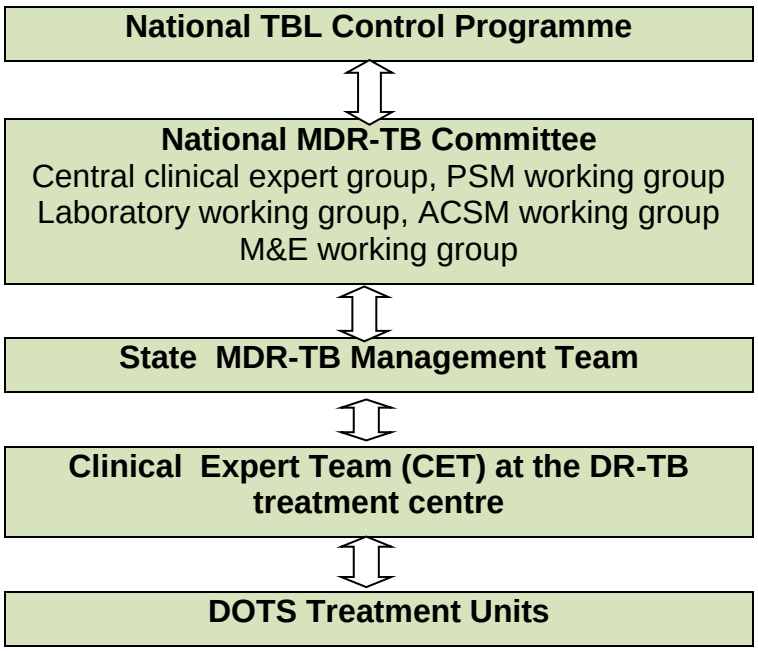
Following a positive result for drug resistance by *GeneXpert* or LPA, a sputum specimen is collected for confirmatory TB culture and DST for first line anti-TB drugs prior to commencing the patient on treatment. Currently, culture and DST for first line anti-TB drugs are performed at the two NRLs and four other reference laboratories (UCH, Ibadan; Aminu Kano Teaching Hospital, Kano; DLHMH, Calabar and Zankli Medical Centre, Abuja). In addition, NRLs provide DST for second-line anti-TB drugs by both solid and liquid methods.

Patients with RR-TB by *GeneXpert* are started on a standardised category IV regimen. The regimen consists of an intensive phase of at least eight months with five drugs followed by a continuation phase of 12 months with four drugs. Treatment includes kanamycin (or amikacin) as the injectable, levofloxacin, prothionamide, cycloserine and pyrazinamide during the intensive phase, followed by levofloxacin, prothionamide, cycloserine and pyrazinamide during the continuation phase.

Patients are monitored clinically and bacteriologically while on treatment. Bacteriological monitoring includes monthly sputum smear examination throughout the duration of treatment and monthly culture examination during intensive phase and every three months during the continuation phase. Sputum samples for follow up culture examination are transported from the central state collection points to the reference laboratories by courier, except for states that have reference laboratories, where specimens are transported by the LGTBLS.

The PMDT management structure is presented in figure 6. It includes groups with specific

Figure 6: PMDT management structures.



responsibilities for guiding clinical and programmatic management of patients, ensuring that there is sufficient stock of second-line anti TB drugs, ancillary drugs and supplies, providing supervision, managing patients on an in-patient or ambulatory basis, providing treatment support and tracking of treatment defaulters.

According to the directive of the National Council on Health, each state should have a DR-TB treatment centre. As of June 2014, there were a total of 302 treatment beds for DR-TB patients located in 12 hospitals (see Table 9). National policy for treatment of DR-TB currently includes hospitalisation for the full eight months of the intensive phase of treatment, but scale-up plans include a gradual decrease in hospitalisation to three months or less. The requirement for hospitalisation has led to a bottleneck in treatment initiation as more patients are being diagnosed than beds are available for treatment. While the backlog at present is relatively small, it is expected to grow as more *GeneXpert* machines come online and a wider group of patients at risk of DR-TB is tested.

Table 9: DR-TB treatment centres as at time of completion of NSP TB.

S/N	**Treatment Centre**	***State***
1	University College Hospital , Ibadan	Oyo
2	Chest Hospital Jericho Ibadan	Oyo
3	Lagos Mainland Hospital Yaba	Lagos
4	National TB and Leprosy Training Centre, Zaria DR-TB ward	Kaduna
5	Infectious Disease Hospital, Kano	Kano
6	University of Uyo Teaching Hospital	Akwa Ibom
7	Dr. Lawrence Henshaw Hospital Calabar	Cross River
8	University of Port Harcourt Teaching Hospital	Rivers
9	Jos University Teaching Hospital	Jos
10	Sacred Heart Hospital, Abeokuta.	Ogun
11	Federal Medical Centre, Owerri	Imo
12	Abubakar Tafawa Balewa University Teaching Hospital, Bauchi	Bauchi

In addition to institutionalised treatment of DR-TB cases, there is a policy for ambulatory treatment of DR-TB cases. In line with this, State DR-TB teams have been established in all 36 states and FCT. The capacity of 21 State DR-TB teams is being developed to manage ambulatory DR-TB cases. National Guidelines for Programmatic Management of DR-TB and Community TB and DR-TB Care have been developed.

Currently, the recording and reporting of data related to DR-TB is captured both in a paper-based and an electronic-based system. The electronic tool, e-TB manager, is a web-based tool that incorporates all aspects of programmatic management of drug-resistant TB (case notification & management, medicine supply & stock control as well as data management) and offers real time access to data and data analysis. It has a summary page accessible to partners and the general public for regular update of analysed data. Incomplete data upload has limited its full utilisation, though efforts are being made to improve data upload by users with about 90% completeness in data upload as at last review. Given NTBLCP experience with the tool, it is proposed to be used for other aspects of TB programming including drug-

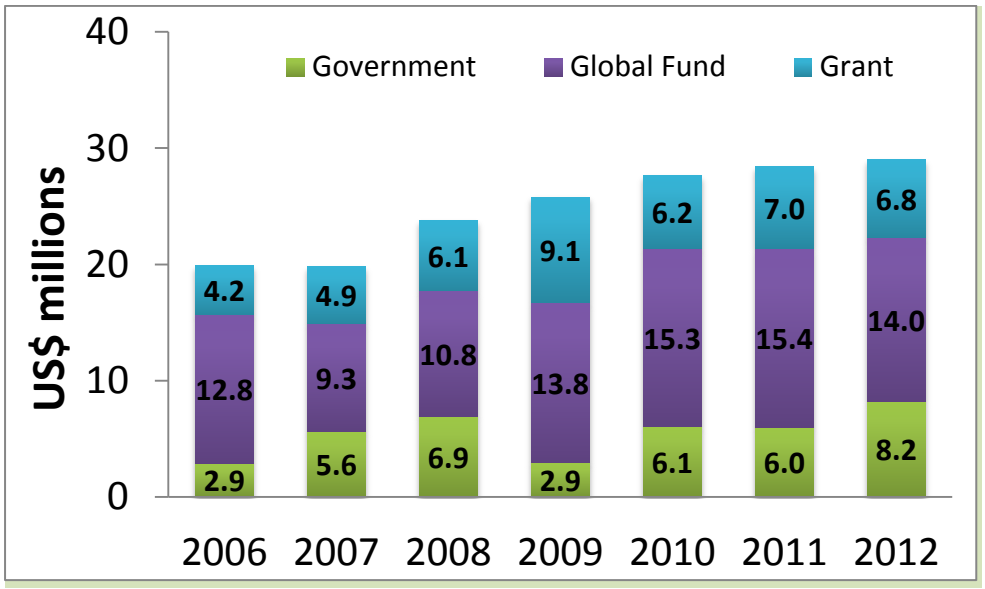
susceptible TB that will be integrated with other national reporting software such as the GxAlert and DHIS2. Details are provided in the section on M&E plan.

3.2.3 Financing and key partners

Financing of the TB programme in Nigeria is heavily dependent on external donors. Major donors include the Global Fund to Fight AIDS, Tuberculosis and Malaria and the United States Agency for International Development (USAID), which together contribute the majority of the overall funding available for TB control in Nigeria, as shown in Figure 7.

The Federal Government of Nigeria is committed to TB control, as evidenced by the creation of the NTBLCP under the department of Public Health of the Federal Ministry of Health, with state-level teams in each of the 36 states and the FCT. At the federal level, domestic funds are allocated each year for TB control and have increased since 2009. However, these represented only 28% of the available funds to the NTBLCP in 2012 and a fraction of the budget needed for full implementation of the NSP. Figure 7 shows the actual allocations and sources of funding for TB control activities.

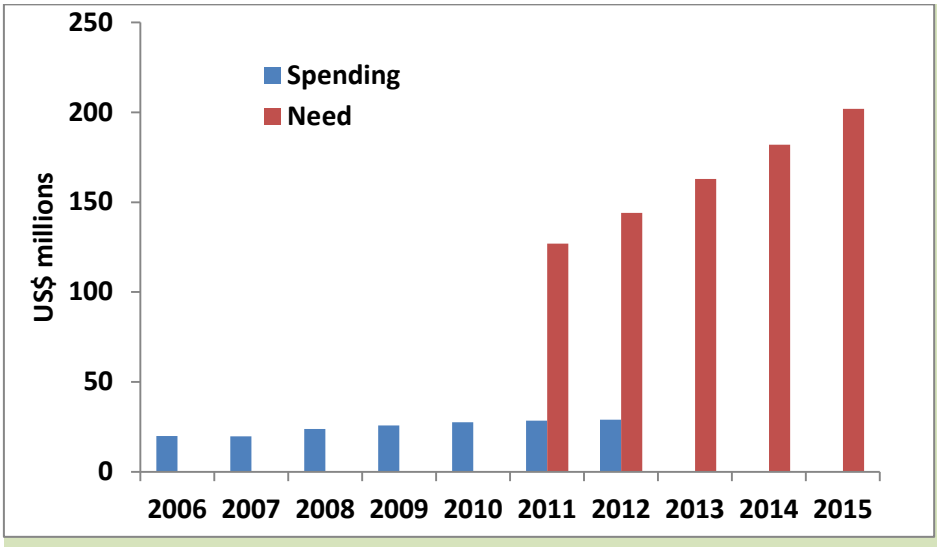
Figure 7: Annual allocated funds for NTBLCP, 2006 – 2012.



(Source: WHO)

Figure 8 illustrates the significant gap between funds available for TB control and the funding needed to implement all TB control activities and achieve programme targets (based on the budget of the NSP-TB 2010-2015). For instance, in 2012, the total available budget for TB and leprosy activities was approximately US$29 million, whereas the budget need was estimated at US$144 million. In other words, 80% of the programme activities were not funded that year. Without significant increases in domestic support for TB control, the ambitious targets set in this NSP will not be met.

Figure 8: Spending versus projected need for TB and leprosy activities, 2006 – 2015.



(Source: WHO)

The NTBLCP is currently implementing a Global Fund grant that ends in 2015. The Principal Recipients under that grant are the Association for Reproductive and Family Health (ARFH) and the Institute for Human Virology Nigeria (IHVN). The NTBLCP is a sub-recipient to these in-country non-governmental partners for implementation of TB programme activities.

The NTBLCP has a number of both local and international technical partners supporting TB control efforts. USAID provides funding for technical assistance through the TB CARE I consortium and a number of other partners. Key NTBLCP partners, their main roles and areas of coverage are listed in Table 10 below.

Table 10: Key NTBLCP partners for TB control.

Partner	Category	Technical area(s) of support	Geographic areas of support
FMOH, SMOH, LGA	Government	Staffing of health facilities, health infrastructure etc	Nationwide
NACA	Government	TB/HIV service integration	Nationwide
NASCP	Government	TB/HIV service integration	Nationwide
NPHCDA	Government	Primary Health Care	Nationwide
GFATM	Donor	TB care and prevention (diagnosis and treatment), TB/HIV, DR-TB, PSM, Health workforce, CSS, Health Information System	Nationwide
USAID	Donor	TB care and prevention (diagnosis and treatment), TB/HIV, PMDT, PSM, Health workforce, CSS, ACSM, Health Information System	Nationwide
US CDC	Donor	TB/HIV, Reference laboratory strengthening M&E, TA for prevalence survey and DRS	Nationwide
Agbami Partners	Donor (Private sector)	Chest clinics, *GeneXpert* machines and catridges	Nationwide
ARFH	GFPR	TB care and prevention (Diagnosis and treatment)	Nationwide
IHVN	GFPR	DR-TB (Diagnosis and treatment)	Nationwide
TB CARE I (KNCV, WHO, MSH, FHI_{360})	TA/IP	TB care and prevention (diagnosis and treatment), TB/HIV, DR-TB, PSM, Health workforce, CSS, Health Information System, *GeneXpert* scale-up	Nationwide
Abt Associates	TA/IP	Supportive supervision	Nationwide

(HFG)		Health information system	
CCRN	TA/IP	TB/HIV	National and some states
CIHP	TA/IP	TB/HIV	National and some states
PATH	TA/IP	ACSM and CSS (short-term to June 2014)	NTBLCP, CSOs
JSI/Deliver	TA/IP	PSM strengthening	National level
CHAI	TA/IP	PSM strengthening	National level
GLRA	TA/IP	TB care and prevention (diagnosis and treatment) and Leprosy control	14 states
Damien Foundation Belgium	TA/IP	TB care and prevention (diagnosis and treatment) and Leprosy control	3 states
The Leprosy Mission Nigeria	TA/IP	TB care and prevention (diagnosis and treatment) and Leprosy control	7 states
Netherlands Leprosy Relief	TA/IP	TB care and prevention (diagnosis and treatment) and Leprosy control	13 states
TB Network	CSO/IP	ACSM, CSS	Nationwide
ACT! Nigeria	CSO/IP	ACSM, CSS	Nationwide

GFPR=Global Fund Principal Recipient; TA=technical assistance; IP=implementing partner; CSO=civil society organisation

3.3 Private and Non-NTBLCP sectors

The private and public non-NTBLCP sectors are playing an increasingly important role in TB control. Private sector engagement is extremely important in Nigeria, as an estimated 60% of all health care is delivered by the private sector. The NTBLCP has stepped up its engagement through a public-public/public-private mix (PPM) approach. PPM activities are implemented in all 36 States and FCT.

By the end of 2011, approximately 685 non-NTBLCP facilities (including faith-based, private, public tertiary, military, paramilitary and corporate) were participating in PPM and providing a range of TB services (referral, diagnosis and/or treatment). They accounted for 24% of the cases (22,217 cases of TB) notified in 2012.

To date, efforts to engage community-based organizations (CBOs) in TB control have occurred primarily through Global Fund projects, specifically the current HIV grant, which includes a CSS component. The goal of the CSS Project is to increase the confidence of community members in Primary Health Care Centres and thus increase demand for services. This is done through awareness-raising with community leaders, faith-based leaders and individuals related to the availability of facilities in communities and services offered, especially HIV, TB and Malaria services.

With funding support from the Global Fund, the capacity of CBOs is being built through a network of AIDS, TB and malaria (ATM) organizations. This ATM approach includes identification and training of local CBOs and their largely volunteer membership in targeted areas, coordinated through lead or umbrella organizations (one for AIDS, one for TB and one for malaria) and supported by technical partners.

The Principal Recipient charged with administering the CSS component of the grant is ARFH and the 3 Sub-Recipients are ACOMIN (Civil Society for Nutrition, Vaccination and Eradication of Malaria), Civil Society for HIV and AIDS in Nigeria (CiSHAN) and the Civil Society for the Eradication of Tuberculosis in Nigeria (TB Network). The three networks

jointly coordinate CSS activities nationwide. TB Network works in 11 states while CiSHAN and ACOMIN work in 13 states each.

In addition to the TB Network and its affiliates, a second network of TB-related CBOs has been formed under the Africa Coalition on Tuberculosis – Nigeria (ACT! Nigeria), registered in Nigeria in 2014. ACT! Nigeria is yet to receive funding for activities as an overall, coordinated group of organizations, although individual members continue to implement activities at community level. Some ACT! members are also members of the TB Network.

ACT! Nigeria and the TB Network have had challenges establishing a collaborative relationship with defined areas of responsibility. Through the NSP development process and the ongoing dialogue on collaboration across AIDS, TB and malaria, that relationship is improving.

The TB Network works in Anambra, Bayelsa, Benue, Borno, Kaduna, Kano, Osun, Oyo, Rivers, Plateau and Yobe. In each of the states, they work with 10 community-based organizations. Each of the 10 CBOs has a monthly target of 20 referrals for evaluation and follow-up at a health facility: 5 for HIV, 5 for malaria and 10 for TB. From June 2013- March 2014, the TB Network system referred 47,471 clients to PHCs in these 11 states, of these 12,998 clients were referred for TB evaluation. This is less than the target of 50 percent of referrals for TB. One of the major challenges according to Network representatives is lack of drugs and supplies or service interruptions at the referral facilities. Clients are turned away as a result of stock outs, industrial actions or related problems, prompting them to seek care at non-Global Fund facilities for uptake of services. In this case, they are not recorded as having been evaluated.

One success of the project has been community acceptance of the intervention as seen in Kano, where TB control is now part of the Islamic School Curriculum through the advocacy of one of the CBOs. Another is improved collaboration between the health facilities and the CBOs who do joint outreach. Regardless, outputs and outcomes have been difficult to measure and both CBOs and the NTBLCP have expressed frustration that the efforts have not yielded desired results.

3.4 Epidemiology

Nigeria is classified as a high TB-, HIV- and MDR-TB-burden country. The recent prevalence and drug resistance surveys have supplied hard data from which to estimate the magnitude of these challenges.

3.4.1 Burden of TB

Prevalence, incidence and mortality

The first-ever national TB prevalence survey was completed in Nigeria in October 2012, with analysis and results finalized in December 2013. Based on the result of the survey, WHO has updated estimates for TB prevalence, incidence and mortality rates for Nigeria as follows:

Table 11: TB Prevalence, Incidence and Mortality rates 2013.[16]

Indicators	Rate per 100,000 population	Absolute numbers*
Prevalence of all forms of TB in all ages	326 (248 – 418)	570,743
Incidence of all forms of TB in all ages	338 (194 – 506)	591,752
Incidence (HIV+TB only)	81 (47–124)	141,810
Mortality (excludes HIV+TB)	94 (39–156)	164,570
Mortality (HIV+TB only)	49 (27–78)	85,787

* Projected from 2006 National population census

This represents a doubling of the estimated overall prevalence and a tripling of the estimated incidence from 2012 WHO estimates. Assuming a population of 175,074,668 in 2013, the estimated number of incident cases of all forms of TB would be 591, 752. In 2013 however, Nigeria notified a total of 100, 401 cases of all forms of TB, revealing a major gap in case detection. Using these updated figures, Nigeria's case detection rate for all forms of TB currently stands at about 17 percent, one of the lowest case detection rates in the world.

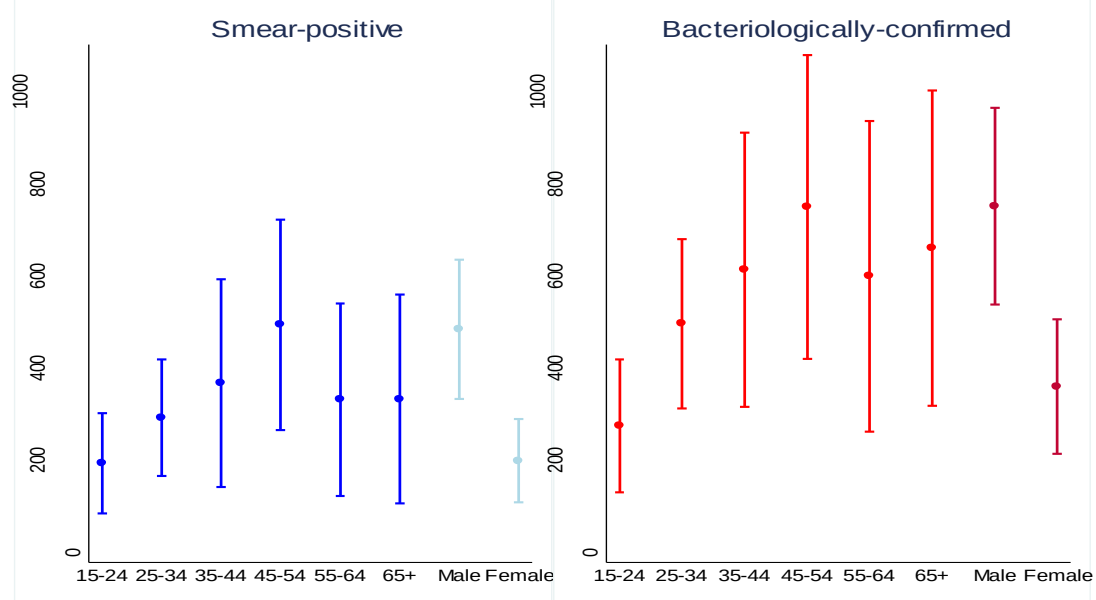
TB-related mortality is difficult to estimate at present because of the weakness of data in the recently implemented vital registration system. As that system is scaled up and strengthened, more accurate estimations may be possible. The WHO-estimated TB mortality (excluding HIV-related TB) rate for Nigeria stood at 94 per 100,000 in 2013. There are some limited data sets from which to draw inferences about excess mortality from TB. In one retrospective study of causes of morbidity and mortality among 183 patients with respiratory illnesses treated at a tertiary care facility in Nigeria between 2006 and 2008, TB was found to be the leading cause of morbidity (42.1%) and mortality (50%).[17] Mortality was higher in women and among 25-44 year olds, likely related to HIV and advanced disease.

As presented in Figures 9 and 10 below, the prevalence survey showed a wide variation in the distribution of disease. While TB heavily affects many sub-populations and geographic areas in Nigeria, there are certain groups where TB is particularly concentrated: in people between the ages of 35 and 54, in men, and in urban areas. These populations and geographic areas should receive special consideration in case-finding activities.

[16] 2014 Global TB Report

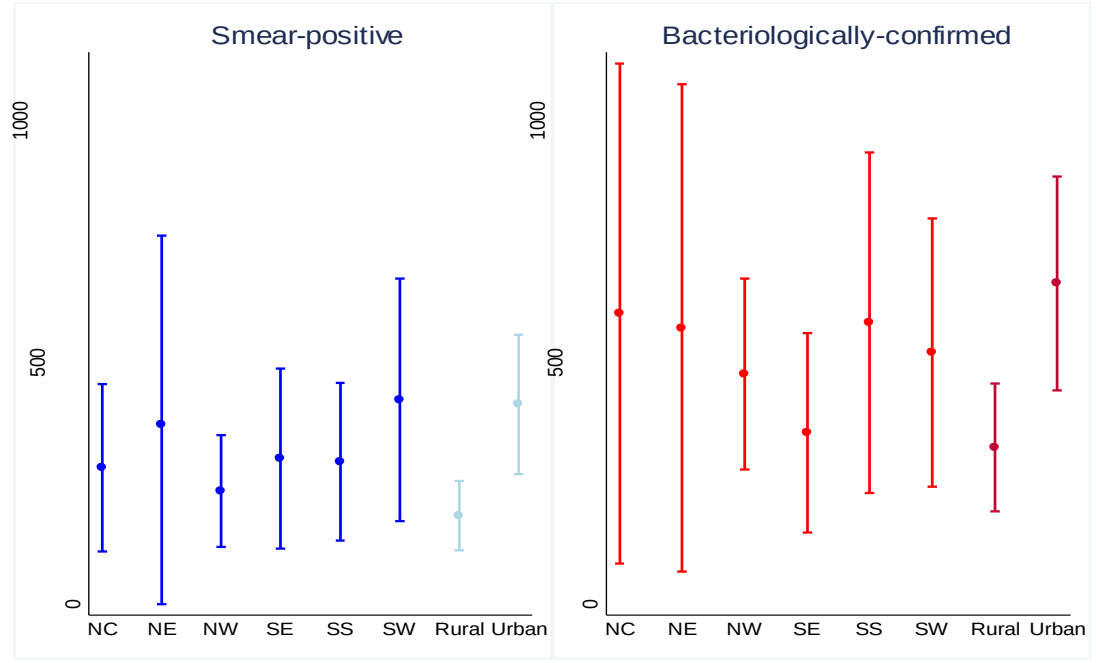
[17] Desalu O, Oluwafemi J, Ojo O. Respiratory diseases morbidity and mortality among adults attending a tertiary hospital in Nigeria. J. bras. pneumol. Aug 2009; 35(8): no page numbers provided. Accessed at: http://www.scielo.br/scielo.php?pid=S1806-37132009000800005&script=sci_arttext on June 30, 2014.

Figure 9: Age and sex-specific TB prevalence rates (smear-positive and bacteriologically confirmed) per 100,000.



(Data source: 1st National TB Prevalence Survey, Nigeria, 2013.)

Figure 10: Zonal and urban/rural-specific TB prevalence rates (smear-positive and bacteriologically confirmed) per 100,000.



NC=North Central; NE=North East; NW=North West; SE=South East; SS=South-South; SW=South West

(Data source: 1st National TB Prevalence Survey, Nigeria, 2013.)

While there is notable variation in the prevalence estimates between the zones, these data must be interpreted with caution, as the prevalence survey was not powered to provide any

estimates at sub-national level. At best, these data point to the need to investigate differences further to determine whether they represent true variations in burden, variations in programme performance and reporting or both.

TB in children

At present, children under the age of 15 years comprise approximately six percent of the TB cases notified in Nigeria every year. As the prevalence survey did not include children, there are few hard data on which to base assumptions about the burden of TB in this vulnerable population. Further studies will be needed to provide good estimates. However, given Nigeria's population structure, with almost 44 percent of Nigerians below the age of 15 and given the fact that the highest burden of TB occurs in adults in the childbearing ages, childhood exposure is likely to be high. Coupled with poor access to diagnostic services for children, particularly in a high TB burden country like Nigeria, it can be assumed that there is a significant burden of undetected paediatric TB.

Table 12: Paediatric TB case notifications, by case type and overall, 2011-2013.

Year	Paediatric				Adult
	S+	S-	EP	All forms (%[1])	All forms
2011	1,107	4,084	645	5,836 (6.3%)	93,050
2012	1,187	3,935	739	5,861 (6.0%)	97,587
2013	1,047	3,908	821	5776 (5.8%)	100,401
[1]Percentage over adult notifications all forms; S+=Smear-positive; S-=Smear-negative; EP=Extra-pulmonary					

Data source: WHO TB database

3.4.2 Burden of DR-TB

The first national drug resistance survey (DRS) was concluded in Nigeria in October 2010. The result shows a proportion of 2.9% among new TB cases and 14.3% among re-treatment cases with a crude rate of 4.8% among all cases (Table 13).

Table 13: First-line drug mono-resistance and MDR-TB observed in the drug resistance survey, 2012.

Drug	All cases	New cases	Retreatment cases
Rifampicin only	3.1%	1.4%	10.6%
Isoniazid only	4.8%	4.3%	5.7%
Ethambutol only	20.0%	4.9%	23.1%
Pyrazinamide only	9.1%	3.7%	20.5%
Streptomycin only	30.6%	25.6%	41.0%
INH + RIF (MDR-TB)	**4.8%**	**2.9%**	**14.3%**

Table 14: Proportion of DRS participants with any resistance to Isoniazid or Rifampicin.

Drug	All cases	New cases	Retreatment cases
Rifampicin	7.9%	4.4%	24.9%
Isoniazid	9.6%	7.2%	20.0%

3.4.3 Burden of HIV and TB/HIV

There were an estimated 3.46 million people living with HIV in Nigeria in 2013.[18] While prevalence rates among adults between the ages of 15 and 49 has decreased in the past five years, the absolute number of new infections continues to rise as a result of rapid population growth that is outstripping the ability to provide prevention and care services, as shown in table 15. In 2012, an estimated 50,000 (95% C.I. 23,000-86,000) people were co-infected with HIV and TB disease.

Table 15: Estimated HIV burden in Nigeria, 2008 and 2012.[19]

Indicator	2008	2012
Median national HIV prevalence	4.6%	4.1%
Estimated number of people living with HIV	2,980,000	3,459,363
Estimated annual new infections	336,379	388,864
Estimated number requiring ART	857,455	1,449,166
Annual AIDS-related deaths	192,000	217,148
Estimated total number of AIDS orphans	2,175,760	2,193,745

2012 NARHS data shows that HIV prevalence is not evenly distributed in the country (see figure 11). The HIV epidemic is concentrated in North-Central and South-South zones of the country, with at least one high-burden state (with prevalence above the national average) in all other regions.

Figure 11: Nigeria HIV prevalence map (NARHS, 2012)

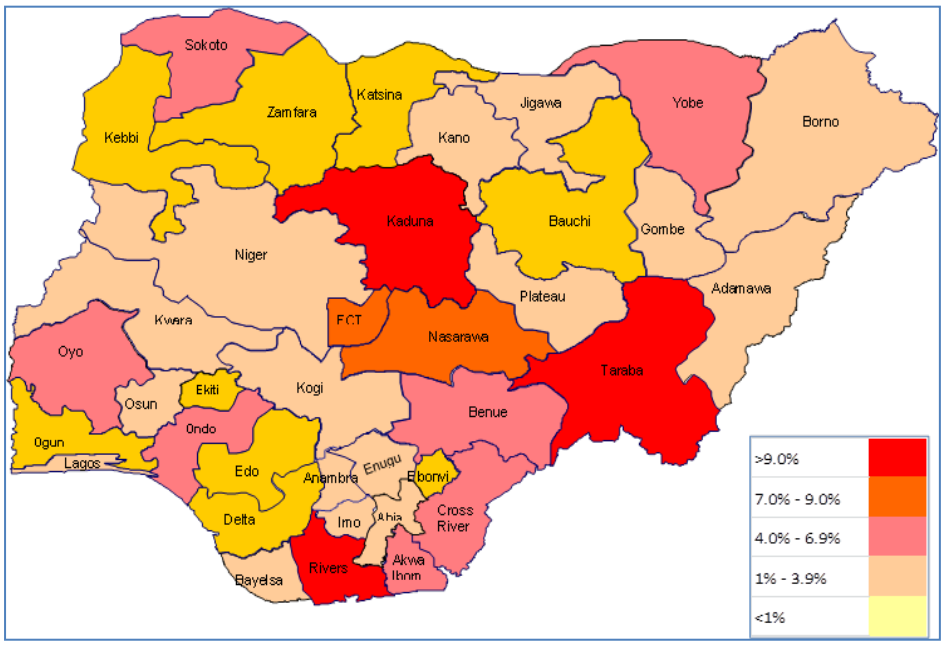


Table 16 provides a breakdown of observed HIV prevalence by state and gender among respondents in the HIV/AIDS and Reproductive Health Survey-Plus conducted in 2012**,** with some significant differences in prevalence not only across states, but also between males and

[18]UNAIDS
[19]Nigeria 2014 HIV Spectrum file

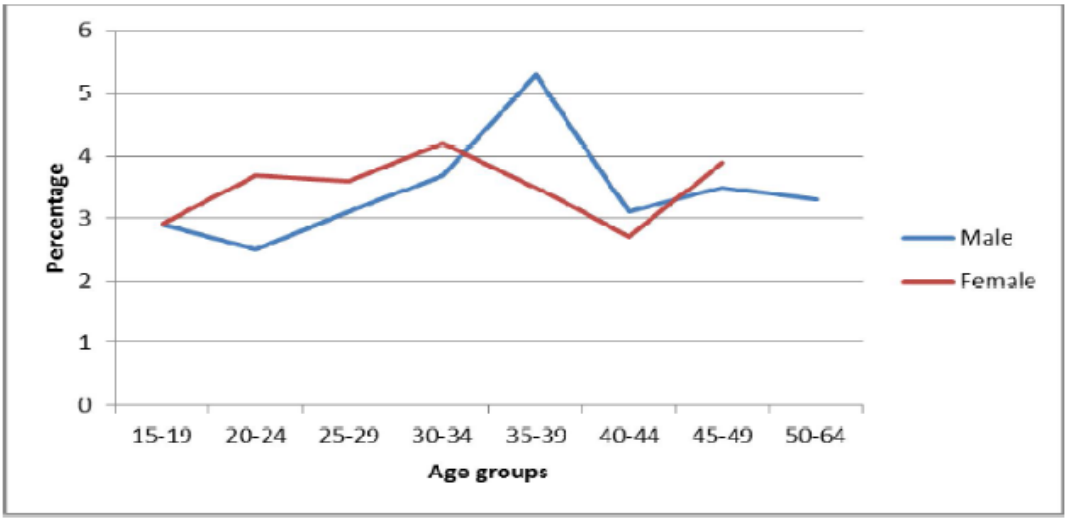
females within the same state. These differences may reflect differences in access to prevention services, gender power relations and ability to negotiate sexual relationships and other risk factors related to gender.

Table 16: Prevalence of HIV by State and Sex of Respondents (NARHS Plus II, 2012)

State	Male	% Positive	Female	% Positive	All tested	% Positive
Abia	230	2.3	281	4.2	511	3.3
Adamawa	439	2.2	412	1.7	851	1.9
AkwaIbom	465	6.3	444	6.8	909	6.5
Anambra	313	0.6	383	1.8	696	1.2
Bauchi	307	0.6	300	0.6	607	0.6
Bayelsa	303	0.7	390	4.3	693	2.7
Benue	381	5.8	373	5.4	754	5.6
Borno	289	2.5	218	2.1	507	2.4
Crossriver	390	4.8	368	3.7	758	4.4
Delta	342	0.5	412	0.7	754	0.7
Ebonyi	277	0.6	319	1.1	596	0.9
Edo	336	0.6	344	0.9	680	0.8
Ekiti	421	0.4	392	0	813	0.2
Enugu	325	1	381	1.6	706	1.3
Gombe	353	2.6	340	4.3	693	3.4
Imo	407	1.2	399	3.8	806	2.5
Jigawa	293	2.8	321	1.6	614	2.1
Kaduna	387	10.1	306	8.1	693	9.2
Kano	247	1.6	289	1.1	536	1.3
Katsina	151	0.5	186	0.4	337	0.7
Kebbi	388	0.7	329	0.9	717	0.8
Kogi	377	0.9	367	1.9	744	1.4
Kwara	368	0.9	317	2.1	685	1.4
Lagos	252	1.5	297	2.7	549	2.2
Nasarawa	380	5.6	350	10.7	730	8.1
Niger	255	2	253	0.4	508	1.2
Ogun	374	0.5	405	0.7	779	0.6
Ondo	181	5.1	232	4	413	4.3
Osun	410	2.4	391	2.8	801	2.6
Oyo	372	5.6	354	5.6	726	5.6
Plateau	306	0.8	404	3.2	710	2.3
Rivers	228	15	202	15.4	430	15.2
Sokoto	215	5	136	8.7	351	6.4
Taraba	417	11.4	434	9.6	851	10.5
Yobe	195	4.3	170	7.1	365	5.3
Zamfara	400	0	356	0.8	756	0.4
FCT	262	6.2	224	9	486	7.5
Total	**12,036**	**3**	**12,079**	**4**	**24,115**	**3**

The differences in HIV prevalence between genders and age groups are also illustrated in Figure 12. Men between the ages of 35 and 39 have the highest HIV prevalence. Most at risk populations (MARPs) in Nigeria include female sex workers and men who have sex with men Injecting drug users, transport workers, police and armed forces are also considered MARPs. Further characterisation of these groups is needed to determine prevalence.

Figure 12: HIV prevalence by gender and age group, NARHS 2012.



The high national HIV prevalence also helps drive the TB burden. According to work by WHO, the population attributable fraction of HIV to TB in Nigeria is estimated at 25.6%.[20] This is borne out by the available in-country data. The North Central zone, with the highest HIV prevalence in the country, also has the highest TB case notification rate per 100,000 population (2013 NTBLCP report). The contribution of the HIV programme to TB case notification is expected to increase in the coming years as the country widens access of PLHIV to rapid TB diagnostic tools, with strategic focus on areas with high HIV burden.

The proportion of TB patients tested for HIV rapidly increased from 10% in 2006 to 88% in 2013, with a current co-infection rate of 22%. The co-infection rates for the North Central zone and the South-South zone stood at 32.3% and 28.3% respectively in 2013, the highest rates in the country. However, it should be noted that while HIV is the single largest risk factor for TB in Nigeria, more than 75% of people with TB are not infected with HIV. Strategies to find these cases will have to rely on other means of outreach and identification.

The contribution of TB to HIV-related mortality is unknown, but likely significant in Nigeria. In one study of maternal mortality among HIV-positive women in Benin City, Edo State, 6.2% of maternal mortality was attributable to TB, second only to pregnancy-related sepsis as a cause of death.[21]

[20]Lönnroth K, Castro KG, Chakaya JM, Chauhan LS, Floyd K, Glaziou P, et al. Tuberculosis control and elimination 2010-50: cure, care and social development. Lancet. 2010;375(9728):1814–29

[21]Onakewhor JU, Olagbuji BN, Ande AB, Ezeanochie MC, Olokor OE and Okonofua FE. HIV-AIDS related maternal mortality in Benin City, Nigeria. *Ghana Medical Journal*.Jun 2011; 45(2): 54–59.

3.4.4 Key affected populations in Nigeria

A number of different sub-populations have been identified as key affected populations in Nigeria, based on a combination of modelling, globally recognized risk factors for TB, prevalence survey data, programme data and project data. This NSP-TB prioritises active case-finding and expansion of service accessibility to the following known or suspected key affected populations in Nigeria, where the benefits from intensified case-finding and case-holding activities are expected to be highest. A total figure for KAPs is not provided, as some of these populations overlap.

Table 17: Key TB-affected populations and population size estimates, 2014.

Sub-population	Size estimate in 2014
PLHIV	3,459,363
Contacts to bacteriologically positive pulmonary TB	203,112*
Urban slum dwellers[22],[23]	50,000,000
Nomads	9,400,000
Migrants and internally displaced people (IDPs)[24],[25]	Unknown (migrants); >500,000 (IDPs)
Prisoners	53,000
People with diabetes[26]	1,200,000
Children	79,500,000
Health care workers, especially those in in-patient facilities, HIV and TB clinics and laboratories	400,000 (including private facilities)

*Assumes average of 4 contacts per adult bacteriologically positive TB case. (Adult TB patients represent about 93% of all TB cases and bacteriologically positive TB cases constitute approximately 52% of all TB cases.)

Evidence to support selection of KAPs

A recent study of the population attributable fraction (PAF) of different risk factors for TB has quantified the relative contributions of well-known determinants of TB on TB disease burden in Nigeria (Table 18). This informs the difficult process of prioritizing public health actions to decrease TB burden. In the case of Nigeria, the top four PAFs of TB determinants were HIV, alcohol abuse, indoor air pollution and under-nutrition. Several of these PAFs, notably alcohol misuse, indoor air pollution and under-nutrition, overlap with other identified risk groups in Nigeria, particularly those in the lower two income quintiles and urban slum dwellers. Sub-population-specific data on TB are not available for all proposed key affected populations in Nigeria. Data for PLHIV were discussed in previous sections. Presented below are available data for urban slum dwellers, children and nomadic populations. Global data support the selection of diabetics as a key affected population, with a relative risk of 3.1

[22] Pepple, A.I,, Minister of Lands, Housing and Urban Development. *Nigeria: Progress on improving the lives of slum-dwellers over the decade 2000 – 2010.* Presentation at Making Slums History International Conference, Rabat, Morocco, November 2012. Accessed July 6, 2014 at: http://www.mhu.gov.ma/Documents/TOP%2020/Pr%C3%A9sentations%2026%20nov/08.County%20Presentation_Nigeria.pdf

[23] UN data website, Slum population as percentage of urban. Accessed July 6, 2014 at: http://data.un.org/Data.aspx?d=MDG&f=seriesRowID%3A710

[24] Mberu B and Pongou R. Nigeria: Multiple forms of mobility in Africa's demographic giant. Migration Policy Institute. June 30, 2010, Accessed July 6, 2014 at: http://www.migrationpolicy.org/article/nigeria-multiple-forms-mobility-africas-demographic-giant

[25] UNHCR

[26] International Diabetes Federation website. Accessed July 6, 2014 at: http://www.idf.org/webdata/docs/background_info_AFR.pdf

compared to the general population; and of close contacts to active TB cases, with a yield of approximately 4.5% among contacts investigated globally.[27]

Table 18: Prevalence & population attributable fractions (PAF) of selected TB risk factors, Nigeria[28]

Risk factor	Prevalence in total population	PAF total population
HIV	3.9%*	25.6%
Under-nutrition	9.0%	16.5%
Diabetes	3.5%*	4.0%
Alcohol misuse	26.1%*	21.7%
Smoking	7.0%	3.8%
Indoor Air Pollution	67.0%	21.1%

*Among those aged 15 years or above

Urban slum dwellers: According to national data, approximately 60% of the urban population in Nigeria lives in a slum, where several of the important TB risk factors noted in the table above are predominant, including indoor air pollution, alcohol misuse and under-nutrition. One TB REACH Wave 2 project in urban slums in FCT used community health extension workers to canvass households and collect two spot sputum specimens from people with symptoms for smear microscopy and *GeneXpert* testing if smear negative. This effort resulted in an additional 80-100 TB cases per quarter (approximately 20%-30% increase above baseline) from canvassing, as well as an increase in facility-based notifications as a result of the community sensitisation done during canvassing.[29]

Children: TB diagnosis in children is complicated by the inability of most young children to produce adequate sputum specimens and the general lack of access to services. Globally, children under the age of 15 are estimated to contribute approximately 11% of TB cases (all forms).[30] In Nigeria, with more than 40% of the population under the age of 15, the burden of TB in children is likely to represent more than 10% of total cases,[31] but as of 2013, children represented only 5.8% of cases notified.

Nomadic populations: Nomadic groups comprise approximately 9.4 million people in Nigeria. One TB REACH project has contributed TB data specific to nomadic populations. Nomads in Nigeria face a number of risk factors for TB, including limited access to health care because of their mobility, overcrowding and poor ventilation in tents, malnutrition, consumption of raw milk products in a setting of high bovine TB, poor BCG coverage and low levels of education and knowledge of TB. In 2012, the TB REACH project identified 4,433 symptomatics among 20,907 nomads screened (21%). Using AFB smear microscopy for diagnosis, a total of 884 cases of TB (all forms) were notified (20% of those tested), including 614 sputum smear-positive cases (14% of those evaluated). A total of 642 people

[27] Narasimhan P, Wood J, MacIntyre CR and Mathai D. Risk factors for tuberculosis. Pulmonary Medicine, vol. 2013, Article ID 828939, 11 pages, 2013. doi:10.1155/2013/828939
[28] Lönnroth K, Castro KG, Chakaya JM, Chauhan LS, Floyd K, Glaziou P, et al. Tuberculosis control and elimination 2010-50: cure, care and social development. Lancet. 2010;375(9728):1814–29
[29] Abdurraman, S. TB REACH Abuja FCT NTBLCP. Presentation at TB REACH implementers' meeting, Addis Ababa. (no date)
[30] Nelson LJ, Wells CD. Global epidemiology of childhood tuberculosis. Int J Tuberc Lung Dis 2004;8:636-47.
[31] Perez-Velez CM, Marais B. Tuberculosis in children. N Engl J Med 2012;367:348-61.

with TB received HIV counselling. Of those 416 were tested for HIV and 40 (9%) were positive.[32]

3.5 Programme performance

In general, the NTBLCP continues to strengthen its performance, with slow but steady increases in case notification and treatment success. The programme has made progress in expanding DOTS, integrating HIV into TB services and initiating a DR-TB diagnosis and treatment system. With the support of its technical partners, NTBLCP has developed numerous plans and guidelines covering laboratory scale-up, PMDT scale-up, DR-TB, paediatric TB, TB/HIV, infection control, CTBC and ACSM. Table 19 summarizes programme performance on key indicators over the last four years for which complete data are available.

Table 19: Programme performance indicators.

Indicator	2010	2011	2012	2013
Case notification, all forms	90,447	93,050	97,853	100,401
Case notification rate, all forms/100,000	42.7	57.2	59.2	57.3
Paediatric case notification, all forms	n/a	5,836	5,861	5,776
Treatment success, new smear-positive cases	84%	84%	86%	86%
TB patients tested and counselled for HIV	79%	81.5%	86%	88%
TB/HIV patients treated with CPT	59%	68%	81%	87%
TB/HIV patients treated with ART	34%	43%	57%	67%
Number of patients tested for DR-TB	n/a	n/a	n/a	10,410
DR-TB patients notified	25	39	185	665
DR-TB patients started on treatment	23	38	156	432
DR-TB treatment success rate				61% (2010 cohort)

3.5.1 TB Case notification and case notification rates

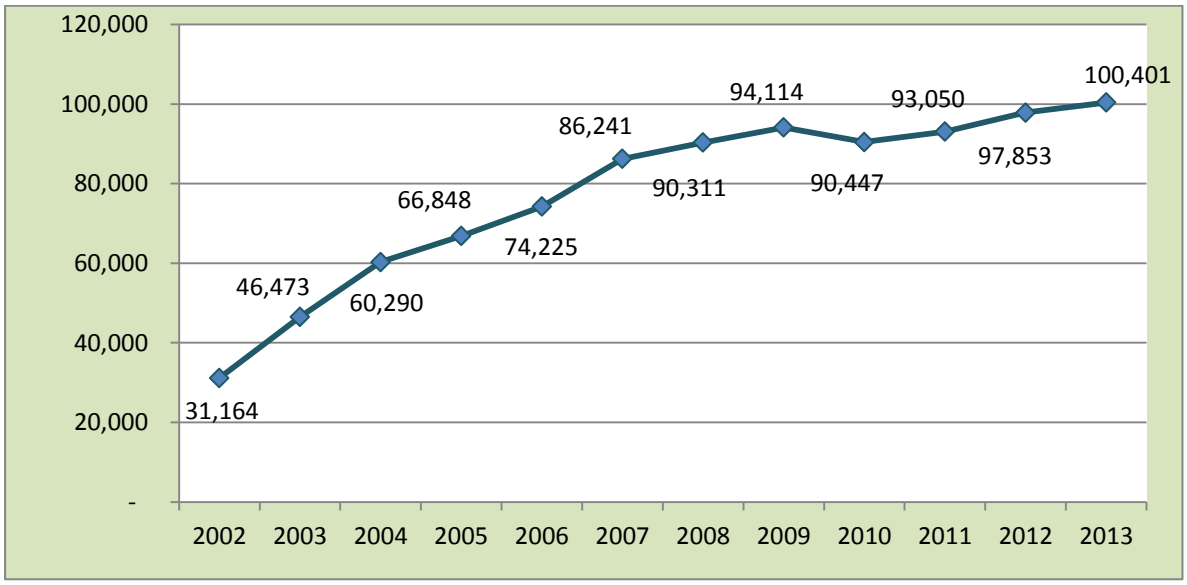
Overall, case notifications have been consistently on the rise during DOTS expansion in the country (see Figure 13), but seem to have reached a plateau since 2008, despite the more intensified approach to PPM activities NTBLCP has taken recently (24% of 2012 notifications were from private facilities and providers). Out of all notified TB cases in 2012, 59% were confirmed through smear-microscopy, 37% were based on a clinical diagnosis and only 5% were extra-pulmonary TB. The proportion of extra-pulmonary TB is lower than might be expected in a population with high rates of HIV and a high proportion of children, indicating a potential under-diagnosis of this form of TB due to limitations in diagnostic capacity and provider experience.

Patients who had not been treated previously accounted for the vast majority of notifications in 2013, with only 8.3% of all notifications having a history of previous anti-TB treatment. Given that 14% of the bacteriologically positive TB cases found in the prevalence survey had a prior history of TB treatment but were not on retreatment at the time of diagnosis, the

[32] John S. *An Intervention Providing Access to Care for Nomadic Communities in Nigeria*. Presentation at Global Lung Health Conference, Paris, 2014.

proportion of retreatment cases notified likely under-represents the number of individuals who would be eligible for retreatment.

Figure 13: Trend in notification of all forms of TB cases, 2002 - 2013



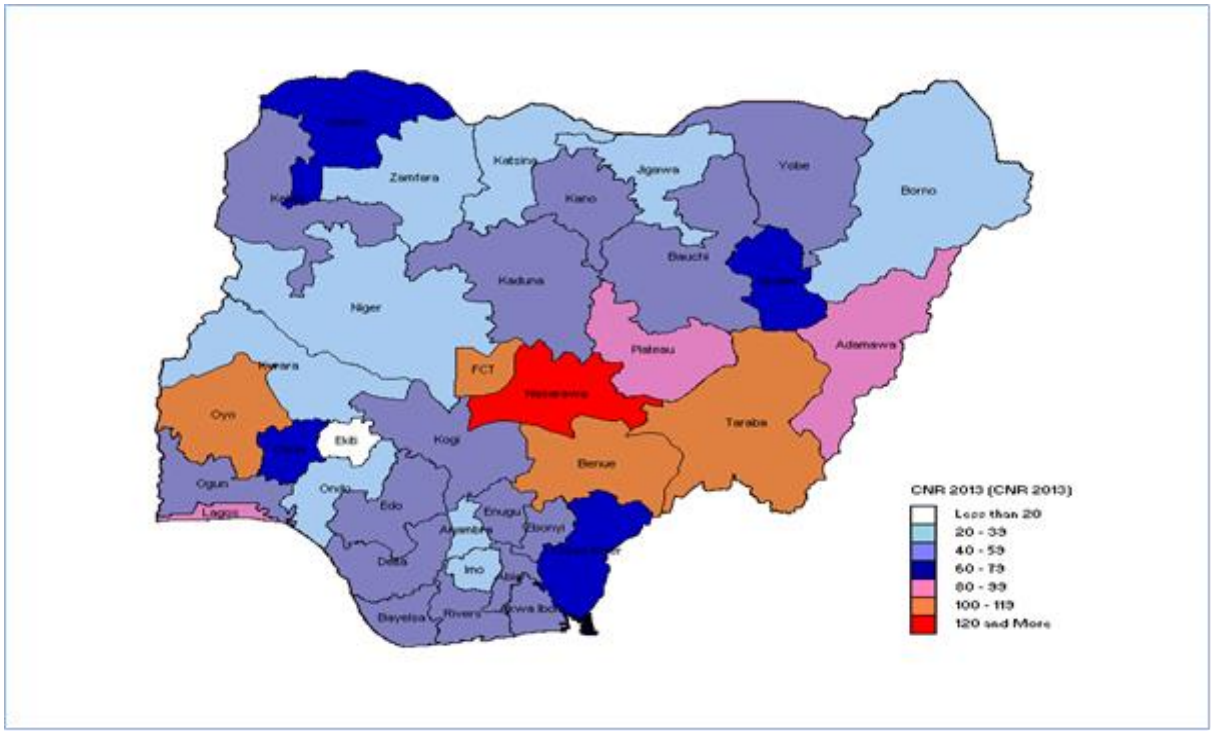
The case notification rate in Nigeria for all forms of TB in 2013 was approximately 57.3/100,000, in sharp contrast to the new estimated incidence rate of 338/100,000. As can be seen from the data presented below in Table 20 and Figure 14, there is a marked variation in case notification rates across the zones and states of Nigeria. It is not clear to what degree this represents true variability in the burden of TB in different geographic areas (as is suggested by the prevalence survey) and/or differences in the capacity to diagnose and report accurately. Regardless, the clear message from the data presented is that in all regions of the country, notifications are far behind the incident cases predicted by the prevalence survey.

Table 20: New TB case notification rates per 100,000 (smear-positive and all forms), by zone 2011 - 2013.

Zone	2011		2012		2013	
	Smear-positive	All forms	Smear-positive	All forms	Smear-positive	All forms
North Central	36	75	39	80	40	75
North East	27	58	34	65	32	60
North West	26	48	26	46	29	48
South East	24	41	24	41	25	39
South South	30	53	30	52	30	51
South West	35	68	39	71	41	70

Data source: NTBLCP database

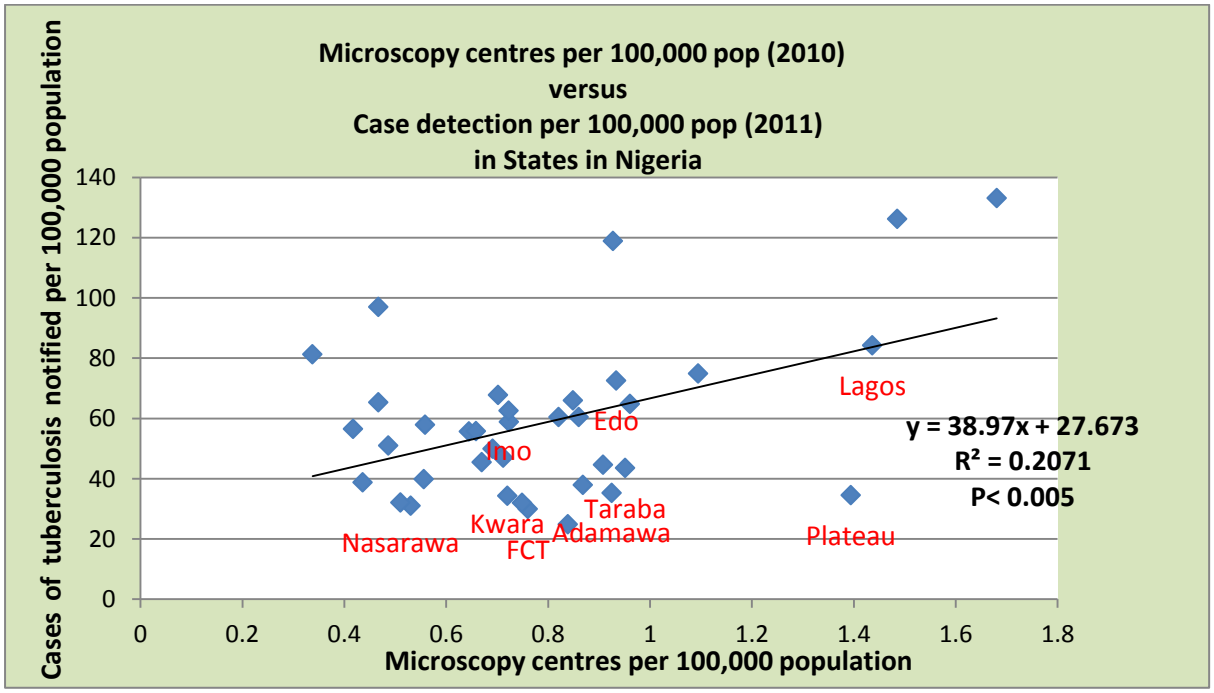
Figure 14: Map of state level, all forms, annual TB case notification rates in Nigeria, 2013.



Data source: NTBLCP annual report 2013

An analysis of 2011 data by TB CARE I showed a direct correlation between the number of diagnostic facilities available per 100,000 population and the case notification rates at the state level, consistent with findings in other countries (see Figure 15). This suggests that access to diagnostic services may play a substantial role in case notification rate variations.

Figure 15: Microscopy centres per 100, 000 population versus case notification rates, by state, 2011 data.

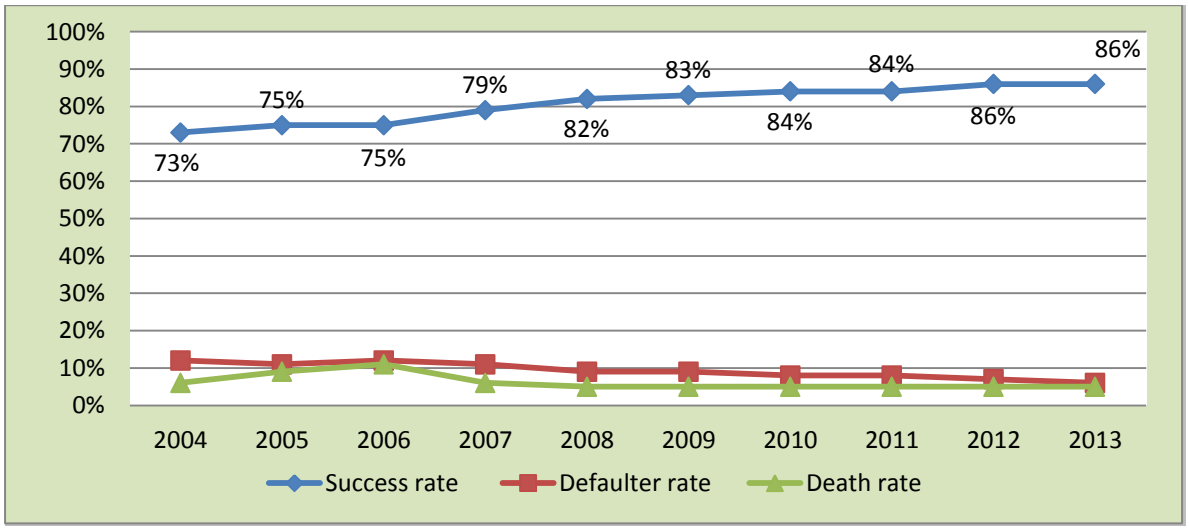


Experiences in active case-finding with potential value for scale up have been acquired through various TB REACH projects, particularly those targeting hard-to-reach populations, including nomads. In addition, in response to the findings of the national TB prevalence survey, active TB case finding in urban slums has been started in collaboration with community representatives and is expected to yield evidence for case-finding in these populations. All of these data have been taken into account in this NSP when prioritizing geographic areas and populations for intensified efforts, as presented in section 5.

3.5.2 Treatment outcomes

Treatment success has gradually increased over the last ten years to 86% in 2012, reaching the national target for 2015. Loss to follow up has decreased from 13% to 7% and the death rate has remained relatively low and constant at around 5%. (See Figure 16 for trends).

Figure 16: Trends in TB treatment outcomes of new smear-positive TB cases (2004 – 2013).



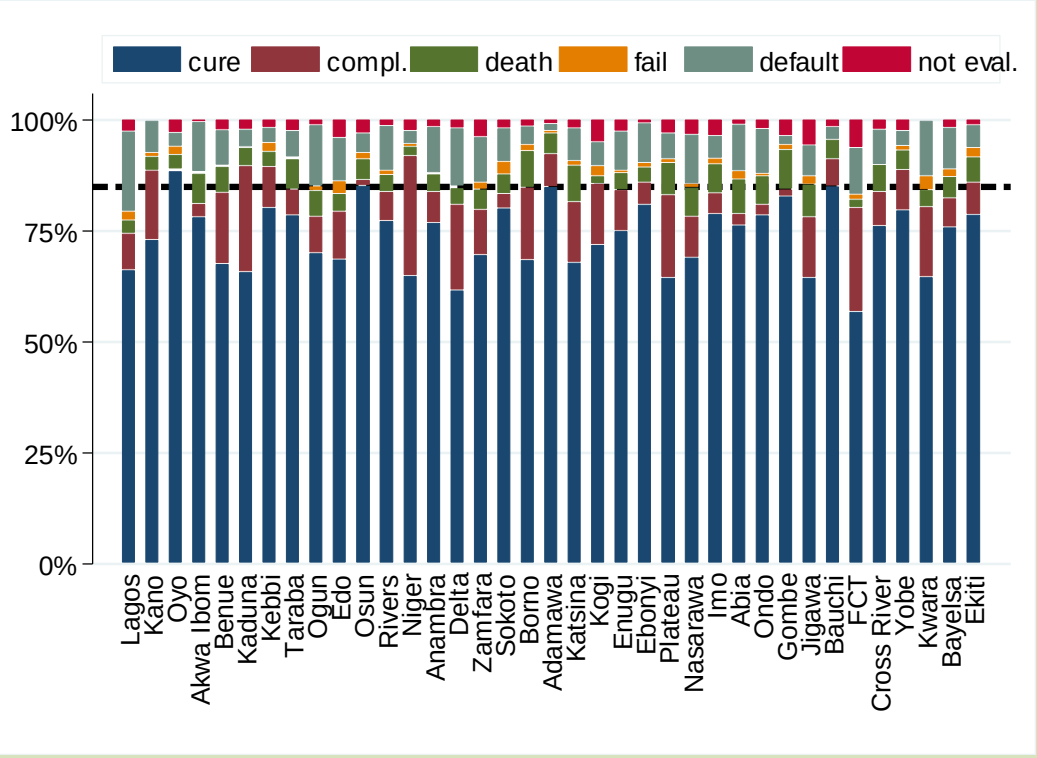
While the overall performance of the country on TB treatment is on track to reach the new international target of 90 percent treatment success, there are some states (and LGAs) where performance is inadequate (see Figure 17). The four states noted in the mid-term evaluation as underperforming on treatment success included Kwara, Lagos, Ogun and Anambra. In Kwara, the TSR declined to 62% in 2012 while loss to follow up increased to 29%. Lagos, Ogun and Anambra also have unacceptably high rates of loss to follow up, at 16%, 15% and 21% respectively. In addition, there are LGAs within each state where performance is below the national average. Reasons for low performance have not been determined for each of these areas and warrant further investigation, but likely include a variety of contributing factors such as high proportions of mobile populations, poorly trained and motivated health workers, insufficient numbers of health workers, frequent industrial actions (strikes) by health workers, civil unrest, lack of community engagement and poor access to services.

States and LGAs with lower treatment success rates will be prioritized for action on community-based treatment support and systematic tracing of those lost to follow-up. Treatment outcomes stratified by disease site and age are not currently available within the information system, so that potential variations in treatment outcome for different populations cannot be fully identified and addressed.

Figure 17: Treatment outcome data by state for new smear-positive and all forms, 2010.

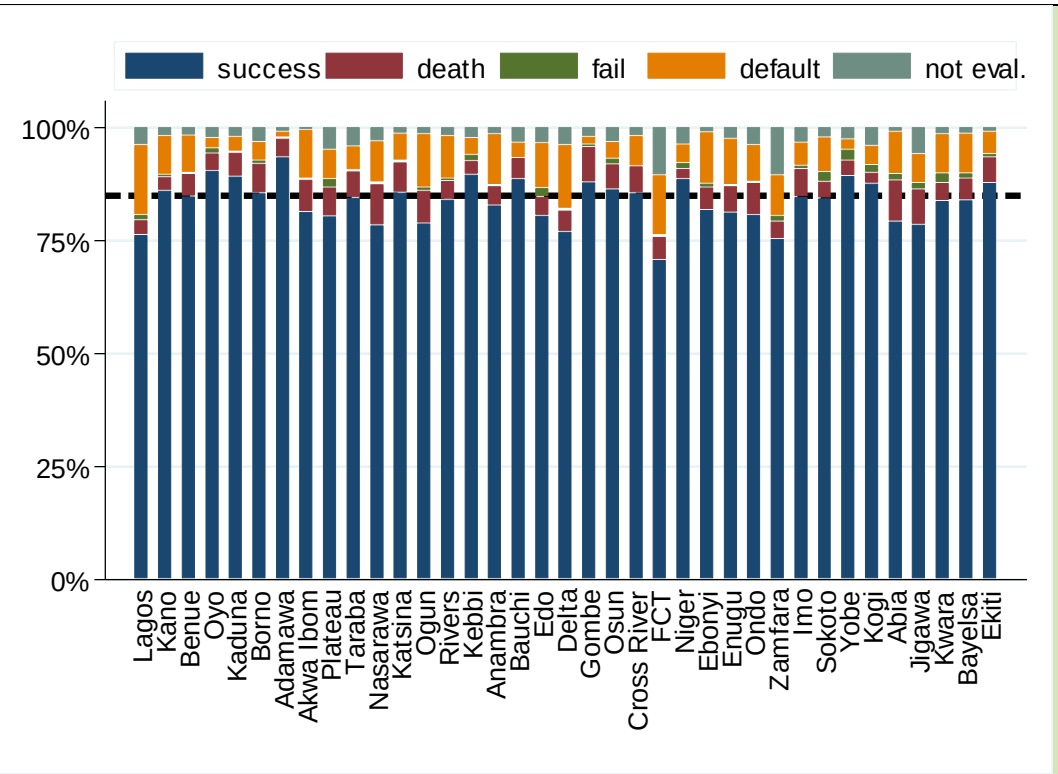
Source: 2014 TB epi analysis. Data source: NTLCP database

New, smear-positive TB (bars from left to right are presented in descending order of the cohort size, starting with the state that had the largest cohort in 2010)



NC=North Central; NE=North East; NW=North West; SE=South East; SS=South South; SW=South West; compl.=treatment completed; not eval.=treatment not evaluated or transferred out

New, all-forms TB (bars from left to right are presented in descending order of the cohort size, starting with the state that had the largest cohort in 2010)

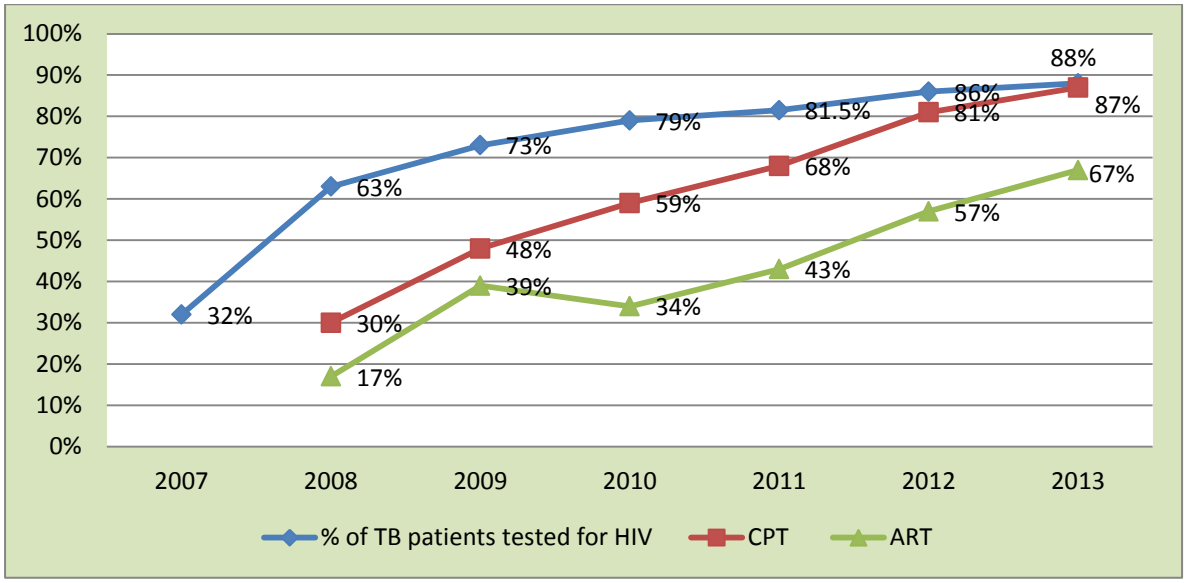


NC=North Central; NE=North East; NW=North West; SE=South East; SS=South South; SW=South West; not eval.=treatment not evaluated or transferred out

3.5.3 TB/HIV performance indicators

In 2013, 19,423 HIV-positive TB patients were notified, primarily through the TB programme. Access to HIV services for TB patients has increased rapidly since 2007 (Figure 18). In 2013, 88% (88,317) of the 100,401 notified TB patients were tested and counselled for HIV. Out of the TB patients tested and counselled for HIV, 19,423 (22%) were HIV-positive. In the same year, the percentage of HIV-positive TB patients on co-trimoxazole preventive therapy and anti-retroviral therapy during TB treatment were 87% and 67% respectively. The relatively low proportion of co-infected patients on ART is reflective of the overall situation in ART scale-up, where about 44% of eligible PLHIV in Nigeria are receiving ART.

Figure 18: Scale-up of HIV services for people with TB.



In 2013, of the 639,937 persons enrolled for HIV care (Pre-ART and ART) only 68% (435,216) were screened for TB. Possible contributory factors to this low performance include shortage of human resources in HIV treatment settings, suboptimal documentation and in sufficient knowledge of screening PLHIV for TB among health care workers.

Of all recommended medical interventions, IPT for PLHIV without active TB lags the furthest behind in implementation. In general, IPT is provided infrequently. In 2013, only 1.7% of PLHIV without active TB were placed on IPT. Barriers to expansion of IPT include weak capacity to implement by service providers and lack of sufficient knowledge among service providers.

3.5.4 DR-TB case notification and treatment outcomes

In December 2008, the NTBLCP applied to the Green Light Committee (GLC) for a pilot project for the programmatic management of drug resistant TB. This was approved in June 2009 for an initial cohort of 80 patients. Second-line drugs (SLDs) were procured through the Global Drug Facility (GDF) to treat all 80 patients.

The first DR-TB treatment centre was established in UCH Ibadan in July 2010 with the enrolment of the first cohort of 23 patients. With the advent of *GeneXpert* in 2011, access to diagnostic services increased for suspected DR-TB cases. In 2013, a total of 11,189 presumptive DR-TB cases were evaluated using *GeneXpert*, of which 665 (5.9%) were positive for rifampicin resistance. As at end of 2013, 721 cases had been enrolled for treatment since the beginning of the programme.

In the first cohort of patients, treatment outcomes were not very good, as might be expected. Many of those patients had been waiting for treatment for long periods and were quite ill when treatment commenced. Treatment success in that first cohort was only 60.9%. Treatment success has improved as a result of an increased supply of TB drugs and scale-up of facilities providing DR-TB treatment. For patients diagnosed from July 2010 through November 2011, treatment success was 62.3%, but notably cure was only 37.7%. Loss to follow-up in these cohorts was almost 10%, reflecting the need to strengthen patient support systems and deaths were high at 27.9%. (See Table 21).

Table 21: MDR-TB treatment outcome data, July 2010 – Nov 2011 cohorts.

Cohort	Cured	Completed treatment	Treatment success*	Lost to follow-up	Died	Total
Jul-Dec 2010	12	2	14	2	7	**23**
Jan-Jun 2011	7	8	15	4	6	**25**
Oct-Nov 2011	4	5	9	0	4	**13**
Total	**23 (37.7%)**	**15 (24.6%)**	**38 (62.3%)**	**6 (9.8%)**	**17 (27.9%)**	**61**

* Treatment success = cured + completed treatment

4 Programme gaps and contributing factors

4.1 Introduction

As part of the process of developing the NSP-TB 2015 – 2020, a thorough programmatic gap analysis was performed to determine priority challenges that will be addressed by the NSP. The analysis was based on the findings of the national TB prevalence survey, the mid-term evaluation of the 2010 – 2015 NSP, the national drug resistance survey, the TB KAP survey and the professional and personal experiences of each stakeholder in the process, including people with TB.

4.2 Priority programme gaps

Key programmatic gaps that will receive the highest priority for action in the new NSP-TB to improve TB control in Nigeria include the following:

1. Low TB case notification in adults and children
2. Low treatment success in specific states and LGAs
3. Insufficient integration of TB and HIV services
4. Insufficient capacity to diagnose and treat MDR-TB
5. Weak systems to support the programme, including management, information systems and procurement and supply

To develop appropriate interventions to address each of these gaps, NSP-TB stakeholders analysed the contributing factors to and root causes of these challenges, specific to Nigeria and based on available evidence. To improve and sustain performance in the areas listed above, this NSP-TB will address the critical contributing factors and root causes where it is feasible to do so.

4.3 The gap analysis framework: using a person-centred approach

The focus of the NSP workshop gap analysis was the primary challenge facing the NTBLCP: low TB case detection. Sub-groups analysed this challenge for the general population, PLHIV, children, prisoners and other vulnerable groups and people with drug-resistant TB. The stakeholders put the person with TB at the centre of this analysis by using a modified version of the Cough-to-Cure Pathway as the framework for analysing the contributing factors to and root causes of low case detection.

The Cough-to-Cure Pathway framework charts the steps in the path a person with TB takes, from the onset of symptoms through diagnosis, treatment and cure. Along that path, there are ideal behaviours or actions and deviations from these ideal behaviours are the contributing factors to poor performance in TB control.

The modified version of the Cough-to-Cure Pathway that was used for the analysis is presented in table 22. Stakeholders assessed contributing factors to poor performance on the first three steps of the pathway, along three different dimensions: i) individual and community factors ii) technical factors and factors within the control of the NTBLCP and iii)

health system factors and those external to the NTBLCP. For each step and each dimension, they answered the following questions:

1. What is going wrong in this step along all three dimensions?
2. Why is it going wrong?

The answers formed the basis for the gap analysis summary presented in the sections that follow.

Table 22: The modified Cough-to-Cure framework used for the gap analysis.

	1	2	3	4	5
Steps in the pathway	**Recognise illness and the need to seek care**	**Seek care at a health facility that can diagnose TB**	**Complete diagnosis for TB, including HIV counselling and testing**	**Begin treatment for TB**	**Continue and complete treatment**
Individual and community factors					
Technical and NTBLCP factors					
Health system and external factors					

While the analysis focused specifically on case detection challenges related to the first three steps of the pathway, the contributing factors and root causes noted are applicable across the entire spectrum of the pathway. These weaknesses or gaps will be addressed through the actions described in the new NSP-TB.

4.4 Areas of underperformance: key findings from recent programme reviews and mission reports

The key findings of the surveys and evaluations are summarized below to provide a context for the gap analysis and proposed interventions for the new NSP.

4.4.1 Prevalence survey

Implementation of the first-ever national TB prevalence survey in Nigeria began in February 2012 and field activities (covering 70 geographic clusters) were completed in October 2012, with analysis and results finalized in December 2013. A total of 44, 186 people (aged ≥15) participated in the study. The key findings from the prevalence survey include the following:

1. Among participants, 107 people were diagnosed with smear-positive pulmonary TB. Of these, **73% had never previously been diagnosed with TB**.
2. Approximately **60% of detected TB cases were less than 45 years of age**.
3. About **75% of the smear-positive TB cases in the community reported typical TB symptoms**, the highest amongst all national TB prevalence surveys since 2001.
4. The first point of contact within the health care system for the majority (65%) of survey participants who had at least one symptom of TB was either a general hospital

or a chemist. Only 14% of symptomatic respondents first visited a primary care facility.

5. The crude prevalence of smear-positive pulmonary TB among participants (aged ≥15 years old) was 256 per 100,000 population (95% CI: 178−333)
6. The observed **prevalence of bacteriologically positive TB among participants (aged ≥15 years) was 353 per 100,000** (95% C.I. 263, 434).
7. **The burden of TB is not distributed equally across the country**. TB prevalence in the clusters sampled ranged from very low (0/100,000) to extremely high (1,757/100,000).
8. The calculated prevalence rate of all forms of TB for all ages is 323 per 100,000 population.
9. The calculated incidence rate of all forms of TB for all ages is 338 per 100,000 population.

The main messages for the NTBLCP from the prevalence survey are as follows:

1. The prevalence and incidence rates of all forms of TB in 2012 are much higher than previously estimated by WHO for the same year. While the prevalence rate has doubled to 323 per 100,000 population; the incidence rate tripled to 338 per 100,000 population.
2. A large proportion of prevalent cases are being missed in the current approach to case-finding, which relies heavily on people with symptoms of TB seeking care at available diagnostic centres (passive TB case finding).
3. Many of these missed cases report typical symptoms of TB, indicating that there are relatively simple opportunities for intensified case finding through education and outreach as well as symptom screens at first points of contact and increasing access to diagnostic services.
4. More than half of TB among adults occurs in people less than 45 years of age.
5. Adult males and urban adults appear to have a significantly higher burden of disease than adult females and rural adults. In all groups, however, TB prevalence rates are high.
6. Fourteen percent of prevalent cases in the survey occurred in people with a history of previous treatment. They likely represent missed opportunities for case-holding and a large pool of cases with the potential for acquired drug resistance.
7. There are potential hotspots in the country where TB prevalence is significantly higher than in other areas, but this finding needs to be interpreted with caution because the prevalence survey was not powered to estimate prevalence at sub-national levels.

4.4.2 Mid-term review

A mid-term evaluation of the NSP 2010 – 2015 was conducted in April 2013 and served to reinforce the findings of the prevalence survey.

The key challenges noted in the mid-term review include:

1. **Low case notification rate** related to the lack of access to microscopy; poor follow-up of smear-negative cases; poor diagnosis of extra-pulmonary cases; and lack of consistent contact tracing.
2. **Low treatment success rates in specific states**, with unacceptably high proportions of patients lost to follow-up in some states including: Kwara, Lagos, Ogun and Anambra states, as well as lack of systematic tracing of those lost to follow-up.
3. Increased **diagnosis of MDR-TB patients that is exceeding the ability to treat**, primarily due to the then policy of hospitalization throughout the intensive phase of treatment.
4. **Low proportion of paediatric cases** among total cases diagnosed (5.8% in 2013) due to inadequate trained health care providers, poor diagnostic tests and lack of access to paediatric drug formulations, which further discourages providers from making the diagnosis. Widespread unavailability of isoniazid for IPT in children (or those who are HIV-positive) was also noted.
5. **Programmatic challenges** that contribute to underperformance, include:
    a. **Inadequate results-based planning** at all levels of the NTBLCP
    b. **Weak supervision** systems
    c. A **weak recording and reporting** system that is not in an electronic format
    d. **Suboptimal capacity to analyse and use data** for programme performance improvements

4.4.3 KAP survey

A knowledge, attitude and practice (KAP) survey was conducted in 2012 as a follow-up to a baseline KAP survey conducted in 2007-2008 as part of Global Fund Round 5, to note changes in knowledge and behaviour following interventions geared toward behaviour change. The KAP study covered all zones of Nigeria and focused on adults from 15 to 45 years of age within different subgroups of interest, including the general population, people with TB, people with HIV and health care workers.

The clear messages from the survey include:

1. Despite some improvements, the **level of knowledge with respect to the causes, diagnosis and treatment of TB remains relatively low** in all groups and is of particular concern among people with TB and/or HIV. Outreach and education interventions have not yielded the desired results and the approach should be refined for better performance.
2. Health care workers' knowledge and attitudes toward TB were positively related to the amount and timing of training on TB that they have received.
3. **Stigma related to TB remains high** and is sometimes linked to misconceptions around the cause of TB as due to spirits or punishment from God.
4. **Radio is the most widely used medium** for accessing information across all zones of Nigeria and therefore could be used to distribute TB-related messages.

4.4.4 Drug resistance survey

The 2009 - 2010 DRS demonstrated reasons for concern about the magnitude of MDR-TB among new and retreatment cases and the programme data point to gaps that should be addressed in the NSP-TB. The number of MDR-TB cases detected among notified cases in 2012 was 107 cases out of an estimated 3,697 (based on DRS data), representing less than three percent of the estimated incident MDR-TB cases. The key challenges to DR-TB control include:

1. Inadequate specimen transport systems
2. Limited capacity to diagnose DR-TB cases
3. Limited capacity to treat diagnosed cases
4. Low levels of knowledge about drug-resistant TB among health care providers
5. Limited capacity to confirm diagnosed rifampicin-resistant cases as MDR-TB cases
6. Inadequate system and capacity to conduct follow-up investigations for patients in the ambulatory phase of treatment
7. Inadequate bed capacity for management of DR-TB cases in the intensive phase
8. Inadequate capacity-building for State and LGA TB Teams
9. DST for 2nd line drugs is not widely available in-country, resulting in non-diagnosis of pre-extensively drug resistant TB (pre-XDR-TB) and XDR-TB cases
10. Non-availability of drugs for treatment of pre-XDR-TB
11. Organization and co-ordination of routine DR-TB management has not been fully integrated into the TB control programme
12. Sub-optimal DR-TB information system and data management.

4.4.5 Laboratory assessment report

As part of the ongoing strengthening of the existing TB culture laboratories in Nigeria, a laboratory assessment was conducted in February 2014. The assessment was supported by a team of assessors from the NTBLCP, TB Supranational Reference Laboratory, San Raffaele Scientific Institute, Milan, American Society for Microbiology and IHVN. Both major and minor issues were identified from the laboratories. Most of the laboratories have adequate numbers of well-trained and committed staff for efficient running of the TB laboratories with adequate supply of laboratory materials. Major issues identified include:

- Irregular electrical power supply and inadequate supply of diesel to run the generators resulting in poor maintenance of the heating ventilation and air conditioning (HVAC) system and equipment
- Deficiencies were observed in the reporting systems that prevent timely reporting of results from the laboratories to facilitate prompt treatment or actions
- Use of multiple TB laboratory registers developed by various partners with no standardized electronic reporting system.

4.4.6 Recent GDF Mission reports

Annually, the WHO and Global Drug Facility (GDF) organizes a mission to assess the performance of the programme with special emphasis on drug management. The mission team is composed of local and international consultants of WHO as well as all partners

closely associated with the implementation of the TB programme. Key findings excerpted from the 2012 and 2013 GDF mission reports include:

1. More staff are needed at central level to track procurement and supply management
2. A data management centre is needed at the Federal Central Stores to collate information from the zonal level, guide their activities and better manage distribution
3. Long-term quantification (2-3 years) is not being performed and should include considerations for scale-up of IPT among PLHIV
4. State level staff responsible for PSM need to be identified and trained on PICKnPACK, with continuous mentoring and supervision on how to perform analyses, interpret and use data
5. DR-TB commodities need to be integrated into the PICKnPACK system, including temperature and power outage monitoring
6. Storage facility staff need training on good storage practices and inventory management at national and state levels
7. Transport of drugs and supplies to state and local levels is not always timely and lacks sufficient funding
8. Pharmacovigilance activities should be expanded, staff trained at local level and a system for reporting adverse drug reactions put in place.

4.5 Priority programme gaps and contributing factors

Based on the situation analysis and a review of programme performance data, stakeholders identified five priority areas of programme underperformance, including low adult and paediatric case detection, treatment success in specific regions, TB/HIV integration, PMDT scale-up and Programmatic support systems, in particular monitoring and evaluation systems and procurement and supply management systems. Using the modified Cough-to-Cure Pathway as an evaluation framework, stakeholders identified the key contributing factors to underperformance as listed in Table 23 below. Many of these are relevant across all areas of underperformance. They are described in detail in the text that follows. The new NSP clearly and directly addresses these priority gaps and their contributing factors through its objectives, strategic interventions, activities and sub-activities.

Table 23: Summary of priority programme gaps and contributing factors to be addressed in the NSP.

Priority TB Control Gaps	Priority Contributing Factors
1. Low adult and paediatric TB case detection 2. Low treatment success in specific states and LGAs 3. Insufficient integration of TB and HIV services 4. Insufficient capacity to diagnose and treat MDR-TB 5. Weak support systems to implement and monitor programme performance	**Individual & Community** • Inadequate knowledge on TB • Fear of stigma and discrimination • Inadequate access to health services • Preference for alternative care providers • Inadequate engagement of the affected community and community-based organizations
	Technical & NTBLCP-controlled • Inadequate diagnostic capacity, including microscopy, *GeneXpert*, LPA, culture and drug susceptibility testing • Inadequate treatment capacity to match diagnostic scale-up • Inadequate data collection system and insufficient capacity for analyses to inform programme improvements • Poor capacity to manage the supply chain at the local level

	• Lack of results-based plans tied to the NSP at State and local levels • Ineffective supervision to lower levels of the programme • Limited linkages with other disease control programmes • Limited engagement of other stakeholders, including public and private health care providers, civil society organizations and the corporate sector • Insufficient personnel, training and infrastructure to support the national programme
	Health Systems & External factors • Inadequate financing and political commitment • Weak linkages between federal, state and local levels of the health system • Poor coverage and sub-optimal quality of health services especially at primary health care level • Industrial actions • Civil unrest, internal displacement and disruption of services

4.5.1 Individual and community factors

The priority cross-cutting individual and community factors that affect the programme's performance include the following:

Lack of information on TB

In contrast to information, education and communication (IEC) efforts related to HIV, which have been robust and consistent, the TB programme has little funding for IEC and has been unable to distribute TB messages adequately or consistently, particularly through high-coverage but relatively more expensive media channels such as radio or TV. In addition, low literacy rates and the multitude of languages spoken in Nigeria make print materials less effective as vehicles for disseminating messages. Findings from the KAP survey corroborate this point: there is significant misinformation on TB in the general public and within vulnerable sub-groups that prevents people from seeking care early or at all.

Fear of stigma and discrimination

A reluctance to seek care for suspected TB related to fear of stigma has been reported as a major barrier to case-finding and case-holding by people with TB, CSOs, health facility staff, technical partners and other stakeholders. Misconceptions about TB further fuel stigma and discrimination. Culturally held beliefs that TB is caused by witchcraft or is God's punishment or that TB is an inherited condition, make people unwilling to seek care for fear they will be ostracized by their communities.

Lack of access to health facilities

Individuals have a difficult time navigating the health care system and accessing appropriate care. They may live a long distance from a health facility. Evidence reported by CSOs and patients suggests they may have to pay hidden fees for services and they may face discrimination and stigmatization from health care providers. Language may be a barrier to accessing care as well as low social status. Health facilities are not evenly distributed and many lack trained providers.

Preference for alternative care providers

Related to the previous point, individuals with TB symptoms often present to providers outside the public health system. According to the National Health Plan, up to 60% of health care is delivered outside the public sector. Many people who still believe TB is caused by witchcraft or is a punishment from the gods seek care from witch doctors or religious leaders first. Others who perceive that they are ill-treated by health facility staff, live a far distance from a health facility or believe they cannot afford to go to a health centre will do nothing, self-medicate or use community-based providers, including medicine vendors and traditional healers, as reported in the KAP survey.

Lack of adequate engagement of communities

Engagement of communities and community-based organizations in TB care is a recent phenomenon and these entities have not yet been fully utilized by the NTBLCP to support community education and outreach, TB case-finding and treatment support and programme advocacy. CBOs need more support to become technically competent and organizationally sound partners in TB control and the NTBLCP needs support to develop effective mechanisms for collaboration with CBOs.

4.5.2 Technical and NTBLCP factors

The technical challenges faced by the NTBLCP have been well-documented in recent external evaluations and internal assessments of the programme. Priority issues that the new NSP will address include the following:

Inadequate diagnostic capacity

As described previously, laboratory capacity is being expanded rapidly, but remains inadequate to reach the target of 90 percent case detection in Nigeria. To reach the national target of one AFB smear microscopy laboratory per 50,000 population or less and achieve 100 percent population coverage, a total of approximately 4,365 microscopy laboratories will be needed. The gap between existing capacity (1,602 sites) and required capacity is therefore 2,763 additional laboratories, with the likelihood that some additional capacity will be required in areas where geographical barriers, civil unrest or other issues limit access to the population.

In addition, access to rapid and advanced diagnostic methods is limited. As at end of 3rd quarter of 2014, there were 87 *GeneXpert* MTB-RIF machines (four-cartridge) in Nigeria. Few of these are utilised for the routine diagnosis of TB cases—the focus to date has been on diagnosis of drug-resistant TB.

An additional 185 machines (four-cartridge) are planned as part of the NACA/NASCP Global Fund-supported expansion of TB diagnostic capacity through HIV services. The main challenge with the existing machines has been underutilization in the initial stages as a result of limited emphasis on the use of *GeneXpert* for the diagnosis of TB disease, due to use only for drug resistance testing and not for HIV-positive, smear-negative individuals, children or others who could benefit from their use. That is expected to change rapidly as *GeneXpert* is incorporated into the HIV programme.

Projected need for *GeneXpert* testing is up to 1.6 million tests by 2020. This number may increase over the six years of this NSP as *GeneXpert* testing algorithms incorporate additional patient risk categories for testing. This NSP anticipates the need for a total of 469 *GeneXpert* machines to meet the testing needs of all risk groups.

First-line drug susceptibility testing (FLDST) is currently conducted in two national reference laboratories. Projected need for FLDST annually will increase in the coming six years to an anticipated 76,355 specimens by 2020. This is clearly too much for the two NRLs to be able to process. The NSP targets to increase the number of laboratories with capacities for FLDST to 22 by the year 2020.

Priorities for diagnostic scale-up include ongoing and strategic expansion of smear microscopy to improve access to diagnosis at the LGA level, using LED fluorescent microscopes to increase yield and efficiency, increased use of molecular methods (LPA and *GeneXpert*) to improve detection of smear-negative TB and drug-resistant TB, expansion culture on solid and liquid media and increase capacity for DST for both first- and second-line anti-TB drugs.

Inadequate treatment capacity to match scale-up

As at the end of 2013, Nigeria has a total of 5,389 facilities that provide TB treatment services under DOTS. These facilities are currently located at primary, secondary and tertiary facilities within the public health system; at faith-based and private facilities and at other locations including prisons. The NTBLCP has made a concerted effort to increase access to TB treatment, establishing 673 new treatment sites between July 2010 and December 2012.

However, given the massive scale-up of TB diagnosis envisioned in this NSP (a greater than threefold increase in the number of cases diagnosed by 2020), a complementary increase in the number of treatment facilities (to a total of 8,739 DOTS centres) and trained staff to improve access to treatment and handle the increased number of people on TB treatment must be planned. This capacity must be concentrated at the primary health care level, but expansion to these facilities alone cannot meet the anticipated demand. Strengthening the primary health care system's capacity to deliver TB diagnostic and treatment services, through infrastructure upgrades, training and intensified supervision, must be complemented by community-based treatment support and the robust engagement of other providers of health services (i.e. faith-based institutions, private providers, community pharmacists, patent medicine vendors and traditional healers).

Inadequate data collection system and capacity for analysis

An external epidemiological review for the NTBLCP Nigeria was completed in February 2014. An excerpt from that report (below) summarizes key gaps.[33]

The TB surveillance system in Nigeria has some strength but also important gaps that need prompt action. Of all the standards for TB surveillance, 5 were met, 7 were not met and 1 was

[33] Sismanidis, B. *Epidemiological review of TB disease in Nigeria: Mission report, February 2014*. (Draft). WHO: Geneva.

not applicable (see Table 24). Increased investment is required to address the gaps identified by the assessment. Based on the assessment, the greatest strengths of TB surveillance in Nigeria include the external consistency of its data, its adherence to best-practices in recording and reporting as described by WHO guidelines, the ongoing dialogue for the transition from paper to an electronic, case-based system and its monitoring of the level of HIV among TB cases.

Table 24: A summary of the surveillance checklist results

Met	Not Met	Not applicable
B1.1 – Case definitions consistent with WHO guidelines B1.2 (Paper) – TB surveillance system is designed to capture a minimum set of variables for reported TB cases B1.6 – TB surveillance data are externally consistent B2.1 – Surveillance data provide a direct measure of drug resistant TB in new cases B2.2 – Surveillance data provide a direct measure of the prevalence of HIV infection in TB cases	B1.3 (Paper) – All scheduled periodic data submissions (e.g. electronic data files or quarterly paper reports) have been received and processed at the national level B1.4 (Paper) – Data in quarterly reports (or equivalent) are accurate, complete and internally consistent B1.7 – Number of reported TB cases is internally consistent (within country) B1.8 – All diagnosed cases of TB reported B1.9 – Population has good access to healthcare B1.10 – Vital registration system has high national coverage and quality B2.3 – Surveillance data for children reported with TB are reliable and accurate *OR* all diagnosed childhood TB cases are reported	B1.5 (Electronic) – Data in national database are accurate, complete, internally consistent and free of duplicates

The primary challenges of the system include the inappropriate storage of aggregated, national and sub-national level TB surveillance data that make any attempts at analysis cumbersome, the weak capacity of available human resources to maintain large datasets, regularly analyse and critically review surveillance data, knowing that all diagnosed TB cases are reported and that reported cases are accurate, achieving up-to-date coverage for paediatric TB and TB mortality surveillance. Increased investment is required to address these gaps and build a system that can accurately measure TB incidence and mortality.

Poor capacity to manage the supply chain at the local level

PSM is improving in Nigeria with the implementation of the PICKnPACK database, but weaknesses are still evident. During the mid-term review, stock outs of Category II kits, paediatric medicines and isoniazid were observed, as well as of laboratory consumables. The mid-term evaluation report noted that "capacity of DOTS providers to manage commodities in 29 of the 36 states was reported to be inadequate and some states did not have a designated State Supply Chain Manager…Weak distribution systems for TB medicines from the state stores to the facilities were observed, with no support for transportation in some states."

"Storage conditions in the DOTS clinics visited were largely inadequate with insufficient space in most DOTS centres…Some of the zonal and state stores were not being regularly maintained and had not been renovated."

Lack of results-based plans tied to the NSP at state and local levels

The mid-term evaluation report noted that "from the national to state and LGA levels there were no comprehensive results-based plans with complete result/logic frameworks, performance monitoring plans or operational plans with which the coordinating teams could plan their implementation and monitor their own progress quarter by quarter or year by year."

Plans at the national, state and local levels are essential to achieving NSP targets and to creating a coherent, coordinated response to TB in Nigeria. While the NTBLCP has developed well-reasoned national plans for overall TB control activities and scale-up of specific programme components, these plans are not being fully operationalized throughout the three levels of the system. Creating explicit linkages between national, state and LGA activities and NSP goals and objectives will support programme improvements.

Ineffective supervision of lower levels of the programme

In general, while supervision is conducted on a regular basis, the content and follow-up of that supervision is weak. The mid-term evaluation remarked that supervision is superficial and does not address key performance issues clearly. This deficit can also be linked to the issue described above of not having clear, results-based plans to form the basis of monitoring and supervision. Follow-up of deficiencies noted during visits is also inconsistent. Modifications in supervision checklists and approaches, with additional training for supervisors, will be needed to correct this gap.

Limited engagement of other stakeholders

As described in the situation analysis, the NTBLCP has stepped up its engagement with the non-NTBLCP facilities and providers through PPM efforts that now cover all states in Nigeria. The 685 facilities that now participate in PPM activities notified 24% of TB cases in 2012, but there was a wide variation by state in PPM contribution, from a low of 0.5% of cases in Akwa Ibom to a high of 50% in Ebonyi.

Efforts have focused on large tertiary institutions through the Hospital DOTS Linkage programme (24 facilities), but lag behind the target of engaging 53 tertiary facilities set for 2015. This linkage is important, because those seeking care at tertiary facilities now pay for TB medications—tertiary facilities are administered by the Department of Hospital Services and are not otherwise connected to the NTBLCP.

Considering the wide variety of actors in the non-NTBLCP sector, the potential to increase engagement is large. There are a number of other potential stakeholders who have been reached in very limited areas, but who have the potential to make significant contributions to TB case-finding and treatment success. These include first points of contact within the community, such as community pharmacists, patent medicine vendors, traditional healers and religious leaders.

Community-based organizations have been engaged through Global Fund activities and USAID projects in community TB care. For TB, community volunteers recruited and affiliated with CBOs exist in 10 LGAs per state in 24 states at present. CVs are trained by the LGTBLS. Under the Global Fund HIV grant, a CSS component provides support to AIDS,

TB and malaria CBOs to do awareness creation and make referrals to health facilities for all three diseases. Coverage includes all 36 states and FCT, with concurrent activities for all three diseases. Deliverables include training for Ward Health Committees to supervise PHCs; advocacy to form Ward Health Committees where they do not exist; supervision of community volunteers and liaison work with health facilities; and quarterly meetings between health facilities, community volunteers and CBOs.

Thus far, results have been difficult to measure and frustration has been expressed by both CBOs and the NTBLCP at difficulties in collaboration. CBOs cite state and LGA staff's lack of understanding of the role CBOs can play, lack of access to programme data for planning and monitoring and lack of technical and administrative capacity on the part of CBOs as some of their key challenges.[34] The NTBLCP notes that poor measurement and communication of results, a CBO community that is broken into different factions that do not speak with one voice and poor working relationships with NTBLCP are hampering its ability to engage effectively with CBOs.

Limited linkages with other disease control programmes

TB control in Nigeria, while integrated into the primary health care system, remains largely vertical with few linkages to other disease control programmes where synergies could exist. The NTBLCP has intensified its partnership with NACA/NASCP to support integration of TB and HIV services, but they still have much work to do to ensure universal access for Nigerians.

The NTBLCP's engagement with other services is limited or non-existent. In particular, a partnership between TB, AIDS and malaria programmes could make better use of scarce Global Fund resources in the areas of HSS and CSS especially, building on the lessons of the ATM community system strengthening work under the existing GF HIV grant.

To better support paediatric TB diagnosis and treatment, strong linkages with maternal and child health programmes should be built. The most critical linkage is with the National Primary Health Care Development Agency, the body in charge of oversight and expansion of primary health services throughout the country. Without a stronger primary health care system through which to deliver services, the NTBLCP cannot reach its ambitious goal of universal access to quality TB care.

Insufficient personnel, training and infrastructure

Human resources for adequate programme implementation are lacking in terms of the number of personnel, the requisite knowledge and skills and the level of motivation of staff across all levels of service delivery. This challenge is not specific to TB control, but is emblematic of the wider issues in health service delivery in Nigeria. Specific human resources for health data for TB are not readily available to quantify the needs. More work will be required to develop a strategic human resource development plan.

[34] PATH. *Nigeria ACSM workshop report, February 2014.* (Draft)

4.5.3 Health system and external factors

The NSHDP sums up major health systems challenges in the following paragraph:

> "…the key challenges for achieving national health objectives are related to the weak health system characterized by constrained governance systems and structures, low levels of health care financing and poor predictability and release of funds with inadequate financial protection for the poor, shortage and mal-distribution of human resources for health, poor quality service delivery, inadequate and untimely availability of quality health commodities, lack of routine health services data, low levels of research for health, weak partnership and coordination, as well as poor community participation and poor utilization of health services, particularly child and maternal services, to mention a few."[35]

These overall challenges are mirrored in the key health system challenges to TB control identified by the stakeholders, as described below.

Inadequate financing and political commitment

As presented in Section 3.2.3, there is a vast gap between the funding available for TB control and the amount needed to achieve the ambitious goal of universal access to services. The Government of Nigeria has contributed very little funding from the federal, state or local levels for basic programme activities. There is a general lack of awareness among decision-makers that TB continues to be a major public health problem in Nigeria. Intensive education and advocacy to decision-makers at all levels for allocation of sufficient resources is essential to progress in TB control.

There is significant potential for increased domestic funding for TB control in Nigeria, but there are a number of equally important threats. Nigeria has a healthy economy with robust growth, but its heavy dependence on oil for revenue makes it more vulnerable to market fluctuations. For example, the World Bank noted in 2013 that:

> Declining oil revenues have placed increasing pressures on government budgets. As of the second half of the year, total federation revenues available for sharing by the three tiers of government fell short of projections by 21%. The balance of the fiscal reserve of the country (Excess Crude Account) declined from over $9 billion in early 2013 to $5 billion by mid-year. The implementation of the capital budget has been adversely affected as only a little over half of the federal capital budget has been made available to line ministries as of the end of September for the implementation of investment projects. Early indications from the 2014-2016 Medium Term Expenditure Framework (MTEF) point towards a significant fiscal contraction in 2014 although the MTEF is still under consideration by the National Assembly. However, the forthcoming presidential elections would also make compressing budgetary expenditures quite difficult in 2014.[36]

The difficulties in funding TB activities are present at all levels of the health system and become particularly evident at the lower levels of implementation—state and LGA. States and LGAs have significant control over their budgets and receive basket funds for health from the federal level, so that no funds are specifically targeted for TB activities. Allocations vary widely among the states and LGAs but overall are grossly inadequate. The lack of

[35] National Health Plan, p. 11.

[36] World Bank, Nigeria Overview at http://www.worldbank.org/en/country/nigeria/overview. Accessed 16/12/13.

budgetary control from the federal to the state and LGA levels also extends to the management of human resources and infrastructure, creating a significant challenge to the expansion of any health programme nationally, including TB. Significant advocacy efforts will be required to bring about a unified commitment, both political and financial, to TB control at all levels of the system.

In addition to these challenges, the recalculation of Nigeria's GDP may complicate access to external donor funds. At the same time that this adjustment may increase Nigeria's economic ratings and make it the largest economy in sub-Saharan Africa, it has the potential to reduce Nigeria's access to international grants and aid monies that have supported much-needed development programmes, including health.[37]

Weak linkages between federal, state and local levels of the health system

The organization of and linkages between Nigeria's government structures are an ongoing challenge to development progress in the country. According to a World Bank summary in 2013:

> "In spite of successful initiatives in human development, Nigeria may not be on track for meeting most of the Millennium Development Goals (MDGs). Underpinning these challenges is the core issue of governance, in particular at the state level. Fiscal decentralization provides 36 states and 774 local governments considerable policy autonomy, control of 50% of government revenues and responsibility for delivery of public services. Capacity is weak in most states and improving governance will be a long term process."[38]

These observations apply to TB as well. Although the NTBLCP has structures and/or staff in place at zonal, state and LGA levels, the linkages between these levels is tenuous and there is no line authority over lower levels of the system. At present, there is an insufficient engagement between the NTBLCP and states and LGAs, which translates into a low priority for TB among many competing issues at state and LGA levels and low allocations of funding. A key issue is the absence of performance-based allocation of resources. At the same time, results-based planning that is coordinated between the federal, state and local levels to align with the national strategy is lacking. There is therefore little incentive for states to change their practices and little opportunity to measure performance. The linkages are further hampered by the NTBLCP's lack of funding and personnel to strengthen the relationships with lower levels of the system by providing technical assistance and regular supportive supervision.

Communication between NTBLCP staff across the levels of the programme must be intensified and a concerted advocacy effort made to educate and engage decision-makers at state and LGA levels in supporting TB control efforts in their areas.

[37] T Akinmutimi. Nigeria may record 1.832 bn yearly loss in grants to GDP. National Mirror. December 16, 2013. Accessed at http://nationalmirroronline.net/new/nigeria-may-record-1-832bn-yearly-loss-in-grants-to-gdp/.

[38] World Bank, Nigeria Overview at http://www.worldbank.org/en/country/nigeria/overview. Accessed 12/16/13

Poor coverage and sub-optimal quality of health services especially at primary health care level

Nigeria continues to struggle to provide basic health services to her citizens. The NSHDP painted a picture of limited access to all services in 2009:

> The very weak health system contributes to the limited coverage with proven cost-effective interventions. For example, immunization coverage is 23%; only 12% of under-fives sleep under ITNs, 20% of children in urban areas and 14% resident in rural areas with fever are appropriately treated with antimalarials at home, contraceptive prevalence rate is 15% and only 39% of women deliver under the supervision of skilled attendants.[39] It is important to note that wide regional variations exist for these indicators, with comparatively worse figures in the rural areas and in the northern part of the country.

Little has changed since that time. Weaknesses in primary health facilities have been documented in numerous reports, including the recent mid-term evaluation of the NSP for TB. Nigerians seeking health care continue to bypass primary health care facilities due to crumbling infrastructure, poorly motivated or absent staff and lack of supplies. The majority of TB cases reported in Nigeria are notified by secondary level facilities.[40]

For lasting progress, it is essential that addressing primary health care issues becomes an integral part of the overall NSP and that the NTBLCP builds critical coalitions with NACA, NASCP, Malaria, NPHCDA, state and LGA officials to create a functional system for the delivery of essential health care services.

Industrial actions

Industrial actions by health care workers' unions have posed a serious threat to health care service access in recent years. The impact on TB control is evident in TB notification data anomalies from areas where there have been strikes. No quantification of the impact of industrial actions on TB services has been developed, but anecdotal evidence suggests it may be a major contributor to programme underperformance in some areas of the country.

Civil unrest, internal displacement and disruption of services

Civil unrest and the attendant insecurity remains a concern in some regions of the country, causing internal displacement of Nigerians and disruption of health care services or of access to them. The North East zone of the country is particularly affected, with sporadic violence occurring in other regions as well. Programme staff have been prohibited from traveling to certain areas due to security concerns, making supervision and technical support extremely difficult. Implementing TB control in these areas will require specialized interventions aimed at creating partnerships with local organizations that can continue operating during periods of unrest and relying on mHealth solutions to provide ongoing support and supervision.

Gender

The data from the prevalence survey appear to show a significantly higher burden of TB among men than among women. It must be noted, however, that for both groups, TB burdens

[39] National Population Commission (2008) *National Demographic and Health Survey* Abuja: National Population Commission.
[40] NTBLCP programme data.

are high. In adult males, prevalence of bacteriologically confirmed TB is estimated at 751/100,000 and in adult females at 359/100,000.

The ratio of observed prevalence in the survey to smear-positive case notification rates also differed by gender: for men, the ratio was 7.25, whereas for women it was 4.63. In other words, males with smear-positive TB are 1.56 times less likely to be diagnosed than their female counterparts. Both men and women respondents with symptoms of TB most often first sought care at general hospitals or chemists, with primary health centres as the third most frequent first point of contact. Behaviour did not differ by gender for those who first sought care at general hospitals or chemists, but women who sought care at a primary health level did so almost twice as often as men.[41] These findings require confirmation, but can point to potential opportunities to tailor interventions to increase service access for both men and women.

Interventions aimed at reaching men and women at risk for tuberculosis must take into account the specific barriers to care that they face, while acknowledging that all Nigerians are facing significant barriers to accessing TB services, unrelated to gender. Further study will be required to determine specific gender-related barriers in Nigeria. In general, however, males' access to TB services is likely influenced by working hours and locations, incarceration, stigma, competing priorities and lack of perceived threat to their health. Women likely face access issues because of religious and cultural restrictions on their independent movement, a lower family priority placed on their health, stigma and fear of being outcast from family or considered unmarriageable, competing priorities and perceived lack of threat to their health.

Human rights

The right of all Nigerians to enjoy the highest level of health attainable and to have access to health services and other means needed to protect health is enshrined in Article 12 of the International Covenant on Economic, Cultural and Social Rights and in Article 25 of the Universal Declaration on Human Rights, as well as related conventions on the rights of the child, of women and of people with disabilities. Nigeria is a signatory to both of these key documents.

Given the challenges with the health care system described above, the right to health is not guaranteed for Nigerians at this time. A concerted government effort is underway to provide equitable and improved access to health care, as described in the NSHDP 2009 – 2015. Implementation of the Plan is essential for fulfilling the right to health for all Nigerians.

TB continues to be highly stigmatized and people with TB have reported poor treatment by health care providers, employers, family members and other social contacts. At the same time, existing religious law and new legislation may threaten the ability of the NTBLCP to reach some sub-populations at risk for TB. In the north of the country, homosexuality is punishable by death according to Sharia law. In addition, recent national legislation criminalizing homosexuality as well as participation in organizations that support homosexuality and banning same-sex marriage have had immediate negative consequences

[41] Draft prevalence survey report, June 2014 revision, p. 57.

for homosexual individuals and their supporters, leading to increased arrests and violence against those suspected of being homosexual. Widespread anti-homosexual discrimination will likely prevent individuals who identify as homosexual or who support homosexual rights from presenting to health facilities for treatment of any health condition, including TB. At the same time, health providers may refuse services to individuals they perceive as homosexual, out of their own prejudice or for fear of retribution from others.

The challenge of providing equitable access to health services for all Nigerians will have to address the issues of discrimination and stigma presented above.

4.6 Risk Analysis and Mitigation Plan for the NSP

The NTBLCP has identified various strategic interventions that will ensure that the identified programme goals and objectives as outlined in the 2015 – 2020 NSP are realized. Certain key threats which could contribute to low or non-achievement of the targets have been identified as follows:

I. Lack of demonstrable increase in Government funding and release at federal, state and local government levels, including non-fulfilment of Global Fund counterpart funding requirements for TB
II. Frequent and prolonged industrial strike actions
III. Widespread insecurity and civil unrest
IV. Weak health and community systems, especially at PHC level
V. Upcoming Presidential elections in 2015

Mitigating measures which can cushion the effects of the identified risks have also been laid out in the NSP and include the following:

I. Strengthened and coordinated advocacy, including specific CBO advocacy capacity building aimed at influencing policy and decision makers at all levels to allocate sufficient resources to TB control.
II. Linkage with the DPRS to ensure tracking of TB budgets and financing at all levels which will be implemented through the National Health Account, with support of the Global Fund.
III. Increased resource allocation for health and community system strengthening, by pooling funds from Government, private sector and donor funding. Targeted advocacy and policy shift in the National Health Insurance Scheme is also planned to promote the inclusion of TB services for financing by the NHIS.
IV. Strengthening of the existing community systems as well as scale up of community TB activities to provide access to TB services for people that live in hard- to–reach areas, difficult terrains and internally displaced persons arising from insecurity and civil unrest.
V. Identification of alternative health service delivery mechanisms that will ensure continued provision of TB services across all the LGAs in Nigeria during periods of industrial strike actions. These include private health facilities and community pharmacies.

VI. Collaboration with NPHCDA, as well as the HIV and Malaria Programmes to institute health system strengthening measures at all levels, especially in geographical areas with high disease burden, with special focus on the PHC level, where most TB patients access services. These measures include capacity building of service providers to promptly and effectively diagnose and manage TB, provision of adequate infrastructure and human resources, strengthening the supply chain management to ensure availability of required drugs and commodities in an integrated manner as well as increased investment and harmonization of the data management system for effective reporting.

VII. Planning for delays in activities that may result from election-related disruptions in 2015 and timing of activities to avoid disruptions to the extent foreseeable.

5 The National Strategic Plan for Tuberculosis 2015 – 2020

5.1 New strategic directions

The new information and new technology now available to the NTBLCP call for a major rethinking of the approaches the programme is using to control TB in Nigeria. The mid-term review of the national strategic plan for TB 2010 – 2015 underscored one key performance challenge that has the highest priority in this new NSP-TB: case notification. The prevalence survey results reinforced the need to strengthen case finding and diagnostic capacity to bring down the backlog of prevalent cases and prevent ongoing transmission and mortality. Many national strategies and assessments have enumerated the key health systems weaknesses that must be addressed to improve health programme performance.

This NSP-TB presents an ambitious agenda for rapid scale-up of services to achieve universal access to TB prevention, diagnosis and treatment, with an emphasis on quality, accountability, linkages between the different levels of the health system and partnerships that leverage the resources and efforts of other disease programmes and initiatives to have a greater impact for TB control.

The NTBLCP will prioritise the following approaches as part of this NSP-TB, based on a thorough analysis of available evidence:

1. Maintain and expand basic diagnostic and treatment services, with a focus on quality implementation and expand screening and referral activities to all PHC facilities to provide universal access to basic services;
2. Integrate TB screening and referral/case-finding into the routine activities of public non-TB service providers, military and paramilitary providers, private providers, faith-based organizations, community providers and community-based organizations to increase case notification at low cost;
3. Shift from passive to active case-finding in key affected populations, including PLHIV, urban slum dwellers, men, prisoners, migrants and internally displaced people, nomadic populations, children, people with diabetes and facility-based health care workers, to target those most at risk for TB;
4. Scale up use of rapid TB diagnostic technologies to serve groups at risk for missed or delayed diagnosis, including PLHIV, children, people with smear-negative TB, extra-pulmonary TB or presumptive drug-resistant TB;
5. Work with NACA and NASCP to scale up integrated TB and HIV services at the local level in the areas with the highest burden of co-infection;
6. Concentrate community-based treatment support in poor-performing areas to reduce loss to follow-up and creation of drug resistance;
7. Expand services for DR-TB based on an ambulatory model, with rigorous supervision and community-based patient support;

8. Seek cost-savings in routine activities such as training and supervision by partnering with NACA, NASCP and others;
9. Improve the procurement and supply management system to assure an adequate stock of drugs and supplies where and when they are needed and integrate the system with other disease programmes as possible to realize cost savings;
10. Design and implement an electronic reporting system that captures and analyses TB data for use in timely programme monitoring and improvement and assure its compatibility with the DHIS2;
11. Establish linkages with and coordinate stakeholders to advocate for domestic resource mobilization at federal, state and local levels; and
12. Leverage existing resources through other government agencies and initiatives to strengthen the health delivery infrastructure at the primary health care level, where TB services should be available.

While basic TB services will be expanded to cover all the country, the NTBLCP analysed existing epidemiological and performance data and has prioritized geographic regions for intensified interventions to increase case-finding in 13 states and the FCT, representing an estimated 50% of the missing cases in Nigeria. The analysis was conducted based on burden of HIV, current case notification rates and current population coverage of TB diagnostic and treatment services. Priority was given to states with a high burden of TB, a large gap in actual versus expected case notification and low coverage of services, based on a weighted ranking (see Annex 2 for a detailed description). FCT was added because of the high concentration of key affected populations within the FCT area.

The intensified intervention package will include community outreach for demand creation; active case-finding in key affected populations; public-public- and public-private mix strategies to engage key care providers in case-finding activities; scale-up of rapid diagnostic technologies; and expansion of treatment capacity to meet the increased need. States targeted for this intensified package of services include Akwa Ibom, Anambra, Bauchi, Borno, Imo, Jigawa, Kaduna, Kano, Katsina, Lagos, Oyo, Rivers and Sokoto as well as the FCT.

5.1.1 Ambitious targets

Stakeholders consulted during the development of the NSP-TB were unanimous in their desire to see the NTBLCP set ambitious targets for the 2015 – 2020 period, given the many opportunities they see to catalyse radical changes in programme performance. The new national targets for TB are presented in Table 25.

Table 25: National TB control 2013 baseline and 2020 targets for key indicators.

Key Indicators	2013 performance[42]	2020 target
Case notification (all forms)	100,451	625,844
Case notification rate (all forms)*	57/100,000	287/100,000
Treatment success rate, bacteriologically confirmed new TB cases	86%	>90%
Paediatric cases as a proportion of total notifications	5.8%	12%

[42] 2013 NTBLCP Annual Report

Proportion of eligible under-six child contacts placed on IPT	NA	100%
Percentage of TB patients who had an HIV test result	88%	100%
Percentage of HIV-positive registered TB patients receiving CPT during TB treatment	87%	100%
Percentage of HIV-positive registered TB patients receiving ART during TB treatment	67%	100%
Percentage of PLHIV who were screened for TB at last visit to an HIV care or treatment setting	68%	100%
Percentage of PLHIV without active TB placed on IPT	1.7%	>80%
DR-TB: diagnostic evaluation for those in risk groups	48%	100%
DR-TB: cases diagnosed per year (RR- and MDR-TB)	665	29,469
MDR-TB: cases diagnosed per year	NA	18,526
Proportion of confirmed DR-TB (RR- and MDR-TB) patients enrolled on treatment	65%	100%
DR-TB: treatment success rate	61% (2010 cohort)	70% (2018 cohort)
DR-TB: cure rate	52% (2011 cohort)	60% (2018 cohort)

*Based on an estimated total population of 218,263,539 in 2020. NA = Not available

5.2 The NTBLCP vision and mission and NSP goal, objectives and strategic interventions

This NSP-TB is set within the overall framework of the NTBLCP's vision and mission for TB control in Nigeria, presented below. This NSP describes in detail the steps that the NTBLCP and all of its partners must take within the next six years to address urgent challenges in TB control and to move Nigeria closer to the ultimate aim of the programme, namely a Nigeria free of TB.

It is the explicit intention of the NTBLCP to reach or exceed global targets for TB control as quickly and expediently as possible, recognizing that some targets are achievable within the scope of this six-year plan, while others will require longer-term efforts to bring Nigeria up to international standards.

Vision of the NTBLCP's TB efforts: A Nigeria free of TB.

Mission of the NTBLCP for TB: Save Nigerian lives, reach zero TB deaths and reduce the burden and impact of TB, drug-resistant TB and TB/HIV on Nigeria.

Goal of the NTBLCP: By 2025, to achieve a 50% reduction in TB prevalence rate and 75% reduction in TB mortality (excludes HIV-related TB) rate in Nigeria compared to 2013 figures.

Goal of the NSP-TB, 2015 – 2020: To ensure universal access to high-quality, patient-centred TB prevention, diagnosis and treatment services for Nigerians with all forms of TB, regardless of geographic location, income, gender, age, religion, tribe or other affiliation.

"Universal access" is a frequently used term that may have many different meanings. The stakeholders present during the development of this NSP specifically defined universal access for the purposes of this six-year plan, as follows: Universal access includes equitable access for all to:

- TB information, delivered in appropriate language through appropriate channels
- Affordable, quality health care
- Health services delivered in a convenient location and at a convenient time either in a facility or the community
- Safe and secure facilities, with safe routes to get there
- Facilities practicing appropriate infection control to avoid transmission of disease to patients, staff and visitors.
- Well-trained, knowledgeable, respectful and motivated health workers
- Rapid, reliable diagnostic tests for TB, DR-TB and HIV
- High-quality, effective drugs to treat TB, DR-TB and TB/HIV
- An appropriate and comprehensive package of client support to facilitate cure
- A supportive environment, free of stigma and discrimination

The NTBLCP and its partners will achieve the goal of providing universal access through a coordinated and client-centred approach that establishes systems and interventions that best serve people with TB. Accordingly, the NTBLCP and partners are committed to the objectives and strategic interventions presented in table 26, which are further elaborated into activities in the operational and technical assistance plan described in part 2 of this document.

Table 26: NSP goals, objectives, interventions and key indicators and targets.

NSP TB 2015 – 2020 Goal: Ensure universal access to high-quality, patient-centred TB prevention, diagnosis and treatment services for Nigerians with all forms of TB, regardless of geographic location, income, gender, age, religion, tribe or other affiliations, as a necessary interim step in achieving reductions in TB prevalence and mortality.	
Impact Indicators and Targets This NSP will contribute to the following long-term impact indicators by providing universal access to prevention, diagnosis and treatment of TB: 1. **Prevalence rate of TB** decreases from 326/100,000 in 2013 to 163/100,000 by 2025 2. **TB mortality** rate decreases from 94/100,000 in 2013 to 24/100,000 by 2025	
NATIONAL STRATEGIC PLAN OBJECTIVES, STRATEGIC INTERVENTIONS AND TARGETS	
Objective 1. Rapidly increase case finding activities and diagnostic capacity to achieve increase Case Notification Rate of all forms of TB from 57.3 per 100,000 population in 2013 to 287 per 100,000 population in 2020	
Key Indicators and Targets: 1. Case notification rate of all forms of TB increases from 57.3/100,000 in 2013 to 287/100,000 in 2020. 2. Number of all forms of TB cases notified annually increases from 100,401 (2013) to 625,844 (2020). 3. Ratio of diagnostic centres to population improves from 1:109,285 in 2013 to 1:50,000 or less by 2020.	
1.1	Strengthen and scale up diagnostic capacity strategically, focusing on high-burden areas and areas of poor coverage and maintain quality throughout the laboratory network
1.2	Implement active TB case finding in specific vulnerable populations (e.g. contacts to active TB cases, nomadic populations, migrants and IDPs, prisoners and slum dwellers) Children is in objective 3 and PLHIV in objective 4
1.3	Engage patent medicine vendors and community pharmacists, traditional healers, religious leaders and other first-points-of-contact in identification of people with TB symptoms and referral for evaluation
1.4	Engage all health facilities in intensified case finding through suspect and referral to ensure universal access to TB services
1.5	Engage FBO health facilities and private health facilities in providing TB diagnostic services

1.6	Remove/reduce financial barriers to care-seeking
1.7	Create an informed public who know TB facts, how to access services, how to get cured and what their rights and responsibilities are to support demand for universal access to services
Objective 2. Align treatment capacity scale-up with increased diagnostic capacity to reach a treatment success rate of 90% by 2020.	
Key Indicators and Targets: 1. Treatment success rate for new of drug-susceptible TB increases from 86% (2013) to 90% or more (2020).	
2.1	Maintain existing services and expand availability of treatment at facilities with diagnostic services to provide a one-stop shop for TB diagnosis and treatment
2.2	Engage FBOs and private health facilities in providing treatment services
2.3	Strengthen the referral system to minimise loss to follow-up
2.4	Maintain an adequate supply of quality-assured anti-TB drugs
2.5	Maintain existing services and expand availability of treatment at facilities with diagnostic services to provide a one-stop shop for TB diagnosis and treatment
Objective 3: Implement new strategies to improve the control of TB in children in line with the global road map for childhood TB.	
Key Indicators and Targets: 1. Proportion of total cases notified represented by paediatric TB cases increases from 6% (2013) to 12% (2020). 2. Paediatric cases achieve a treatment success rate of 90% by 2020	
3.1	Integrate TB services into other child survival strategies (Paediatric associations, department of IMCI, thoracic associations, unicef and other bi- and multilateral agencies)
3.2	Strengthen and scale up diagnostic capacity to diagnose TB in children, while maintaining quality, ensuring safety and reducing financial barriers
3.3	Align treatment capacity scale-up with increased diagnostic capacity to reach a treatment success rate of 90% in children by 2018.
3.4	Strengthen the referral system between the peripheral facilities and tertiary institutions to improve case management of complications and more severe forms of TB in children
Objective 4: Provide access to high-quality integrated services for all people co-infected with TB and HIV by 2020**.**	
Key Indicators and Targets: 1. Percentage of TB patients who had an HIV test result recorded in the TB register increases from 88% in 2013 to 100% in 2020. 2. Percentage of HIV-positive registered TB patients given anti-retroviral therapy during TB treatment increases from 67% in 2013 to 100% in 2020. 3. Percentage of HIV-positive registered TB patients given co-trimoxazole preventive therapy during TB treatment increases from 87% in 2013 to 100% in 2020. 4. Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings increases from 85% in 2013 to 100% in 2020. (NACA/NASCP target) 5. Percentage of PLHIV without active TB who receive isoniazid preventive therapy increases from 1.7% % in 2013 to 80% or more by 2020. (NACA/NASCP target)	
4.1	Strengthen mechanism for coordination of TB/HIV collaborative activities at all levels
4.2	Use the TB system to expand accessibility of HIV services and expand DOTS services to all facilities providing HIV services to enhance patient-centred treatment (one stop shop)
4.3	Build the capacity of health care workers to deliver integrated TB/HIV services
4.4	Increase TB case-finding among PLHIV, including children, through universal implementation of TB screening tools within HIV sites and in community-based care
4.5	Support provision of IPT to PLHIV through the HIV control programme
4.6	Implement infection control in facilities that treat TB and HIV
4.7	Continue expanding HCT services to all people with TB symptoms and TB disease
4.8	Provide CPT to all TB/HIV patients
4.9	Provide ART for all TB/HIV patients
4.10	Provide routine TB and HIV screening for health workers in TB/HIV facilities
4.11	TA for TB/HIV collaborative activities

Objective 5: Provide access to DR-TB diagnosis to all Presumptive DR-TB cases by 2020.	
Key Indicators and Targets: 1. Proportion of presumptive DR-TB cases who receive testing for DR-TB increases from 48% in 2013 to 100% by 2020. 2. DR-TB cases notified annually increases from 665 in 2013 to 29,469 in 2020.	
5.1	Strategically expand DR-TB diagnostic sites
5.2	Institute a standardized specimen transport system from the point of collection from presumptive DR-TB cases to DR-TB diagnostic centres for DR-TB diagnosis and treatment follow up
5.3	Increase DR-TB case finding skills among health care providers
5.4	Strengthen the DR-TB Surveillance system
Objective 6: Enrol 100% of diagnosed DR-TB patients on appropriate treatment between 2015 and 2020.	
Key Indicators and Targets: 1. Proportion of notified DR-TB patients on appropriate treatment increases from 65% in 2013 to 100% in 2020. 2. Number of DR-TB cases enrolled on treatment annually increases from 432 in 2013 to 29,469 in 2020. 3. Treatment success rate increases from 61% in the 2010 cohort to 70% in 2020.	
6.1	Provide prompt, appropriate treatment & care to all diagnosed DR-TB cases.
6.2	Assure adequate supplies of second-line and ancillary drugs and supplies
6.3	Institute appropriate infection control measures to prevent transmission of DR-TB in facilities and the community
Objective 7. Strengthen the collaboration with and capacity of community-based organizations and networks to support NTBLCP objectives and activities.	
Key Indicators and Targets: 1. Proportion of suspects identified by a CV/CBO increases from 11% to at least 30% 2. TSR among TB patients supported by TS is ≥ 90% 3. Proportion of LGAs with formal community TB care services is >25%.	
7.1	Build on the existing CSS AIDS, TB and malaria (ATM) activities under Global Fund to coordinate activities of CBOs engaged in HIV, TB and malaria control at community level.
7.2	Build the technical, managerial and administrative capacities of CBOs to provide effective support to the implementation of the National Strategic Plan of NTBLCP.
7.3	Strengthening community monitoring and evaluation system in planning, managing and improving programme performance
7.4	Strengthen the administrative functions of civil society organisations working on TB control
Objective 8. Strengthen political commitment and mobilize domestic resources at all levels to fund essential TB services in Nigeria.	
Key Indicators and Targets: 1. Domestic funding for TB control accounts for 50% of the total funding available for implementing the National Strategic Plan. 2. TB is included in major national health strategies and initiatives, including the national health insurance scheme.	
8.1	Plan and implement the 100% Campaign, a coordinated and sustained multi-disease advocacy campaign designed to mobilize public support and political commitment for TB, HIV and malaria control as an integral part of essential primary health care services, in collaboration with NACA, NASCP, Malaria, PHCDA, the Stop TB Partnership and civil society organizations
8.2	Provide advocacy training to key stakeholders, including programme managers, campaign ambassadors, civil society organizations and Stop TB Partnership members
8.3	Support civil society organizations at national, state and local levels to institute targeted advocacy campaigns for funding of TB control activities
8.4	Strengthen the Nigeria Stop TB Partnership to be functional, effective and responsive to the challenges of TB control in the country
8.5	Promote accountability and transparency of government and partners commitment to TB
Objective 9. Strengthen NTBLCP systems and capacity to support full implementation of the National Strategic Plan at all levels.	

Key Indicators and Targets: 1. Availability of well-equipped office with functional infrastructure for optimal performance of the central unit of NTBLCP. 2. Proportion of identified job positions filled by trained personnel is >90%. 3. Availability and accessibility of an electronic recording and reporting system capable of generating timely and quality data. 4. NTBLCP financial team capable of effectively and efficiently managing the finances of the TB programme. 5. Proportion of DOTS facilities that reported a stock-out in first line drugs (patient kits) that resulted in interruption of treatment during the year out of all DOTS facilities in the country is <5%. 6. NTBLCP complete and publish at least 4 research articles in international and/or local journals.	
9.1	Provide adequate infrastructure to support efficient NTBLCP functions
9.2	Develop and implement an HR development plan addressing technical skills, managerial skills and staff recruitment and retention to ensure long-term sustainability
9.3	Upgrade the existing Monitoring and Evaluation system to be more robust and be able to meet up with the increasing demand for the TBL programme at all level
9.4	Further develop the NTBLCP financial management system
9.5	Develop an efficient Procurement Supply Management system for all products at all levels
9.6	Develop an effective advocacy, communication and social mobilization system and provide adequate staff and resources for an ACSM unit at NTBLCP
9.7	Develop an effective information and communications technology system and unit for the programme
9.8	Develop and implement an operations research agenda to support attainment of TB control targets
9.9	Engage professional bodies, academic institutions and others to support training, task shifting and/or other HSS activities
Objective 10. Strengthen linkages between levels of the health system to improve management and accountability.	
Key Indicators and Targets: 1. Proportion of states with TB strategic plan (target of 100% by 2015) 2. Proportion of states with annual TB work plan (target of 100% annually from 2015)	
10.1	Conduct joint results-based action planning at federal-state and state-local levels
10.2	Maintain federal-level NTBLCP liaisons for each zone to facilitate communications, planning and supervision with zones and states
10.3	Standardize the composition and mandate of the State and LGA TBL teams to include all relevant stakeholders, especially CSO representatives and improve team function
10.4	Institute rigorous supportive supervision at all levels
10.5	Provide a results-based incentive scheme (monetary or non-monetary) to high-performing State, LGA and facilities
10.6	Programme review at all levels
Objective 11. Contribute to the strengthening of the health care system, especially primary health care, in collaboration with other disease programmes and agencies for integrated delivery of prevention, diagnosis and treatment services for TB, HIV and malaria.	
Key Indicators and Targets: 1. Number and proportion of primary health care facilities providing TB diagnostic and treatment services 2. Proportion of states experiencing TB service disruptions as a result of industrial actions is <5%.	
11.1	Strengthen the existing interagency partnership with NTBLCP, NACA/NASCP, Malaria and PHCDA to coordinate and implement efforts for health system strengthening, including PHC
11.2	Develop and implement a plan for PHC system strengthening in geographic areas critical for the three diseases
11.3	Develop and implement a plan to prevent or address service disruptions
11.4	Develop and implement a plan to provide access to TB services in areas of civil unrest

PART TWO:

Operational and Technical Assistance Plan

6. Operational and Technical Assistance plan

6.1 Purpose:

The purpose of the operational and technical assistance plan is to define the specific activities that will be implemented to achieve the targets of the NSP. The template provides for the details of what activities will be implemented, when and by whom, as well as the funding source that will support each activity. The operational and technical assistance plan will serve as a roadmap for the NTBLCP and its partners to prepare annual work plans based on agreed activities and to monitor progress toward reaching the expected outputs and outcomes described in the M&E Plan (Part 3 of the NSP). Such annual work plans will define specifics in terms of whom, when and where the activities will be implemented and the funding sources.

It also indicates, as an integral part of the document, areas in which the NTBLCP requires technical assistance, particularly in laboratory expansion, PMDT scale-up, TB/HIV integration, HMIS strengthening, PSM strengthening, CSS, advocacy, financial management and programme management. As part of its annual planning process, NTBLCP will identify technical assistance providers (drawing from in-country resources as well as external experts) and opportunities for staff skills-building through training courses and exchange visits.

This document is meant to be a working document that guides the activities of the NTBLCP and its partners. It will be revisited and revised on a regular basis to take into account changes in the situation on the ground, including changes in donors, funding, implementing partners, the political landscape and the security situation among others. Those changes will be reflected in the annual work plans of the NTBLCP and its partners.

The framework of the operational and technical assistance plan is described in table 27.

6.2 Framework of the Operational and Technical Assistance Plan

Table 27: Operational and Technical assistance Plan for NSP-TB 2015 - 2020

Operational and Technical Assistance Plan for National Strategic Plan for Tuberculosis Control 2015 - 2020												
S/N	**Strategic direction**	**Activity No.**	**Activities**	**Timeline**						Responsible Organization/s	Funding Source/s
				YR 1	YR 2	YR 3	YR 4	YR 5	YR 6		
Objective 1: Rapidly increase case finding activities and diagnostic capacity to achieve increase Case Notification Rate of all forms of TB from 57.3 per 100,000 population in 2013 to 258.1 per 100,000 population in 2020											
SI 1.1	**Strengthen and scale up diagnostic capacity strategically, focusing on high-burden areas and areas of poor coverage and maintain quality throughout the laboratory network**										
1.1.1	Strengthen national laboratory network	1.1.1.1	Conduct a 3-day meeting of 20 lab staff from various levels of the lab network across the country to review the national laboratory network organogram and develop written roles and responsibilities of each level of the laboratory network and decide on the plan for the distribution of LED microscopes and training for LED microscopy								
		1.1.1.2	Review laboratory recording and reporting tools and adaptation to new WHO definitions								
		1.1.1.3	Conduct a 3-day meeting of 15 persons to finalise the draft TB laboratory policy on test selection and use, basic inputs (equipment, supplies, infrastructure and HR), Quality Assurance, Safety, Ethics, Research and Development and Local, Regional and International Collaboration in year 1 of the NSP.								
		1.1.1.4	Print 5,500 TB laboratory policy manual for all TB laboratories (AFB-LED, *GeneXpert* and Culture lab) including buffer								
		1.1.1.5	Distribute TB laboratory policy manual to all TB laboratories (AFB-LED, *GeneXpert* and Culture lab). 2,588 in 2015, 563 in 2016, 543 in 2017, 544 in 2018, 383 in 2019 and 232 in 2020.								
		1.1.1.6	Conduct a 3 day meeting of 10 people from NTP (3), NRLs (4), ZRLs (3) to finalize NTBLCP Laboratory Strategic Plan and EQA Guidelines and Procedures manual in year 1 of the NSP.								

1.1.2	Strengthen and maintain TB laboratory infrastructure at all levels	1.1.2.1	Conduct assessment of existing 1602 AFB microscopy centres to identify infrastructural needs during routine supervision using a checklist								
		1.1.2.2	Provide basic renovation of 801 out of the existing 1602 (i.e. 50%) AFB microscopy centres								
		1.1.2.3	Procure 480 LED microscopes to replace 30% (480) of the microscopes in the existing 1602 microscopy centres in year 1 of the NSP.								
		1.1.2.4	Develop a protocol for maintenance of microscopes and other small laboratory equipment (at no cost)								
		1.1.2.5	Develop processes and procedure (SOPs) for retrieval of non-functional laboratory equipment								
		1.1.2.6	Print 5,500 SOPs on retrieval of non-functional laboratory equipment to be distributed to all labs including buffer								
		1.1.2.7	Distribution of SOPs on Retrieval of non -functional Laboratory equipment to laboratories in 37 states								
		1.1.2.8	Hire the services of a maintenance Engineer biannually for 5-days for the retrieval and repair of non-functional laboratory equipment in each of the 37 states								
1.1.3	Strengthen laboratory quality management system	1.1.3.1	Conduct a 5-day training of 52 lab staff (national, zonal and state level) on quality management of TB laboratories in year 2 and year 4 of the NSP.								
		1.1.3.2	Conduct a 3-day quarterly supervisory visits by 2 lab staff from the national (NRLs and NTBLCP), to the zonal TB reference laboratories; 8 in 2015, 8 in 2016, 8 in 2017, 8 in 2018, 8 in 2019 and 8 in 2020								
		1.1.3.3	Conduct a 3-day quarterly supervisory visit by 2 lab staff from zonal TB reference laboratories to state TB reference laboratories; 1 in 2015, 3 in 2016, 5 in 2017, 8 in 2018, 11 in 2019 and 13 in 2020.								
		1.1.3.4	Conduct quarterly supervisory visits from the state to peripheral labs; 37 State Laboratory Supervisors to visit 2302 labs in 2015, 2802 in 2016, 3302 in 2017, 3802 in 2018, 4152 in 2019 and 4352 in 2020.								
		1.1.3.5	Conduct quarterly zonal review meetings of all 37 states Quality Assurance officer and 6 zonal reference laboratory focal leads								

		1.1.3.6	Conduct a 2-day state quarterly EQA meeting for peripheral labs 2,501 in 2015, 3,053 in 2016, 3,605 in 2017, 4,158 in 2018, 4,561 in 2019 and 4,810 in 2020								
		1.1.3.6	Conduct a 2-day quarterly meeting of the national TB lab working group involving 20 persons								
		1.1.3.7	Procure laboratory consumables (see list) for preparation of panels for GeneXpert (2690 in 2015, 3290 in 2016, 3690 in 2017, 4090 in 2018, 4390 in 2019 and 4690 in 2020) and LPA sites (70 in 2015, 80 in 2016, 90 in 2017, 100 in 2018 and 100 in 2019 and 100 in 2020) once a year for the duration of the NSP								
		1.1.3.8	Support 2 resident NRL lab staff and 8 external lab staff to prepare panels for GeneXpert sites (189 in 2015, 239 in 2016, 289 in 2017, 339 in 2018, 389 in 2019 and 436 in 2020) and LPA sites (7 in 2015, 8 in 2016, 9 in 2017, 10 in 2018 and 10 in 2019 and 10 in 2020) once a year at the 2 NRLS for the duration of the NSP for 5 days each								
		1.1.3.9	Use courier to distribute GeneXpert panels to GeneXpert sites (189 in 2015, 239 in 2016, 289 in 2017, 339 in 2018, 389 in 2019 and 436 in 2020) and LPA sites (7 in 2015, 8 in 2016, 9 in 2017, 10 in 2018 and 10 each in 2019 and 2020) once a year for 6 years.								
		1.1.3.10	Procure laboratory consumables for preparation of panels for AFB Microscopy labs (25322 in 2015; 30822 in 2016; 36322 in 2017; 41822 in 2018; 45672 in 2019, 47872 in 2020) for AFB sputum smear microscopy twice a year for 6 years.								
		1.1.3.11	Support 2 resident NRL lab staff and 10 external lab staff to prepare AFB microscopy panels 2,302 in 2015; 2,802 in 2016; 3,302 in 2017; 3,802 in 2018; 4,152 in 2019, 4,352 in 2020) for AFB sputum smear microscopy at the 2 NRLs twice a year for 6 years.								
		1.1.3.12	Distribute panels for AFB microscopy to AFB microscopy sites 2,302 in 2015; 2,802 in 2016; 3,302 in 2017; 3,802 in 2018; 4,152 in 2019, 4,352 in 2020) twice a year for 6 years. (at no cost; during zonal review meeting/supervision)								

		1.1.3.13	Conduct 3 day meeting of 15 persons to review the TB laboratory SOPs for 15 persons in year 1 of the NSP								
		1.1.3.14	Print 5,500 Lab SOPs 2,588 in 2015, 563 in 2016, 543 in 2017, 544 in 2018, 383 in 2019 and 232 in 2020. (AFB, GeneXpert and Culture lab)								
		1.1.3.15	Distribute Lab SOPs 2,588 in 2015, 563 in 2016, 543 in 2017, 544 in 2018, 383 in 2019 and 232 in 2020. (AFB, GeneXpert and Culture lab)								
		1.1.3.16	Conduct a 5-day meeting of 15 persons to review the TB laboratory quality and biosafety manuals in years 2 and 5 of the NSP								
		1.1.3.17	Conduct a 3-day meeting of 8 persons to review and finalise the TB laboratory quality and biosafety manuals in years 2 and 5 of the NSP								
		1.1.3.18	Print and distribute copies of the TB laboratory quality and biosafety manuals 3,969 in 2016, 718 in 2017, 719 in 2018, 5,930 in 2019 and 324 in 2020.								
		1.1.3.19	Conduct a 5-day training of 20 national and zonal TB reference laboratories on bio-safety, bio-risk, infection control and waste management in year 3 of the NSP.								
		1.1.3.20	Support 6-day bi-annual preparation of Quality Control slides at the zonal labs by 18 persons for all AFB microscopy centres 1,215,456 in 2015, 1,479,456 in 2016, 1,743,456 in 2017, 2,007,456 in 2018, 2,192,256 in 2019 and 2,297,856 in 2020								
		1.1.3.21	Support quarterly transportation of samples of laboratory commodities from the central medical store to NTBLTC, Zaria for validation of quality of commodities								
1.1.4	Establish 2,450 sputum smear microscopy centres to reach areas without adequate diagnostic	1.1.4.1	Conduct an assessment for the identification of health facilities (public and private) for the establishment of AFB microscopy services (2015 - 400; 2016 - 500; 2017 - 500; 2018 - 500; 2019 - 350, 2020 - 200)								
		1.1.4.2	Provide basic renovation of the identified facilities to provide AFB microscopy services (2015 - 400; 2016 - 500; 2017 - 500; 2018 - 500; 2019 - 350, 2020 - 200)								

	coverage	1.1.4.3	Procure 2,450 LED microscopes for the new microscopy centres (2015 - 400; 2016 - 500; 2017 - 500; 2018 - 500; 2019 - 350, 2020 - 200)								
		1.1.4.4	Procure additional AFB microscopic lab equipment (e.g. Beaker, Bunsen burner, Gas safety tubing, Butane gas cylinders with pressure reducers, Loops nickel-chromium, Forceps, Funnel, lime-soda-glass, Laboratory gown, Loop holder, Marker pen, etc) for the 2,450 new microscopy labs 2015 -400; 2016- 500; 2017- 500; 2018 -500; 2019- 350, 2020- 200								
		1.1.4.5	Procure GDF TB lab Consumable kits (e.g. Strong carbol fuchsin, Acid alcohol 3% v/v, Methylene Blue (3g/l), Industrialized methylated spirit (95% methanol), Immersion oil, 'Lysol' 5% solution, Slides, etc.) for the 100,133,477 smears 2015 – 15,402,833; 2016 – 15,895,724; 2017- 16,404,387; 2018 - 16,929,327; 2019- 17,471,066, 2020- 18,030,140)								
		1.1.4.6	Procure additional laboratory equipment starter kit required for effective microscopy (e.g. Applicator sticks, lime-soda-glass, pack of 50, Diamond pen, pack 100, Lens tissue paper, Liquid soap for hands, etc) for the 2450 new microscopy labs 2015 -400; 2016- 500; 2017- 500; 2018 -500; 2019- 350, 2020- 200)								
		1.1.4.7	Procure Sputum containers required for effective microscopy (15,402,833 in 2015; 15,895,724 in 2016; 16,404,387 in 2017; 16,929,327 in 2018; 17,471,066 in 2019; 18,030,140 in 2020)								
		1.1.4.8	Procure microscope spare parts (bulbs, stages, X100 and X 10 objective lenses and X10 eyepiece lens, microscope maintenance kit , stage and condenser) for 30% of the newly procured microscopes 2015 -400; 2016- 500; 2017- 500; 2018 -500; 2019- 350, 2020- 200)								
		1.1.4.9	Conduct a 5-day AFB microscopy training for 2 lab staff per each of the new 2450 microscopy centres 2015 -400; 2016- 500; 2017- 500; 2018 -500; 2019- 350, 2020- 200)								

		1.1.4.10	Conduct a 2 day refresher training for 1 microscopist from each of the existing 1602 AFB microscopy centres (801 in each of 2015 and 2016)								
		1.1.4.11	Conduct a 2 day refresher training for 1 microscopist from each of the newly established 1900 microscopy centres in established from 2015 to 2018 i.e. 400 in 2017, 500 in 2018, 500 in 2019 and 500 in 2020								
1.1.5	Scale-up molecular diagnostic tools to concentrate in areas of high HIV prevalence, dense population centres and areas with concentrations of DR-TB	1.1.5.1	Procure 300 four-module GeneXpert machines and accessories including a 5-year warranty (100 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020)								
		1.1.5.2	Procure cartridges for the conduct of 3,426,000 GeneXpert tests (403,500 in 2015, 493,500 in 2016, 553,500 in 2017, 613,500 in 2018, 658,500 in 2019 and 703,500 in 2020)								
		1.1.5.3	Conduct assessment of 300 facilities for the installation of the GeneXpert machines (100 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020)								
		1.1.5.4	Provide basic renovation and upgrading of infrastructures at the identified GeneXpert sites (see basic renovation list) (100 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020)								
		1.1.5.5	Distribution of the procured GeneXperts and accessories (100 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020)								
		1.1.5.6	Install the GeneXpert machines (100 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020) at the sites								
		1.1.5.7	Conduct a 5-day Training of trainers 3 days for 1 person per 37 states and 5 persons from the central unit								
		1.1.5.8	Site based training during installation of GeneXpert machine for 4 Lab staffs, 4 Clinicians, 4 GHCW, 4 Nurses for 4 days (100 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020)								
		1.1.5.9	Purchase modems for the installation of GX alert system for all GeneXpert machines (269 in 2015, 60 in 2016, 40 in 2017, 40 in 2018, 30 in 2019 and 30 in 2020)								

		1.1.5.10	Annual subscription for the modems (269 in 2015, 329 in 2016, 369 in 2017, 409 in 2018, 439 in 2019 and 469 in 2020)								
1.1.6	Support the cost for chest-ray for diagnosis of TB among smear negative TB patients and TB in children	1.1.6.1	Provide cost for chest radiography to diagnose TB among 491,765 smear negative TB patients including PLHIV (74,499 in 2015, 77,394 in 2016, 80,399 in 2017, 83,432 in 2018, 86,455 in 2019 and 89,586 in 2020)								
		1.1.6.2	Provide cost for chest radiography for diagnosis of TB in 105, 913 children (3,431 in 2015, 5,498 in 2016, 8,211 in 2017, 11,751 in 2018, 16,394 in 2019 and 22,530 in 2020)								
SI 1.2	**Implement active TB case finding in specific vulnerable populations (e.g. contacts to active TB cases, nomadic populations, migrants and IDPs, prisoners and slum dwellers) Children is in obj 3 and PLHIV in obj 4**										
1.2.1	Develop coordinated outreach to key vulnerable groups and identification of people with symptoms through CBOs and CHWs, with a standard referral system to local diagnostic facilities.	1.2.1.1	Identify CBOs operating in areas where the key affected population are located								
		1.2.1.2	Identify health facility supervisors for CBOs no cost)								
		1.2.1.3	Develop MOUs between CBOs and local health facilities that will provide diagnosis and treatment								
		1.2.1.4	Hold a 2-day meeting of 15 persons to adapt standardized recording and reporting tools (referral forms and evaluation tools) for identification, referral and management of presumptive TB cases								
		1.2.1.5	Develop and print state level DOTS and AFB microscopy centre directory (calendar) annually for the duration of the NSP to facilitate referral and management presumptive and diagnosed TB patients								
		1.2.1.6	Develop and print national level DOTS and AFB microscopy centre directory (booklet) annually for the duration of the NSP to facilitate referral and management presumptive and diagnosed TB patients (1000 copies per year)								
		1.2.1.7	Train CBOs, CHWs and health facility supervisors together in TB education and outreach, case-finding in targeted groups, contact tracing, referral system, diagnosis, treatment, treatment support, IPCC and recording and reporting								

1.2.2	Conduct active case finding among contacts of active TB cases	1.2.2.1	Develop an SOP for tracing, screening and referring contacts of positive TB cases, including collection and transportation of sputum of contacts of smear positive TB cases								
		1.2.2.2	Procure 7000 sputum transport boxes for the transportation of sputum specimen to the DOTS centres 4000 in 2015 and 3000 in 2016								
		1.2.2.3	Train CBOs on the use of the SOP for tracing, screening and referring contacts smear positive TB cases, including collection and transport of sputum of contacts of smear positive TB cases								
		1.2.2.4	Provide support for CBOs and CHWs to carry out home visits for each smear-positive TB case to identify and evaluate contacts and collect sputum samples from those presumed to have TB (85,544 visits in 2015, 119,933 visits in 2016, 159,234 visits in 2017, 205,086 visits in 2018, 260,109 visits in 2019 and 327,679 visits in 2020)								
		1.2.2.5	Evaluate yield of contact tracing and refine approach based on data								
1.2.3	Establish innovative TB control Services in Nomadic Communities through linkages with the existing livestock health services and community volunteer system	1.2.3.1	Identify 12 States with highest population of Nomads by desk review								
		1.2.3.2	Identify a contact person for Nomads from the ministry of livestock in each of the 12 States with high population of Nomads								
		1.2.3.3	Support 2 persons from the state on a 5-day field visit to identify nomadic community leaders as well as map nomadic communities, cattle routes, resting points and DOTS Facilities along/proximal to identified nomadic communities and cattle routes in each of the 12 states								
		1.2.3.4	Conduct a-day stakeholders meeting of 20 persons including nomadic community leaders, representatives of the livestock (veterinary) health service etc on TB control among Nomads (transportation, DSA) in each of the 12 states								
		1.2.3.5	Production of radio jingles on Tuberculosis in relevant local languages								
		1.2.3.6	Airing of radio jingles thrice weekly in each State								

		1.2.3.7	Participation of focal person on TB among nomads in the quarterly state review meetings								
		1.2.3.8	Hire a short-term (one week) consultant to map cattle route, resting points, Nomadic Communities and Health Facilities along/proximal to identified Nomadic Communities and cattle route in each of the 12 states								
		1.2.3.9	Identification of 30 Community Volunteers from Nomadic Communities and 10 veterinary staff per State								
		1.2.3.10	Conduct a 2-day training of the 30 community volunteers and 10 veterinary staff on identification of presumptive TB cases among Nomads, transportation of sputum samples to AFB microscopy centres as well as result retrieval and contact tracing in each of the 12 states								
		1.2.3.11	Establish DOTS and microscopy centres within the nomadic communities where feasible or in health facilities proximal to the nomadic communities								
		1.2.3.12	Procure 10 sputum transportation boxes per each of the 12 states for transporting sputum samples to diagnostic centres								
		1.2.3.13	Support the examination of household and social contacts of all smear positive TB cases diagnosed among Nomads in each State								
1.2.4	Establish TB Control among internally displaced and migrant populations using health workers involved in quarterly national immunisation days	1.2.4.1	Identify States with internally displaced populations								
		1.2.4.2	Support 1 week consultancy to conduct mapping of camps for internally displaced population in 6 states as well as existing health facilities								
		1.2.4.3	Establish DOTS and microscopy centres within the IDPs where feasible or in health facilities proximal to the IDPs								
		1.2.4.4	Engage agencies responsible for quarterly national immunisation days at the national and each of the six states as well as WHO on the use of immunisation officers for identification of TB suspects among IDPs								
		1.2.4.5	Conduct one-day orientation of 10 immunisation officers in each of the six states on identification of presumptive TB cases and referral								

		1.2.4.6	Provide DOTS and AFB microscopy directories to the immunisation officer								
		1.2.4.7	Conduct quarterly TB screening of IDPs using SOP on TB screening as part of routine immunisation services in each of the 6 states								
1.2.5	Strengthen the capacity of prisons and their staff (including the cell captains) to diagnose and treat TB and TB/HIV patients including TB infection control (TB IC)	1.2.5.1	Organise a 2-day training of 10 persons (including health workers and cell captains on TB and HIV management, provision of patient support and TB IC) in each of the 235 prison facilities annually for the 5 years of the NSP								
		1.2.5.2	Establish 25 AFB microscopy centres including minor renovations within prison health facilities								
		1.2.5.3	Establish 100 DOTS facilities within prison health facilities								
		1.2.5.4	Conduct a 3-day meeting of 15 persons to support the finalisation of health screening tool for all inmates								
		1.2.5.5	Print health screening tools for inmate (5 booklet per prison per year x 235 prisons) while supplying other R&R tools from the respective state TB programmes								
		1.2.5.6	Install 6 Xpert machines in six high burden prison (one in each zone) and provide cartridges (part of the overall geneXpert expansion plan								
		1.2.5.7	Provide logistics support for sample movement from smaller prisons to microscopy centres								
		1.2.5.8	Support the establishment of FAST in all the Nigerian prisons								
		1.2.5.9	Upgrade and renovate six 4-bedded isolation facilities within the prison (one per zone) for the management of DR-TB patients								
1.2.6	Conduct active case finding in slum populations	1.2.6.1	Hire a consultant for 2 weeks (one per six geo-political zone) to map slum populations across the country based on an identified criteria.								
		1.2.6.2	Conduct a desk review to select 360 slum populations across the country (60 new slums in each year of the NSP)								
		1.2.6.3	Conduct a 1-day advocacy and sensitization visits to community leaders and gatekeepers (approx. 30								

			persons) in each of the slum population (60 in each year of the NSP) to facilitate entry into the community								
		1.2.6.4	Conduct a 2-day mapping of available TB services and general health services as well as structures that support them in each of the identified 60 slum populations (60 in each year of the NSP)								
		1.2.6.5	Identify and contract 2 CBOs and 50 community health workers (CHWs) in each slum (60 slums per year) to conduct quarterly community outreach campaigns and active house-to-house search for presumptive TB cases, HIV testing and counselling, collection and transportation of sputum specimen to AFB microscopy centres and retrieval of results (each campaign to last 3 weeks)								
		1.2.6.6	Develop and support locally acceptable communication methods (e.g., magnet theatre, community meetings) and teams to spread key messages about TB, HIV and malaria in the slum populations								
		1.2.6.7	Provide the community with basic TB education during the active Tb case finding activities e.g., Broadcast TB messages in local languages through MP3 players at major junctions, motor parks and markets using okada riders and roadside music players in each of the slum population (10 in each year of the NSP)								
		1.2.6.8	Establish additional DOTS centres and microscopy centres in the slum population if needed								
		1.2.6.9	Provide relevant IEC materials to increase awareness on TB in each of the slum population								
		1.2.6.10	Provide relevant recording and reporting tools in each of the slum population								
		1.2.6.11	Conduct a 3-day training of 8 CBO members, 50 CHWs and 10 health workers in each slum on community outreach campaigns, active house-to-house search, recording and reporting, sputum transportation								
		1.2.6.12	Conduct a 3-week quarterly active house-to-house search of presumptive TB cases using questionnaires, transportation of sputum samples of presumptive TB cases to microscopy centres, retrieve their results and								

			accompany TB patients to DOTS centres for treatment initiation over a year period i.e. four times in each year for the 360 slums (60 slums per year)								
		1.2.6.13	Provide logistics support to the CHWs such as provision of bags, umbrellas, rain boots, stationeries, identity cards, T-shirts to enable them carry out the case search (50 CHWs per slum x 10 slums per year)								
		1.2.6.14	Support monthly supervision of interventions by TBLs in each intervention								
		1.2.6.15	Support quarterly supervision of interventions by STBLCO in each intervention								
		1.2.6.16	Organise a launch meeting with community leaders, CBOs, volunteers and health providers to provide feedback and information-sharing twice yearly in each slum (meals for 50 persons and transportation)								
1.2.7	Conduct active TB case finding among patients with diabetes mellitus attending diabetic clinics in the 83 public and private tertiary health facilities in the country	1.2.7.1	Introductory meeting with the leadership of Endocrinologists and metabolism Society in Nigeria (EMSON)								
		1.2.7.2	Introductory meeting with the leadership of Diabetes Association of Nigeria (DAN)								
		1.2.7.3	Consensus building/sensitisation meeting with EMSON and DAN on the importance and approach of TB screening diabetic patients								
		1.2.7.4	Organise a 2-day meeting of 15 persons to discuss modalities for incorporating TB screening into routine services for patients with diabetes mellitus								
		1.2.7.5	Convene hospital-level half day meetings of 15 persons to link diabetic clinics to DOTS services within the tertiary facilities								
		1.2.7.6	Implement TB screening among diabetic patients in tertiary hospitals (12 in 2015, additional 18 each year through 2020)								
		1.2.7.7	Conduct operational researches on yield and publish results								
		1.2.7.8	Support the participation of DAN and EMSON (4 persons) in 3-day annual review meetings of the TB programme (DSA, transportation)								

SI 1.3	**Engage patent medicine vendors and community pharmacists, traditional healers, religious leaders and other first-points-of-contact in identification of people with TB symptoms and referral for evaluation**										
1.3.1	Engage first-points-of-contact in 100 high-density areas with high burdens of TB and/or HIV, as well as underserved or low-performing low-density areas for identification of presumptive TB cases and referral for evaluation	1.3.1.1	Organise a 2-day meeting of 15 persons to adapt a training manual for suspect identification, patient/client education, referral of clients to diagnostic centres and completion of relevant recording and reporting tools								
		1.3.1.2	Print 500 copies of the training manual in year 1								
		1.3.1.3	Conduct desk review to identify 24 LGAs (4 LGA - rural and urban - per state x 6 states, one from each zone) to conduct the intervention in year 1								
		1.3.1.4	Hold a one-day state level sensitization meeting with the leadership of the PMVs and CPs in the six pilot states on the importance of engagement of their organisations in TB case-finding activities								
		1.3.1.5	Support a 2-day field visit by 2 persons to conduct mapping of PMVs and CPs facilities in each of the 24 LGAs								
		1.3.1.6	Conduct a two-day training of 20 persons in each of the 24 LGAs (non-residential for participants) on identification of TB symptoms, education of clients, referral of clients, completion of forms								
		1.3.1.7	Develop and sign MOU for services with each organisation								
		1.3.1.8	Provide standardised IEC materials in several languages, referral forms, recording and reporting tools								
		1.3.1.9	Provide performance-based incentives to participants for identifying confirmed cases of TB (e.g. communication cost, cash for each confirmed case referred by the participant and certificate of recognition)								
		1.3.1.10	Support TBLS to attend quarterly meetings of patent medicine vendors in each of the 24 LGAs for review and feedback including data collection								
		1.3.1.11	Invite participating individuals to ceremony on World TB Day or at annual meeting and present high performers with certificates of recognition								

		1.3.1.12	Conduct a national level 2-day meeting of 20 persons to review the PMV/CP intervention and update the implementation plan as may be necessary								
		1.3.1.13	Scale up to remaining LGAs (i.e. approx. 24 LGAs per state) in each of the 6 pilot states in the 2nd year of the NSP.								
		1.3.1.14	Organise a 1-day meeting of 15 persons to review the training manual for suspect identification, patient/client education, referral of clients to diagnostic centres and completion of relevant recording and reporting tools based on the result of the PMV/CP engagement pilot								
		1.3.1.15	Print 3000 copies of the training manual in year 2, 4 and 6								
		1.3.1.16	Conduct desk review to identify approximately 24 LGAs in each of the 6 pilot states in year 2 (i.e. 144 LGAs) and 150 LGAs in the remaining 4 years of the NSP to conduct the PMV/CP engagement intervention								
		1.3.1.17	Support a 2-day field visit by 2 persons to conduct mapping of PMVs and CPs facilities in each 24 LGAs of the 6 pilot states in year 2 (i.e. 144 LGAs) and 150 LGAs in the remaining 4 years								
		1.3.1.18	Conduct a two-day training of 20 persons in each of the 24 LGAs of the 6 pilot states in year 2 (i.e. 144 LGAs) and 150 LGAs in the remaining 4 years (non-residential for participants) on identification of TB symptoms, education of clients, referral of clients, completion of forms								
		1.3.1.19	Develop and sign MOU for services with each organisation								
		1.3.1.20	Provide performance-based incentives to participants for identifying confirmed cases of TB (e.g. communication cost, cash for each confirmed case referred by the participant and certificate of recognition)								
		1.3.1.21	Support TBLS to attend quarterly meetings of patent medicine vendors 24 LGAs of the 6 pilot states in year 2 (i.e. 144 LGAs) and 150 LGAs in the remaining 4 years of the NSP for review and feedback including								

			data collection								
		1.3.1.22	Invite participating individuals to ceremony on World TB Day or at annual meeting and present high performers with certificates of recognition								
SI 1.4	**Engage all health facilities in intensified case finding through suspect and referral to ensure universal access to TB services**										
1.4.1	Ensure all registered health facility provide a minimum of TB services by identifying and referring presumptive TB cases to health facilities where TB diagnostics services can be obtained	1.4.1.1	Organize a one-day sensitisation meeting with State programme managers on strategic expansion to all health facilities in each state								
		1.4.1.2	Conduct an LGA-level one-day on-site sensitization training for 2 facility staff per each of the 30,098 primary health care facilties in the country on identification, referral and management of presumptive TB cases (45 persons per session i.e. 446 sessions per year for the 1st 3 years of the NSP. cost for local transport, hall and meals and DSA for 3 facilitators per session)								
		1.4.1.3	Conduct one-day on-site sensitization training for facility staff and managers from different service points within each of the 4075 secondary and tertiary health facilities on identification, referral and linkages to DOTS services within the facility (average of 20 health workers per facility i.e 680 sessions in each year of the NSP period)								
		1.4.1.4	Provide IEC materials on TB signs and symptoms, local DOTS directory and referral forms to the facilities								
SI 1.5	**Engage FBO health facilities and private health facilities in providing TB diagnostic services**										
1.5.1	Identify Faith-based and private health facilities including stand-alone laboratory centres for the establishment of TB diagnostic services (including	1.5.1.1	Support a 5-day field visit to conduct mapping of available private and FBO facilities including stand-alone laboratory centres in each of the 37 states								
		1.5.1.2	Conduct a one-day state level stakeholders' meeting with the association of private health practioners at the state level x 37 states (15 persons)								
		1.5.1.3	Conduct a one-day national level stakeholders' meeting with the 20 FBOs health management boards/National secretariat (50 persons)								
		1.5.1.4	Conduct a one-day state level stakeholders' meeting with FBOs from district/diocesan 37 states (25 persons)								

	microscopy, molecular diagnostic services as well as culture and DST)	1.5.1.5	Conduct an assessment of health facilities for the establishment of microscopy centres in 30% of the projected 2450 microscopy centres as part of the general microscopy centre expansion to determine the suitability of the facilities to provide AFB microscopy services									
		1.5.1.6	Conduct a 5-day AFB microscopy training for 2 DOTS providers per each of the projected 30% of the 2450 AFB microscopy centres (735) to be cited in FBO and private facilities (120 in 2015, 150 in 2016, 150 in 2017, 150 in 2018, 105 in 2019 and 60 in 2020)									
		1.5.1.7	Conduct refresher trainings for lab staff									
		1.5.1.8	Provide relevant equipment and lab consumables for the established labs									
		1.5.1.9	Organise a 5-day meeting of 15 persons to review the guideline for engagement of private health facilities in TB care and management (PPM guideline)									
		1.5.1.10	Develop relevant MOUs for the engagement of private health facilities in each scheme of engagement									
		1.5.1.11	Print 500 copies of the PPM guideline in years 1 and 4									
		1.5.1.12	Sign MOUs with participating facilities									
		1.5.1.13	Recognize high-performing facilities at an annual ceremony									
		1.5.1.14	Conduct a 5-day training of trainers among existing providers from FBO and private health facilities (3 persons per state x 37 states) to support training of DOTS providers from private and FBO health facilities									
		1.5.1.15	Establish supervision and monitoring system between the FBO/Private health facilities and the state TB programmes									
SI 1.6	**Remove/reduce financial barriers to care-seeking**											
1.6.1	Provide financial support for indigent patients	1.6.1.1	Through CBO advocacy, develop community emergency funds scheme to support urgent needs of indigent families needing services									
		1.6.1.2	Establish community escort service and provide transport funds for them for accompanying patients to health facilities; assume 500,000 visits per year x 2 persons x N250									

1.6.3	Pilot community sputum collection points to increase accessibility of diagnosis	1.6.3.1	Train and supervise 500 community-based sputum collectors in five most densely populated states , including training in infection control								
		1.6.3.2	Provide supplies and equipment, including PPE								
		1.6.3.3	Provide funding for sputum collectors to transport specimens to nearest health facility								
		1.6.3.4	Send specimens to diagnostic facility through NTBLCP specimen transport system								
		1.6.3.5	Develop and implement mobile-phone based results reporting system and compensate users for texting costs								
SI 1.7	**Create an informed public who know TB facts, how to access services, how to get cured and what their rights and responsibilities are to support demand for universal access to services**										
1.7.1	Implement a branded, multi-disease education campaign (linked with the advocacy campaign in Objective #8 below) designed to educate the public on TB, HIV and malaria	1.7.1.1	Contract an organization with expertise in social marketing and public education to develop TB communication messages								
		1.7.1.2	Conduct 24 focus group discussions (15 per FGD) with key affected populations and the general public to augment information available in the TB KAP survey by the engaged organisation								
		1.7.1.3	Based on the focus group findings, conduct a 4-day meeting of 15 persons to develop TB messages (IEC materials, radio jingles, etc)								
		1.7.1.4	Carry out a 3-day field testing of the TB messages across the six geo-political zones (2 persons for each zone)								
		1.7.1.5	Integrate TB and TB/HIV messages into existing HIV radio communication messages of SFH.								
		1.7.1.6	Print appropriate IEC materials (on TB signs and symptoms, Basic facts on TB, Treatment adherence and local DOTS directory) in English and various local languages to be used to create awareness on TB at slums, health facilities and first-points-of-contacts								
		1.7.1.7	Support airing of radio jingles in national and state radio stations								
		1.7.1.8	Produce 10,000 wall plaques (1 metre by 1.5 metre) of the TB patient's charter								
		1.7.1.9	Distribute the 10,000 copies of the plaque								

Objective 2: Align treatment capacity scale-up with increased diagnostic capacity to reach a treatment success rate of 90% by 2020											
SI 2.1	**Maintain existing services and expand availability of treatment at facilities with diagnostic services to provide a one-stop shop for TB diagnosis and treatment**										
2.1.1	Map existing DOTS and microscopy centres and develop a scale up plan for DOTS centres	2.1.1.1	Collate the number of existing DOTS and microscopy centres disaggregated by LGAs and states								
		2.1.1.2	Develop a scale up plan for DOTS centres using a projection of 1 DOTS centre per 25,000 population								
		2.1.1.3	Align the siting of DOTS centres with the microscopy centres to provide a one-stop shop								
2.1.2	Refurbish existing DOTS centres	2.1.2.1	Develop an assessment tool and reporting template for the assessment of the state of infrastructure of existing DOT, Laboratory centres								
		2.1.2.2	Train all STBLCO, LGTBLS on the use of the assessment tool and reporting template during the quarterly Zonal and state review meeting								
		2.1.2.3	Carry out a LGA level assessment of all existing DOTS centres to determine the state of structural functionality of the DOTS centres and microscopy centres in all 774 LGAs								
		2.1.2.4	Compute a state level summary of the assessment report								
		2.1.2.5	Provide basic structural refurbishment of 30% (1707 DOTS centres) of the existing 5689 DOTS centres over the first three years of the NSP								
2.1.3	Maintain TB treatment services in existing DOTS centres	2.1.3.1	Conduct a 3-day refresher training for 2 DOTS providers per each of the existing 5689 DOTS centres over the first three years of the NSP (24 persons per session. i.e. 158 in 2015, 158 in 2016 and 158 in 2017)								
		2.1.3.2	Provide necessary recording and reporting tools for the existing 5389 DOTS centres and 774 LGAs								
		2.1.3.3	Provide IEC materials on treatment adherence (patient handbook and flyers) to all existing DOTS centres based on the DOTS scale up plan								
2.1.4	Provide treatment	2.1.4.1	Hire a consultant (10 days consultancy) to develop a strategic DOTS expansion plan								

	services in new DOTS centres based on the scale up plan	2.1.4.2	Identify 3050 health facilities for the establishment of DOTS services based on the expansion plan (500 in 2015, 600 in 2016, 600 in 2017, 500 in 2018, 450 in 2019 and 400 in 2020)								
		2.1.4.3	Carry out an LGA level assessment of identified health facilities to determine the state of structural functionality of the facility to provide DOTS services at all 774 LGA annually for the period of the NSP; two sites per day								
		2.1.4.4	Compute a state level summary of the assessment report								
		2.1.4.5	Provide basic structural refurbishment of the proposed 3050 DOTS centres (500 in 2015, 600 in 2016, 600 in 2017, 500 in 2018, 450 in 2019 and 400 in 2020)								
		2.1.4.6	Conduct a 5-day training for 2 DOTS providers per each of the proposed 3050 DOTS centres (24 persons per session) as per the expansion plan (500 in 2015, 600 in 2016, 600 in 2017, 500 in 2018, 450 in 2019 and 400 in 2020								
		2.1.4.7	Provide necessary recording and reporting tools for the estimated number of TB patients per year (163,383 in 2015, 229,063 in 2016, 304,126 in 2017, 391,700 in 2018, 496,788 in 2019 and 625,844 in 2020)								
		2.1.4.8	Provide IEC materials on treatment adherence to all newly established DOTS centres (500 in 2015, 600 in 2016, 600 in 2017, 500 in 2018, 450 in 2019 and 400 in 2020)								
		2.1.4.9	Conduct a 3-day refresher training for 2 DOTS providers per each of the DOTS centres established in years 1, 2 and 3 of the NSP in 2018, 2019 and 2020 respectively (24 people per training session)								
		2.1.4.10	Quarterly supportive supervision by the state TB programme managers to at least 2 DOTS centres per LGA per quarter (budgeted in objective 10)								
		2.1.4.11	Monthly supportive supervision by TBLS to all DOTS sites per month (budgeted in objective 10)								

SI 2.2	**Engage FBOs and private health facilities in providing treatment services**										
2.2.1	Advocacy to owners and management of the private health facilities and FBOs (combined with activity 1.5.1))	2.2.1.1	Conduct mapping of available private and FBO facilities in each of the 37 states								
		2.2.1.2	Conduct a one-day stakeholders' meeting with the association of private health practioners at the state level x 37 states								
		2.2.1.3	Conduct a one-day stakeholders' meeting with the FBOs health management boards/National secretariat								
		2.2.1.4	Conduct a follow-on one-day stakeholders' meeting with FBOs at district/diocesan levels x 50 dioceses (								
		2.2.1.5	Conduct an assessment of the health facilities 30% of the proposed 3,050 DOTS centres (915) to determine the suitability of the facilities to provide treatment services at LGA levels (at no cost. combined with other facility assessments)								
2.2.2	Establish 30% of the proposed 3,050 DOTS centres (915) in FBOs and Private Health facilities as part of the general DOTS expansion plan	2.2.2.1	Conduct 5-day training for 2 persons per each of the 915 DOTS centres that will be sited in FBO and private facilities (150 in 2015, 180 in 2016, 180 in 2017, 150 in 2018, 135 in 2019 and 120 in 2020)								
		2.2.2.2	Provide recording and reporting tools to the established DOTS centres								
		2.2.2.3	Conduct a 3-day refresher training for 2 DOTS providers per each of the 150 and 180 DOTS centres established year 1 and 2 respectively of the NSP in 2017 and 2018 respectively								
2.2.3	Advocacy to owners and management of the private health facilities and FBOs	2.2.3.1	NTBLCP meeting to review latest treatment success trend data stratified by LGA and to determine target areas for CTBC intervention over the next six years								
		2.2.3.2	Identify CBOs/CHWs working in those areas. Use ATM CBOs and CHWs engaged in case-finding and outreach activities under Objective 1 to provide continuing treatment support to identified TB cases.								
		2.2.3.3	Train CBOs and CHWs along with health facility DOTS staff in TB treatment, DOT, patient support, monitoring for medication side effects, case-holding and transfer out processes								

		2.2.3.4	Provide CBOs and CHWs with sufficient funds for transport to perform home visits and provide DOT to people with TB (40% of notification numbers)								
		2.2.3.5	Provide CBOs and CHWs with supplies to conduct home visits and DOT, including bags, umbrellas, educational materials								
		2.2.3.6	Designate health facility supervisor for CTBC activities and individuals (as in Objective 1)								
		2.2.3.7	Provide financial support for monthly supervision and monthly meetings of facilities, CHWs and CBOs								
		2.2.3.8	Review performance quarterly and make changes to processes and policies as needed								
		2.2.3.9	Reward high-performing CBOs and CHWs annually (1 CBO and 2 CHWs per State @ USD500 each annually)								
SI 2.4	**Strengthen the referral system to minimise loss to follow-up**										
2.4.1	Establish an electronic sms monitoring system to ensure completed referral	2.4.1.1	Develop an electronic sms alert network among LGTBLS and DOTS providers								
		2.4.1.2	Procure smart phones								
		2.4.1.3	Train and orientate all TBLS and DOTS providers on the use of the network to send a closed loop sms alert on referrals and transfers (one day training)								
		2.4.1.4	Evaluate use on a quarterly basis and refine the system as needed to ensure follow-up of transferred cases								
2.4.2	Strengthen the functionality of the existing referral tool	2.4.2.1	Adapt existing referral tools to include phone numbers of HCWs in the referral loop and treatment supporter								
		2.4.2.2	Monthly local government based referral review meeting of DOTS providers with the TBLS								
SI 2.5	**Maintain an adequate supply of quality-assured anti-TB drugs**										
2.5.1	Procure and distribute quality assured anti-TB drugs for drug-susceptible TB patients	2.5.1.1	Procure quality-assured first line anti-TB drugs for the treatment of 1,984,853 all forms of adult TB patients (151,946 in 2015; 210,738 in 2016; 276,755 in 2017; 352,530 in 2018; 442,141 in 2019 and 550,743 in 2020).								

Objective 3: Implement new strategies to improve the control of TB in children in line with the global road map for childhood TB.											
SI 3.1	**Integrate TB services into other child survival strategies (Paediatric associations, department of IMCI, thoracic associations, unicef and other bi and multilateral agencies)**										
3.1.1	Build alliance with key partners	3.1.1.1	Provide refreshment for 10 people to develop a standardized protocol for integration with other stakeholders outside the TB programme.								
		3.1.1.2	Support 1 day meeting for 20 members of the NTWG for childhood TB - twice a year								
		3.1.1.3	Support 30 persons for a 2 days stakeholders meeting/platform for meeting with other agencies at regular intervals - annually								
		3.1.1.4	Support 7 persons for a 2 days Joint Advocacy visit to professional stakeholders on issues of policy changes and integration into their training curriculum (Professional bodies, Private, Media, political, UNICEF, Conferences)								
		3.1.1.5	Support 5 persons for a day follow-up Joint Advocacy visit on activity 3.1.1.4 in 4 - 6 months later in the same year								
		3.1.1.6	Support the conferences of 3 associations (Paediatric, NISPID and National Thoracic Society) annually (one session during the conferences)								
		3.1.1.7	Support the participation of 2 persons to 2 local conferences of Paediatric associations (NISPID and any other) annually								
		3.1.1.8	Support the participation of 2 persons to 2 international conferences of Paediatric associations (NISPID and any other) annually								
SI 3.2	**Strengthen and scale up diagnostic capacity to diagnose TB in children, while maintaining quality, ensuring safety and reducing financial barriers**										
3.2.1	Build the capacity of health care providers (Paediatricians, Medical officers, Nurses, LGTBLS,	3.2.1.1	Support 15 persons for a 3 days meeting to adapt existing training curriculum, modules and desk guide for training of all cadre of health care providers								
		3.2.1.2	4 days training on management and control of TB in children for 188 participants in the 1st year (2 Doctors and 2 nurses/health workers from 23 teaching hospitals, 21 FMCs, NTBLTC Zaria, NIMR and National hospital). 25 people per training								

	Community volunteers, Treatment supporters, DOTS providers, CHEW and J-CHEWs) to be able to identify presumptive TB cases in children, collect appropriate specimen samples and refer for bacteriology especially GeneXpert test	3.2.1.3	4 days training on management and control of TB in children for 444 participants in the 1st and 2nd year (2 Doctors and 2 nurses/health workers from 2 GH and 1 Specialist hospital per State x 37 States). 25 people per training								
		3.2.1.4	4 days training on management and control of TB in children for 72 participants in the 1st year (2 Doctors and 2 nurses/health workers from 3 Paediatric Specialist hospitals per x 6 zones). 25 people per training								
		3.2.1.5	4 days refresher training on management and control of TB in children for 57 participants (30% of participants trained in 3.2.1.2) in the 3rd and 4th year. 30 people per training session								
		3.2.1.6	4 days refresher training on management and control of TB in children for 134 participants (30% of participants trained in 3.2.1.3) in the 3rd and 4th year. 30 people per training session								
		3.2.1.7	4 days refresher training on management and control of TB in children for 22 participants (30% of participants trained in 3.2.1.4) in the 3rd year.								
		3.2.1.8	Provide resources for movement of the following numbers (2014 - 121,000; 2014 - 206,400; 2015 - 324,000; 2016 - 488,000; 2017 - 667,480) of sputum samples to GeneXpert diagnostic centres								
		3.2.1.9	Support for cost of X-ray services (should be part of the programme estimation for adult)								
3.2.2	Contact tracing	3.2.2.1	Empower and build capacity of lower cadres on screening for eligibility for INH								
		3.2.2.2	Support 5% of all smear positive cases (this will be approximately estimated as (31,512 in 2015; 32520 in 2016; 33561 in 2017; 34634 in 2018; 35,743 in 2019; and 36,887 in 2020) with 2,000 naira transport allowance to bring their contacts - their children less than 6yrs to the facility for screening for TB								
3.2.3	Ensure updated and availability of guidelines	3.2.3.1	Support 20 persons for 4 days meeting to review training curriculum, modules and desk guides in 2017 and 2019								

	and desk guides	3.2.3.2	Support 10 persons for 4 days to finalize the training curriculum, modules and desk guides								
		3.2.3.3	Printing and dissemination of (1000 copies of training modules and 7,000 copies of desk guide - in 2017 and 2019) and (1,000 copies of training modules and 7,000 copies of desk guide - in 2019)								
SI 3.3	**Align treatment capacity scale-up with increased diagnostic capacity to reach a treatment success rate of 90% in children by 2018.**										
3.3.1	Build the capacity of health care providers LGTBLS, CVs, TS, DOTS providers, to be able to diagnose TB and place them on appropriate treatment regimen.	3.3.1.1	This is captured as part of the training curriculum and capacity building training discussed in activity 3.2.1.2 to 3.2.1.6. This is at no cost								
3.3.2	Ensure continuous availability of quality paediatric anti-TB drugs	3.3.2.1	Procure quality-assured first line anti-TB drugs for the treatment of paediatric TB patients (11,437 in 2015; 18,325 in 2016; 27,371 in 2017; 39,170 in 2018; 54,647 in 2019 and 75,101 in 2020)								
3.3.3	Provide all eligible child contacts with IPT according to national guidelines	3.3.3.1	Procure INH for child contacts witout active TB								
	Task shifting diagnosis and treatment of TB in children in Nigeria	3.3.4.1	Support 4 persons for a 2 days advocacy visit to various professional bodies concerning task shifting. This will be 2 visits in a year for 2015, 2018 and 2020.								

SI 3.4	**Strengthen the referral system between the peripheral facilities and tertiary institutions to improve case management of complications and more severe forms of TB in children**										
3.4.1	Linking of peripheral facilities to one tertiary hospital using the spoke and hub system	3.4.1.1	Support refreshment for 15 persons for a 2 days brainstorming meeting to assess and identify one tertiary/secondary facility where all lower facilities could refer children to in every senatorial district in the State								
		3.4.1.2	Support 2 days consensus meeting of 20 persons to develop a guideline for the engagement of focal points at no cost. The childhood TB TWG could help to do this activity								
		3.4.1.3	Support Quarterly communication cost at 5,000 Naira for the 258 focal persons above								
		3.4.1.4	Build the capacity of peripheral facility staffs for the referral process - This is already part of the training curriculum as captured in activity 3.2.1								
		3.4.1.5	Support transportation allowance of 2,000 naira for the transfer of the following numbers (2015 - 3,431; 2016 - 5,498; 2017 - 8,211; 2018 - 11,751 and 2019 - 16,394; 2020 - 22,530) of patients to and fro the lower facilities to the higher facilities for TB services								
Objective 4: Provide access to high-quality integrated services for all people co-infected with TB and HIV by 2020											
SI 4.1	**Strengthen mechanism for coordination of TB/HIV collaborative activities at all levels**										
4.1.1	Quarterly meetings of TB/HIV working groups at all levels	4.1.1.1	Conduct 1 day quarterly meetings of the National TB/HIV working group								
		4.1.1.2	Conduct 1 day quarterly meetings of the State TB/HIV working group (Meeting of 25 person. Local meeting)								
		4.1.1.3	LGA TB/HIV monthly coordination meetings of the PHC coordinator, Medical officer of Health, LGA TBLS , LGA HIV focal and Facility staff person for data reconciliation								
		4.1.1.4	Conduct 1 day facility TB/HIV monthly meetings to strengthen intra-facility linkage in all comprehensive centres, 700 in year 1 and 100 additional yearly, increasing(to be part of the HIV facility meeting								

4.1.2	Revise TB/HIV policy , guidelines and training materials	4.1.2.1	Conduct expert meetings to review TB/HIV policy and guidelines - Guidelines for clinical management of TB/HIV related conditions in Nigeria; National 3Is guidelines; HIV operational manual in 2015 and 2018 (5 days meeting of 25 participants ,									
		4.1.2.2	Expert meetings to finalize the TBHIV policy and Guidelines for clinical management of TB/HIV related conditions in Nigeria; National 3Is guidelines; HIV operational manual (4 days meeting of 15 participants in 2015 and 2018)									
		4.1.2.3	Print and distribute copies of Guidelines for clinical management of TB/HIV related conditions in Nigeria (8,000 copies in 2015, 10, 000 copies in 2018)									
		4.1.2.4	Print and distribute copies of National 3Is guidelines (8000 in 2015, 10000 in 2018)									
		4.1.2.5	Print and distribute copies of HIV operational manual to all HIV delivery centres (10,000 in 2018)									
		4.1.2.6	Conduct 4 day meeting to adapt all the SOPs for TB/HIV collaborative activities, including IC checklist, ICF signage, TBHIV leaflets etc. (4 day meeting of 20 participants in 2015 and in 2018)									
		4.1.2.7	3 day meeting to finalize all the SOPs for TB/HIV collaborative activities, including IC checklist, ICF signage, TBHIV leaflets (3 day meeting of 15 participants in 2015 and one in 2018)									
		4.1.2.8	Print, laminate and distribute (i) SOPs for TB/HIV collaborative activities, (ii) TB/HIV leaflets (iii) TB IC posters/signage (iv) SOPs on ICF (12000 in 2015, 14000 in 2018)									
		4.1.2.9	Conduct expert meetings to review training material for TB/HIV collaborative activities and management. The training materials include Facilitator guide, participants manual, standard power points package (5 day meeting of 20 participants in 2015 and 2018)									
		4.1.2.10	Conduct expert meetings to Finalize training material for TB/HIV collaborative activities and management (4 day meeting of 15 participants in 2015 and 2018)									

		4.1.2.11	Print and distribute copies of TB/HIV training document (i) Facilitators guide - 1000 copies in 2015 and 1200 copies in 2018 (ii) participants manual - 10,000 copies in 2015 and 15,000 copies in 2018								
4.1.3	Build capacity on TB/HIV programme management	4.1.3.1	5-day training of State TB team and State HIV team on TB/HIV programme management at the Zonal levels, 6 participants to be trained per state comprising of STBLCO, State TB M&E officer, SAPC, State HIV M&E Officer and SACA (cost for 8 Zonal trainings, 1 training per zone with the exception of NW and SS with two trainings; 28 participants per training, 6 night DSA, cost of local transportation within the region, venue, meeting materials, courier, lunch and tea break also cost for 3 facilitators								
		4.1.3.2	3 day training of PHC coordinator, Medical officer of health, LGA TBLS and LGA HIV focal person on TB/HIV programme management in 2015								
		4.1.3.3	Conduct Annual National TB/HIV review meetings/ Retreat with key stakeholders. 2 day meeting comprising of 37 SAPC and 37 STBLCO, 6 NTBLCP, 6 NASCP,6 NACA, 20 PARTNERS (To include cost of press coverage) -								
SI 4.2	**Use the TB system to expand accessibility of HIV services and expand DOTS services to all facilities providing HIV services to enhance patient-centered treatment (one stop shop)**										
4.2.1	Expand ART services to DOTS centres	4.2.1.1	Consensus meeting of TB and HIV programmes to discuss the expansion plan and also the assessment tool for selection of DOTS centres to provide ART services (at no cost, to be done during TB/HIV working group meeting in 2014 using the existing support,) (Update mapping of ART and DOTS services to identify current gaps								
		4.2.1.2	Conduct assessment of selected DOTS centres for ART expansion (ART service delivery by DOTS staff in selected facilities) in 12+1 states (high burden HIV states) in year 1, 12 states in year 2 and 12 states in year 3 ; (3 day visit of 3 person per state comprising of 2 programme staff from TB and HIV programme and 1 HIV Implementer								

		4.2.1.3	Support infrastructural upgrading of selected facilities, unit to be renovated include DOTS clinic, Pharmacy, Laboratory, Waiting areas								
		4.2.1.4	Provide equipment and reagents for CD4 count, viral load, chemistry and other materials such as Fans, TV of the selected facilities (this to be costed NACA/NASCP)								
		4.2.1.5	Support transportation of Blood specimen for baseline chemistry and other tests. OR patient transportation (23,219 patients in 2015; 32,841 in 2016; 40,144 in 2017; 43,086 in 2018, 43,717 in 2019, 41,306 in 2020) - for patient transportation cost N1,000 per patients (this to be costed NACA/NASCP)								
		4.2.1.6	Build capacity of facility staffs to provide ART (cost for 10 days training of 6 staff (2 DOTS staff, pharmacy staff, ART nurse, Medical officer) per facility providing DOTS services from 100 DOTS facility annually, 24 batches of training, 25 participants per training, 3 facilitators (1 local, 2 from outside per training) (this to be costed NACA/NASCP)								
		4.2.1.7	Conduct 5 days training for 2 Lab staff per facility from 50 facilities providing DOTS services annually on the use of CD4 and other necessary machines (6 zonal trainings to be organizaed with an average of 17 participants per training, 2 facilitators per training from outside) - (this to be costed NACA/NASCP)								
4.2.2	Expand DOTS services to ART centres	4.2.2.1	Update mapping of ART and DOTS services to identify current gaps								
		4.2.2.2	Conduct assessment of ART centres without DOTS services to identify infrastructural and HR gaps (state level visits of STBLCO, SAPC, NPO;								
		4.2.2.3	Support Infrastructural upgrade of ART centre for provision of DOTs treatment and microscopy services (average of 100 facilities per year (old and annual) at $2000 per facility,)								

		4.2.2.4	Provide porta-Cabin for AFB microscopy services and GeneXpert in Facilities where there is no space for AFB Laboratory services. To be provided for 12 facilities annually at a cost of $10,000/cabin including flooring, installation, workbenches, water system)								
		4.2.2.5	Expand DOTS Treatment services to identified ARV sites without such services including private facilities by organizing a 5 day training for 2 staff per facility for an average of 200 facilities annually (priority will be given to ART sites)								
		4.2.2.6	Organize a day training for all general staff in the health facilities providing ART services on Suspect and Referral to ensure early identification of presumptive TB cases								
		4.2.2.7	Expand DOTS microscopy services to identified ARV sites without such services including private facilities by organizing a 5 day training for 2 staff per facility for an average of 200 ART facilities annually								
		4.2.2.8	Procure and install LED Microscopes in 200 ART facilities annually and LED reagents kits from GDF								
		4.2.2.9	Support procurement of Rifabutin150mg and loose HZE for 400 PLHIV by 2015, 600 by 2016, 800 by 2017, 1000 by 2018, 1200 by 2019, 1400 by 2020 through CHAI price concessional initiative (6 months treatment for PLHIV on 2nd line ART who developed TB) - a patient will required an average of 168 caps of Rifabutin while on treatment								
SI 4.3	**Build the capacity of health care workers to deliver integrated TB/HIV services**										
4.3.1	Train Health workers to provide joint TB/HIV services	4.3.1.1	Conduct 5 day training for Health workers from DOTS centres on provision of integrated TB/HIV services - incorporated into the DOTS training (500 Facilities in 2015, 600 in 2016, 600 in 2017, 500 in 2018, 450 in 2019 and 400 in 2020)								
		4.3.1.2	Train ART staff to provide DOTS service to enhance one-stop-shop strategy including ICF among PLHIV , by conducting a 5 day training for 3 ART staff per facility (2GHW and MO) for an average of 100 facilities annually								

SI 4.4	**Increase TB case-finding among PLHIV, including children, through universal implementation of TB screening tools within HIV sites and in community-based care**										
4.4.1	Build capacity of the staffs from the HIV service delivery sites (ART, HCT, PMTCT) on ICF among PLHIV	4.4.1.1	Conduct training of HIV facility staff from 100 ART facilities annually on ICF among PLHIV (Combined training of ART staff to provide DOTS services in 4.3.1.2)								
		4.4.1.2	Produce and distribute SOPs on ICF to all ART sites								
		4.4.1.3	Produce and distribute ICF signage for the 100 ART facility (average of 6 per facility cost in 4.1.2.8)								
4.4.2	Implement active TB case-finding activities for PLHIV through CBOs providing community-based HIV services and PLHIV support groups	4.4.2.1	Map all HIV support groups by Communities, LGAs and States to be done by staff from NEPWAN, ATM network, NASCP, NTBLCP, NASCP.								
		4.4.2.2	Map CBOs providing community based HIV services by Communities, LGAs and States (combined with 4.4.2.1)								
		4.4.2.3	Organise a 5-day meeting of 15 persons to Review ATM training manual for CBOs to incorporate TB screening and also adapt TB screening tool								
		4.4.2.4	Conduct a day sensitization meeting with the leaders of support groups during the State level support group meeting (40 participants per state including SAPC, SACA and STBCLO) for the 36 states and FCT								
		4.4.2.5	Distribute SOPs on ICF, treatment adherence and state DOTS directory to HIV support groups during the training in 4.4.2.4								
		4.4.2.6	Conduct 2 day training for peer counsellor to support ICF among PLHIV at the facility level for 518 peer counsellors (14 peer counsellors per state) at the state level.								
		4.4.2.7	Provide incentive/transportation for peer counsellor (members of HIV support groups) to support ICF among PLHIV in 5 high burdened ART facilities per state @ $130/month/peer counsellor for 5 peer counsellor per state for the 37 states								
4.4.3	Expand access of PLHIV to TB	4.4.3.1	Procure 317 four-module geneXpert machines and accessories								

	rapid diagnostic tool	4.4.3.2	Support annual procurement and distribution of cartridges for testing PLHIV for TB								
SI 4.5	**Support provision of IPT to PLHIV through the HIV control programme**										
4.5.1	Support the procurement and distribution of INH for PLHIV	4.5.1.1	Implement coordinated needs forecasting system with NTBLCP and NASCP PSM								
		4.5.1.2	Procure and distribute 6 month INH300mg for IPT among PLHIV (136,686 in 2015; 203,159 in 2016; 271,347 in 2017; 344,156 in 2018; 421,469 in 2019 and 503,924 in 2020)								
		4.5.1.3	Procure and distribute Pyridoxine for PLHIV on IPT (136,686 in 2015; 203,159 in 2016; 271,347 in 2017; 344,156 in 2018; 421,469 in 2019 and 503,924 in 2020)								
4.5.2	Build capacity of HIV service delivery centres to implement IPT	4.5.2.1	Sensitization/consensus meetings with IPs, ART site coordinators from comprehensive sites in 6 zones to enhance uptake of IPT among PLHIV (2 day meeting with 30 participants per zonal meeting for 6 zonal meeting, 3 facilitators per meeting)								
		4.5.2.2	Conduct 5 day training of facility staff from 100 ART sites annually to implement IPT								
		4.5.2.3	Produce cards and registers for IPT among PLHIV (IPT Cards - 205,124 in 2015, 304,739 in 2016; 407,021 in 2017; 516,234 in 2018; 632,204 in 2019 and 755,886 in 2020.) for the IPT registers for PLHIV - 1000 copies to be printed in 2015; 1,200 in 2016; 1,400 in 2017; 1, 600 in 2018, 1,800 in 2019; 2,000 in 2020								
SI 4.6	**Implement infection control in facilities that treat TB and HIV**										
4.6.1	Build capacity to implement TB -IC	4.6.1.1	Conduct a 4 day TOT for master trainers on IC including FAST strategy ICF and IPT in line with National Guidelines (50 Participants in 2 batches)								
		4.6.1.2	Conduct 5 day Training facility staffs from 100 facilities providing TB and ART services annually on infection control including FAST strategy, ICF and IPT (6 participants per facility - 2 ART staff, 1 GOPD staff, 1 IC officer, 1 DOT staff, 1 from ward). Training to be conducted in 24 batches, 25 participants/batch,								

		4.6.1.3	Support a 3-day meeting to develop infection control policy and plans for 100 health facilities annually								
		4.6.1.4	Support meeting of IC committees at facility level for facilities implement IC								
		4.6.1.5	Support upgrading/renovation of waiting areas in 50 facilities annually to ensure appropriate Infection control measures (cost at $2000 per facility). Other minor renovation would have been taken care of by facility upgrading in Obj 1 and 2								
		4.6.1.6	Provide personal protective equipment for HCW in high risk facilities								
		4.6.1.7	Procure infection control equipment for training and use in the facility (150 Vanometer, 150 smoke tube, 12 Fit apparatus) annually								
		4.6.1.8	Support an Architect and programme staff to attend international training on Infection Control (4 Participants per year, training in Havard USA, 2 weeks training, cost to include DSA, Transportation, visa fee and course fee of $5000)								
		4.6.1.9	2 day Consensus meeting with Nigerian society for Architect, engineer, NPHCDA, MDG, National planning and other stakeholders for wider engagement on Infection Control								
		4.6.1.10	Conduct a 4 day training for architect, engineers and programme staff on TB- IC								
		4.6.1.11	Support a session on TB Infection control during the Annual conference of National Society of Architects and also that of Engineers ($5000 in year 1, year 4)								
		4.6.1.12	Support the design, installation, maintenance of UV lights in 2 facilities annually especially in those with ART and DR-TB services (cost of Engineering design ($5000 per facility), cost of procurement, cost of installation ($5000), cost of 2 UV meters ($2000 per meter)								
SI 4.7	**Continue expanding HCT services to all people with TB symptoms and TB disease**										
4.7.1	Build capacity of DOTS staff on Provision of	4.7.1.1	Conduct 5 day training for DOTS staffs on provision of PITC (1000 DOTS centre in 2014; 1100 DOTS centres in 2015; 1,100 in 2016, 1,100 in 2017, 1,000 in 2018								

	PITC	4.7.1.2	Provide Rapid HIV test kit for Patient with presumptive TB and diagnosed TB (465,640 in 2015; 673,445 in 2016; 912,378 in 2017; 1,175,100 in 2018; 1,490,365 in 2019 and 1,877,531 in 2020), the test kits to be provided in line with National algorithm and to be costed in the NASCP/NACA Plan								
SI 4.8	**Provide CPT to all TB/HIV patients**										
4.8.1	Procure Co-trimoxazole 960mg for CPT implementation	4.8.1.1	Procure and distribute Co-trimoxazole 960mg for CPT implementation (22% of TB patients are expected to be co-infected, Project using this and the expected number of TB patients number in the plan) ie 32,440 in 2015; 48,398 in 2016; 66,908 in 2017; 86,174 in 2018; 109,293 in 2019 and 137,686 in 2020) to be costed in the NASCP/NACA Plan								
SI 4.9	**Provide ART for all TB/HIV patients**										
4.9.1	Procure ART for TBHIV co-infected	4.9.1.1	Procure and distribute ART for 22% of TB patients are expected to be co-infected (Project using this and the expected number of TB patients number in the plan: 29,025 in 2015; 46,917 in 2016; 66,908 in 2017; 86,174 in 2018; 109,293 in 2019 and 137,686 in 2020;) to be costed in the NASCP/NACA Plan								
SI 4.10	**Provide routine TB and HIV screening for health workers in TB/HIV facilities**										
4.10.1	Periodic evaluation of health care workers for TB	4.10.1.1	Expert meeting to adapt protocol and revise existing tools to cover routine screening of HW for TB (3 day meeting of 15 participants)								
		4.10.1.2	Expert meeting to finalize draft protocol and tools for screening of HW for TB (2 day meeting of 10 participants)								
		4.10.1.3	Conduct a ToT for master trainers on screening of health worker for TB (incorporated as part of activity 4.6.1.1)								
		4.10.1.4	Advocacy visit to facilities by state team to 100 facilities annually to build consensus on routine health workers screening for TB								
		4.10.1.5	Train focal persons from selected facilities (2 day training for 100 comprehensive facilities annually and 2 staff per facility)								

		4.10.1.6	Provide support for cost of chest X-ray and GeneXpert for health worker with presumptive TB (cost included in GeneXpert and X-ray support)								
		4.10.1.7	Provide HCT for health workers in 100 facilities annually								
		4.10.1.8	Provide support for cabinet for record keeping for the 100 facility annually. (100 cabinets for 100 facilities for record storage) @ N50,000 per cabinet								
SI 4.11	**TA for TB/HIV collaborative activities**										
4.11.1	Support TA for TB/HIV collaborative activities	4.11.1.1	Support international TA on TB/HIV collaborative activities annually.								
		4.11.1.2	Support TA on infection control annually								
Objective 5: Provide access to DR-TB diagnosis to all Presumptive DR-TB cases by 2020											
SI 5.1	**Strategically expand DR-TB diagnostic sites**										
5.1.1	Finalise DR-TB expansion plan in 2014.	5.1.1.1	Conduct a 2-day meeting of 15 persons to review the current DR-TB Expansion Plan								
		5.1.1.2	Engagement of international TA for 1 week to participate in review and update Plan (5 working days)								
		5.1.1.3	Print and disseminate the DR-TB Expansion Plan (200 copies)								
5.1.2	Expand and maintain infrastructure for TB cuture and DST	5.1.2.1	Procure containerized laboratories (BSL2) for 12 State and 2 zonal culture/DST labs. 2 in 2015; 2 in 2016; 2 in 2017; 3 in 2018 ; 3 in 2019 and 2 in 2020)								
		5.1.2.2	Provide transportation of the containerised laboratories (BSL2) to the various sites 2 in 2015; 2 in 2016; 2 in 2017; 3 in 2018 ; 3 in 2019 and 2 in 2020)								
		5.1.2.3	Provide platform, waste disposal system, roofing, services for the installation of the containerised BSL2 laboratories 2 in 2015; 2 in 2016; 2 in 2017; 3 in 2018 ; 3 in 2019 and 2 in 2020)								
		5.1.2.4	Installation of the containerised laboratories (BSL2) at the culture/DST sites 2 in 2015; 2 in 2016; 2 in 2017; 3 in 2018 ; 3 in 2019 and 2 in 2020 in collaboration with in-country biomedical engineers)								
		5.1.2.5	Procure additional equipment for the BSL2 laboratories 2 in 2015; 2 in 2016; 2 in 2017; 3 in 2018 ; 3 in 2019 and 2 in 2020)								

		5.1.2.6	Activate the BSL2 for culture and DST for 10 days each 2 in 2015; 2 in 2016; 2 in 2017; 3 in 2018 ; 3 in 2019 and 2 in 2020)								
		5.1.2.7	Provide for infrastructural upgrade of Line Probe Assay labs and equipment (1 in 2015; 1 in 2016; 1 in 2017 and 1 in 2018) for 2 zonal and 2 state laboratories.								
		5.1.2.8	Activate the LPA laboratory for LPA for 10 days each by NRL staffs (1 in 2015; 1 in 2016; 1 in 2017 and 1 in 2018)								
		5.1.2.9	Annual maintenance of TB culture/DST laboratories:8 in 2015, 10 in 2016, 12 in 2017, 15 in 2018, 18 in 2019 and 20 in 2020								
		5.1.2.10	Purchase and install generators, inverters and stabilizers for TB reference labs (10 in 2015, 12 in 2016, 14 in 2017, 17 in 2018, 20 in 2019 and 22 in 2020.								
		5.1.2.11	Maintenance of generators and inverters for TB Reference labs 8 in 2015, 10 in 2016, 12 in 2017, 15 in 2018, 18 in 2019 and 20 in 2020								
		5.1.2.12	Procure additional equipment (see attached list) for the existing 2 NRLs, 2 ZRL, 1 State and 1 Private reference laboratories to continue culture, DST and TB molecular procedures								
		5.1.2.13	Procure supplies for 1,236,860 cultures (35683 in 2015, 78,933 in 2016, 130,221 in 2017, 200,308 in 2018, 316,003 in 2019 and 475,712 in 2020.								
		5.1.2.14	Procure supplies for 91,539 patients for FLD using solid culture on LJ for 3,320 Patients in 2015, 6,445 patients in 2016, 10,124 patients in 2017, 15,048 patients in 2018, 22,921 patients in 2019 and 33,682 patients in 2020.								
		5.1.2.15	Procure supplies for 18,308 patients for FLD using MGIT liquid culture; 664 Patients in 2015, 1,289 patients in 2016, 2,025 patients in 2017, 3,010 patients in 2018, 4,584 patients in 2019 and 6,736 patients in 2020.								

		5.1.2.16	Procure supplies to conduct 1,527,095 fluorescent microscopy smears to follow up sputum smear microscopy of Rif R-TB patients on treatment								
		5.1.2.17	Procure supplies to conduct 91,539 TB molecular test (LPA) for 3,320 patients in 2015, 6,445 patients in 2016, 10,124 patients in 2017, 15,048 patients in 2018, 22,921 patients in 2019 and 33,682 patients in 2020.								
		5.1.2.18	Provide administrative support to the TB reference laboratories (8 in 2015, 10 in 2016, 12 in 2017, 15 in 2018, 18 in 2019 and 20 in 2020								
		5.1.2.19	Procure office equipment for the TB reference laboratories (see attached list)								
		5.1.2.20	Maintenance of office equipment								
		5.1.2.21	Hire 2 Local Laboratory Consultants to strengthen the capacity of TB Laboratory network throughout the duration of the NSP								
		5.1.2.22	Maintenance and repairs of TB lab equipment and quarterly support for Biomedical Engineers to the TB reference labs (8 in 2015; 10 in 2016; 12 in 2017 and 15 in 2018; 18 in 2019 and 20 in 2020)								
		5.1.2.23	Provide support for 3 external TA including SRL for the annual assessment of the state of functionality, performance and quality issues of TB reference laboratories (2 days per site) (10 in 2015, 12 in 2016, 14 in 2017, 17 in 2018, 20 in 2019 and 22 in 2020)								
		5.1.2.24	Provide support for 6 local staff to participate in the annual assessment of the state of functionality, performance and quality issues of TB reference laboratories (2 days per site) (10 in 2015, 12 in 2016, 14 in 2017, 17 in 2018, 20 in 2019 and 22 in 2020)								
5.1.3.	Strengthen the capacity for diagnosis of DR-TB	5.1.3.1	Conduct a 5-day meeting of 15 persons to review and finalize national guidelines for culture/DST/LPA/Xpert								
		5.1.3.2	Conduct a 3-day meeting of 15 persons and 10 IPs to finalise national guidelines for culture/DST/LPA/Xpert. Include budget for SRL to participate to the guidelines for DST/LPA meeting (+2 international consultants)								

		5.1.3.3	Print and distribute 100 copies of the national guidelines for culture/DST/LPA								
		5.1.3.4	Conduct a 5-day meeting of 8 persons and 10 IPs to review existing DR-TB laboratory training manual by NTP (4) and NRLs (4) in year 1 of the NSP								
		5.1.3.5	Print and distribute 600 copies of the DR-TB laboratory training manual in years 1 and 3 of the NSP								
		5.1.3.6	Conduct a 5-day meeting of 8 persons and 10 IPs to review the DR-TB laboratory training manual in the 3rd year of the NSP								
		5.1.3.7	Overseas training of 2 staff of the NRLs in the SRL in years 2015, 2017 and 2019								
		5.1.3.8	Conduct a 4 week training of 2 lab staff per each of the 14 new Zonal and State TB reference laboratories on culture/DST/LPA/Xpert by 2 external facilitators from the NRLs (2 in 2015, 2 in 2016, 2 in 2017, 3 in 2018, 3 in 2019 and 2 in 2020)								
		5.1.3.9	Conduct a 2 week refresher training of 2 lab staff per each of the existing reference laboratories on culture/DST/LPA/Xpert . 8 in years 2015, 12 in 2017 and 17 in 2019								
5.1.4	Strengthen quality management system and obtain accreditation for the TB reference laboratories	5.1.4.1	Support the conduct of blinded rechecking of 10% of all Rif resistant or MDR-TB culture isolates for 1st and 2nd line anti-TB drugs to SRL, Milan twice annually (468 isolates in 2015, 948 in 2016, 1516 in 2017, 2281 in 2018, 3520 in 2019, 5221 in 2020)								
		5.1.4.2	Procure 6 panels for culture, ID and DST for first and second line anti-TB drugs SRL to NRLs and ZRLs once annually								
		5.1.4.3	Prepare panels for culture, ID and DST for first and second line anti-TB drugs NRLs to ZRLs nnually								
		5.1.4.4	Prepare panels for culture, ID and DST for first and second line anti-TB drugs ZRLs to STBRLs once annually								
		5.1.4.5	Use courier to distribute panels culture, ID and DST for first and second line TB drugs (8 in 2015, 10 in 2016, 12 in 2017, 15 in 2018, 18 in 2019 and 20 in 2020)								

		5.1.4.6	Procurement, clearing and distribution of American Type Culture Collection (ATCC) strains for quality control to all the TB Reference laboratories (10 in 2015, 2 in 2016, 2 in 2017, 3 in 2018, 3 in 2019 and 2 in 2020). 1 set per established laboratory throughout the period of the NSP.								
		5.1.4.7	Support for 2 external TAs to provide quarterly mentoring of local laboratory staff for the first year and annually for the rest of the years								
		5.1.4.8	Support the participation of 6 lab staff (national and zonal) on a 2 weeks mentorship on laboratory procedures quarterly during the first year and annually throughout the duration of the NSP								
		5.1.4.9	Conduct a 5-day training of trainers of 10 NTBLCP lab staff on TB laboratory quality management system (QMS) and strengthening laboratory towards accreditation (SLMTA) in 2015								
		5.1.4.10	Conduct 2 external audit for each of the 10 TB reference laboratories for accreditation in year 2 and 14 in year 4 of the NSP								
		5.1.4.11	Pay fee for the national accreditation of the TB reference laboratories								
		5.1.4.12	Pay fee for the international accreditation of the 2 NRLs and 6 ZRLs								
5.1.5	Support DR-TB laboratory logistics management	5.1.5.1	Hire one laboratory logistic officer for culture/DST/LPA laboratories 10 in 2015, 12 in 2016, 14 in 2017, 17 in 2018, 20 in 2019 and 22 in 2020								
		5.1.5.2	Procure and install laboratory information system (LIS) software for the TB reference laboratories 10 in 2015, 2 in 2016, 2 in 2017, 3 in 2018, 3 in 2019 and 2 in 2020								
		5.1.5.3	Provide for maintenance and support costs for LIS								
		5.1.5.4	Provide for annual internet subscriptions								
		5.1.5.5	Procure desktops for the TB reference laboratories 10 in 2015, 2 in 2016, 2 in 2017, 3 in 2018, 3 in 2019 and 2 in 2020 Procure back up system for data								

		5.1.5.6	Conduct a 3-day training of 1 lab logistic officer from each of the reference laboratories on laboratory logistics management 10 in 2015, 12 in 2016, 14 in 2017, 17 in 2018, 20 in 2019 and 22 in 2020								
		5.1.5.7	Procure supplies and equipment (cold boxes, glycerol, packaging box,) for cold chain transportation of clinical specimen for each of the 774 LGAs (one collection point per LGA to support culture examination for DR-TB patients on ambulatory treatment)								
		5.1.5.8	Procure solar refrigerators for collection centres in 70% of the 774 LGAs for storage of specimens prior to transportation to culture/DST centres in 2015								
5.1.6	Increase capacity for DST of second-line drugs	5.1.6.1	Provide for 3 external TAs including SRL to conduct 2 weeks on site re-training of lab personnel in each of the 2NRLs on DST for second line TB drugs each year of the NSP								
		5.1.6.2	Procure supplies for 2 NRLs to conduct DST for second line TB drugs for 48,001 confirmed MDR-TB cases (1356 in 2015, 3038 in 2016, 5033 in 2017,7764 in 2018, 12283 in 2019 and 18526 in 2020)								
SI 5.2	**Institute a standardized specimen transport system from the point of collection from presumptive DR-TB cases to DR-TB diagnostic centres for DR-TB diagnosis and treatment follow up**										
5.2.1	Improve systems for specimen collection and storage	5.2.1.1	Train staff in DOTS centres in specimen collection, storage and transportation (as part of DOTS training)								
5.2.2	Establish mechanisms of specimen transportation and retrieval of results	5.2.2.1	Contract a courier company (1 per State) to transport clinical specimen for diagnosis and retrieval of transport boxes, ice packs, glycerol packs & results								
		5.2.2.2	Conduct a 2-day training of 2 staff per each of the courier service vendors per state on sputum transportation (25 people per training)								
		5.2.2.3	Weekly transportation of sputum to GeneXpert sites from 30% of DOTS centres (6,189 DOTS site in 2015; 6,789 in 2016; 7,389 in 2017; 7,889 in 2018; 8,339 in								

			2019; 8,739 in 2020) to GeneXpert sites –(cost for 2 way weekly courier movement)								
		5.2.2.4	Weekly collation and transportation of sputum for culture and DST from DOTS centres to 774 LGA central collection points								
		5.2.2.5	Weekly collation and transportation of sputum for culture and DST from 30% of 774 LGAs to TB Culture & DST labs including retrieval of boxes, glycerol packs and result for 1 & 2 above–(cost for 2 way weekly courier movement)								
SI 5.3	**Increase DR-TB case finding skills among health care providers**										
5.3.1	Implement SOPs for identification of presumptive DR-TB cases in all facilities diagnosing TB	5.3.1.1	Conduct a 2-day meeting of 20 persons to develop and harmonize SOPs for DR-TB management								
		5.3.1.2	Print and distribute 12,000 (2 per DOTS facility) copies								
		5.3.1.3	Training of all DOTS staff (integrate SOPs into DR-TB training curriculum) - part of training for DR-TB								
5.3.2	Perform contact tracing for all MDR-TB cases using HCW and community-based organizations	5.3.2.1	Support CBOs and CHWs to do one home visit for every DR-TB contacts, interview them and assess who needs to be evaluated, collect sputum and/or accompany them for evaluation								
5.3.3	Review National PMDT Guidelines and training manuals	5.3.3.1	5 day of Expert meeting of 20 participants and 10 IPs to review National PMDT Guidelines and training manuals in 2016								
		5.3.3.2	2 day Expert meeting of 15 participants to finalize National PMDT Guidelines and training manuals								
		5.3.3.3	Print National PMDT Guidelines and training manuals (2000 copies of each in 2015 2000 copies of each in 2016 and 3000 copies of each in 2017)								
SI 5.4	**Strengthen the DR-TB Surveillance system**										
5.4.1	Update R&R tools.	5.4.1.1	Review recording and reporting tools (to be part of guideline review at no cost)								
5.4.2	Print & distribute R&R	5.4.2.1	Print sputum examination form - 300,000 sheets per year								

	tools	5.4.2.2	Sputum dispatch form - 5 booklets of 50 sheets per DOTS facility (6189 in 2015; 6789 in 2016; 7389 in 2017; 7889 in 2018; 8339 in 2019; 8739 in 2020), 10 booklets per State (37) per year and 5 booklets per treatment centre (44) per year								
		5.4.2.3	Presumptive DR-TB case register: 7467 in 2015; 8677 in 2017; 9612 in 2019								
		5.4.2.4	DR-TB referral form - (6189 in 2015; 6789 in 2016; 7389 in 2017; 7889 in 2018; 8339 in 2019; 8739 in 2020) and 44 per year (for treatment centres)								
		5.4.2.5	Category IV treatment card - (4747 in 2015; 10632 in 2016; 17614 in 2017; 27172 in 2018; 42985 in 2019; 64831 in 2020)								
		5.4.2.6	Patient identity card - (4747 in 2015; 10632 in 2016; 17614 in 2017; 27172 in 2018; 42985 in 2019; 64831 in 2020)								
		5.4.2.7	Category IV treatment register - one per DOTS centre (7467 in 2015; 8677 in 2017; 9612 in 2019), one per treatment centre (44) per year, one per LGA (774) per year, one per State (37) per year [20 pages]								
		5.4.2.8	Laboratory registers for DR-TB (Laboratory group) - (3251 in 2015; 3969 in 2016; 4687 in 2017; 5405 in 2018; 5929 in 2019; 6253 in 2020) [100 pages]								
		5.4.2.9	Quarterly report for Category IV case registration form - 1 per LGA - 774, 1 per State – 37; 1 per treatment centre - 44 (all per year) [100 pages]								
		5.4.2.10	Eight month interim outcome assessments. 1 per LGA - 774, 1 per State – 37; 1 per treatment centre - 44 (all per year)								
		5.4.2.11	Annual report of treatment outcome. 1 per LGA - 774, 1 per State - 37; 1 per treatment centre - 44 (all per year)								
		5.4.2.12	MDR/XDR-TB monthly notification form. 1 per LGA - 774, 1 per State - 37, 1 per treatment centre - 44								
		5.4.2.13	Discharge form - 2 per treatment centre per year (44) [100 pages]								
5.4.3	Strengthen electronic data	5.4.3.1	Provide Computers and modems at uploading points (44 treatment centres, 37 States, 774 LGAs)								

	management - e-TB Manager/GX-Alert (costed under Objective 9)	5.4.3.2	Internet Subscription per uploading point (855) - covered in Obj 9								
		5.4.3.3	2 days Training on electronic data management - 2 people per uploading point (1,730) [20 people per training, all in 2015] - covered in Obj 9								
		5.4.3.4	2 days on site training on electronic data management for newly established labs - covered in Obj 9								
5.4.4	Routine supervision of DR-TB programme management at all levels	5.4.4.1	3 persons per State per year for 5 days - integrate into routine TB supervision								
5.4.5	Conduct National Drug Resistance Survey	5.4.5.1	Stakeholders meeting to plan for the survey - 4 days, 25 persons								
		5.4.5.2	Two external TAs for DRS. Two weeks in each quarter throughout the period of the survey, including protocol development								
		5.4.5.3	Printing of protocol - 50 copies								
		5.4.5.4	Meetings of 5 different committees monthly for 6 months (7 people/committee; 3 days)								
		5.4.5.5	National DRS committee meeting (quarterly, 25 people, 2 days)								
		5.4.5.6	Procure, reagents and consumables for the DR survey for 5,000 cases (10,000 tests)								
		5.4.5.7	Train Survey supervisors - (30 states; 4 people per state; 2 days training); 50 clusters with 120 sites (240 field workers), 14 TB Ref labs (28 staff) and 30 LGA supervisors; 2 days training)								
		5.4.5.8	Communication costs								
		5.4.5.9	Transportation of field workers								
		5.4.5.10	Pilot survey: 4 field (facility staff i.e. 1 HW 1 lab) for 5 days x 2 sites; supervision by 6 NTP/partner staff; cost for additional logistics/consumables								
		5.4.5.11	Conduct survey: field data collection and lab testing (budget for field staff including lab staff (allowances for the period of enrolment of survey participants)								

		5.4.5.12	Post-pilot review meeting: 15 persons x 3 days									
		5.4.5.13	Field visits to supervise the conduct of the survey - 2 people for 5 days; 6 visits per quarter									
		5.4.5.14	Field visits to 14 reference labs - 3 people for 5 days; 14 visits per quarter									
		5.4.5.15	Print R&R tools for survey (patient clinical information form - 5500; sputum shipment form - 12 booklets of 50 pages; bacteriological investigation form - 5500; SOPs - 400)									
		5.4.5.16	Transportation of Sputum to TB Reference Labs - 120 sites									
		5.4.5.17	Shipment of 10% of MDR isolates and 10% susceptible to SRL									
		5.4.5.18	Data entry: 5 Data Entry Clerks (throughout entire survey period)									
		5.4.5.19	Data validation and analysis: 2 sessions of 5 day each; 10 persons/session									
		5.4.5.20	Drafting/Development of DRS report: 10 persons for 10 days									
		5.4.5.21	Stakeholders meeting to present draft report for the survey - 4 days, 50 persons									
		5.4.5.22	Print survey reports - 1,500 copies,									
		5.4.5.23	Meeting of 100 people from 37 States (3 days) to disseminate report									
5.5	Operational Research	5.5.1	Refer to Objective 9									
Objective 6: Enroll 100% of diagnosed DR-TB patients on appropriate treatment between 2015 and 2020												
SI 6.1	**Provide prompt, appropriate treatment & care to all diagnosed DR-TB cases.**											
6.1.1	Strengthen the coordination of DR-TB activities at all levels	6.1.1.1	Provide for quarterly meetings of the National DR-TB committee (2 day meeting of 25 participants)									
		6.1.1.2	Provide for quarterly meetings/treatment facility visits of the members of the National concilium (15 participants for 3 days) (2 days quarterly facility visits for 2 staff)									
		6.1.1.3	Provide for monthly meetings of State DR-TB teams - tea break & lunch for 12 persons, intra-State transport for 5 people									

		6.1.1.4	Provide for monthly meetings of LGA DR-TB teams - 12 persons, tea break & lunch, intra-city transport for 12 persons, including CBOs								
6.1.2	Establish at least 1 DR-TB Treatment centre in each state and at least 1 XDR-TB treatment centre in each zone with 20 beds	6.1.2.1	Conduct a 2-day assessment and advocacy visit by 6 persons to the remaining 26 states for the purpose of establishing a DR-TB treatment centre in each State and 5 XDR-TB centres - 1 per geopolitical zone in 2015 (3 people paid for)								
		6.1.2.2	Renovation of identified 26 DR-TB and 5 XDR-TB facilities including provision of generators - 15KVa in (5 in 2015; 6 in 2016; 7 in 2017; 7 in 2018; 4 in 2019; 2 in 2020								
		6.1.2.3	Furnishing of renovated 26 DR-TB and 5 XDR-TB facilities								
		6.1.2.4	Conduct a 5-day Programmatic training of 20 health care providers per facility for 31 facilities								
		6.1.2.5	Conduct a 5-day pharmaceutical care/LMIS training of 2 pharmacist per facility for 26 DR-TB and 5 XDR-TB facilities (train according to establishment plan)								
6.1.3	Maintenance and support for MDR and XDR-TB treatment centres and facility staff (44 facilities)	6.1.3.1	Monthly facility review meeting for 15 people - Tea break and Lunch, Transport for 5 Persons from outside the facility for 44 facilities (1 day meeting)								
		6.1.3.2	Monthly Consultancy/Retainer ship for 4 visiting specialists per facility/quarter for 44 facilities - cost of consultancy fees (5 days per quarter)								
		6.1.3.3	Monthly Communication support for health care providers per facility for 44 facilities (N5000/month per person x 20 people)								
		6.1.3.4	Fuelling of generators, General Maintenance and Administrative support for 44 facilities								
		6.1.3.5	Patient Hospitalization in Private facilities(PPM) for 30% of patients (N15,000/patient/month) for 2 months 2015 – 2,158 2016 – 4,833 2017 – 8,007 2018 – 12,351 2019 – 19,539 2020 - 29,469								

6.1.4	Patient Support	6.1.4.1	Patient Feeding - @N2,000 per patient/day for 60% of 76,357 (as in 6.1.3.5)								
		6.1.4.2	Patient Feeding - @N2,000 per patient/day for 3,303 XDR-TB patients for 24 months								
		6.1.4.3	Baseline and Follow-up investigations for 76,357 patients @ N120,000/patient								
		6.1.4.4	Baseline and Follow-up investigations for 3,303 XDR-TB patients @ N120,000/patient								
		6.1.4.5	Management of co-morbid conditions for 30% of 76,357 patients @ 20,000/patient								
		6.1.4.6	Ancillary drugs for 50% of 76,357 @ N60,000/patient (PSM cost added to this)								
		6.1.4.7	Transport support for patient/HCW @ N15,000/patient/month for 40% of 76,357 patients for 20 months								
		6.1.4.8	Transport support for patient/HCW @ N15,000/patient/month for 30% of 76,357 patients for 17 months and 30% for 12 months								
		6.1.4.9	Hearing aids for 10% of 76,357 @N200,000/patient								
		6.1.4.10	Social support @ N5,000/patient/month 20 months for 76,357 patients								
		6.1.4.11	Social support @ N5,000/patient/month 24 months for 3,303 XDR-TB patients								
6.1.5	Provide community-based treatment and support to MDR-TB patients throughout the course of treatment	6.1.5.1	Training and retraining for State DR-TB Teams - 4 days training for 12 persons /State for 37 States								
		6.1.5.2	Overseas tour to study best practiced in PMDT - 4 people every two years; 2 weeks visit								
		6.1.5.3	Training for LGA DR-TB Unit, including M&E - 2 days training for 13 persons/LGA, across 774 LGAs								
		6.1.5.4	Monitoring and Supervision by State Teams to LGAs and Community - 3 persons for 5 days/month								
		6.1.5.5	Transport/Communication for monthly Home visits by DOT staff/LGTBLS - N2,000/Month for 10 persons/LGA across 774 LGAs								
		6.1.5.6	Train CBO/CVs in support to patients with MDR-TB, including medications, side effect monitoring, psychosocial support and counselling and recording and reporting as the need arises to provide ongoing								

			support to MDR-TB patients. 11 people/LGA across 774 LGAs. 2 day training								
		6.1.5.7	Form and support Patient Advisory/support Groups associated with each treatment site to provide input on approach to hospitalization and treatment and continuing treatment support in the community and to advise and support MDR-TB patients - Monthly meeting of 20 people/LGA (HCW, CVs, CBO, converted patients, LGTBLS) - snacks and transportation								
		6.1.5.8	Transport/Communication for TS - N2,000/Monthly for 76,357 TS								
SI 6.2	**Assure adequate supplies of second-line and ancillary drugs and supplies**										
6.2.1	Provide 2nd line drugs, Including 10% for MDR failures.	6.2.1.1	Procure 2nd line anti-TB Drugs for 76,357 MDR-TB patients including PSM costs								
		6.2.1.2	Ancillary drugs for 10% of 76,357 MDR-TB patients								
		6.2.1.3	Procure 2nd line anti-TB Drugs for 3,303 MDR-TB Failure patients (XDR-TB) including PSM Costs - Bedaquiline based regimen								
		6.2.1.4	Ancillary drugs for 50% of 3,303 XDR-TB patients								
		6.2.1.5	Green Light Committee costs								
SI 6.3	**Institute appropriate infection control measures to prevent transmission of DR-TB in facilities and the community**										
6.3.1	Training of DR-TB service providers on infection control practices.	6.3.1.1	Health care workers (doctors, nurses, cleaners, LGTBLSs, treatment supporters, DOT providers, CBOs, CVs, TS) - Covered by the various training modules								
	Procure consumables for infection control	6.3.2.1	Procure face masks for 76,357 patients (1 per patient per day for 8 months)								
		6.3.2.2	Procure face masks for 3,303 patients (1 per patient per day for 24 months)								
		6.3.2.3	Procure gloves for health workers								
		6.3.2.4	Procure scrubs for health workers								
		6.3.2.5	Procure lab coats for health workers								
		6.3.2.6	Procure cotton wool for treatment centres								
		6.3.2.7	Procure methanol for treatment centres								
		6.3.2.8	Procure 1 respirator per week per person for 20 Health								

			personnel per treatment centre (including 10% buffer)								
		6.3.2.9	Procure 1 respirator per week for 8 months for DOT providers (including 10% buffer)								
		6.3.2.10	Procure 1 respirator per TS per month for 8 months								
Objective 7: Strengthen the collaboration with and capacity of community-based organizations and networks to support NTBLCP objectives and activities.											
SI 7.1	**Build on the existing CSS on AIDS, TB and malaria (ATM) activities under Global Fund to coordinate activities of CBOs engaged in HIV, TB and malaria control at community level.**										
7.1.1	Establish a mechanism of coordination at national, state and local levels between the ATM community networks and the disease programmes and share costs equally with NACA, Malaria and NTBLCP	7.1.1.1	Update and print existing list of CSOs engaged in ATM at national and state levels (assume 15 person-days of work time-print 100 copies of national directory at 1000 pages and 250 copies of state directory at 100 pages - budget once in 2015, once in 2018) ONLY TB PORTION OF COST REFLECTED								
		7.1.1.2	Support a structured half-day monthly ATM CSO coordination meeting at national level (20 people--one-two from each national CSOs plus 4-6 from ATM programmes and PRs, local transport and refreshments, meeting room/hall for half day, communications for distribution of minutes, budget throughout six years) ONLY TB PORTION OF COST REFLECTED								
		7.1.1.3	Support a structured one-day monthly ATM CSO coordination meeting at state level in the 14 priority areas (13 States+FCT) to review progress on work plan, review data, problem-solve issues and receive technical updates and mentoring from ATM programmes. (20 people per meeting x 14 meetings, local transport, refreshments, hall rental, communications for distribution of minutes, budget throughout six years) ONLY TB PORTION OF COST REFLECTED								
		7.1.1.4	Support a structured one-day monthly ATM CSO coordination meeting at LGA level in the 14 priority areas (13 States+FCT) to review progress on work plan, review data, problem-solve issues and receive technical updates and mentoring from ATM programmes. (40 people per meeting including local programme staff, WDC members, CSOs, local								

			transport, refreshments, hall rental, communications for distribution of minutes, budget throughout six years) ONLY TB PORTION OF COST REFLECTED								
		7.1.1.5	Develop a standardised ATM CSO engagement framework at national level (5-day meeting of 40 people to draft guideline; local travel and DSA; ONLY TB PORTION OF COST REFLECTED								
		7.1.1.6	Three-day meeting of 15 people to finalise a standardised ATM CSO engagement framework at national level ; local travel and DSA; ONLY TB PORTION OF COST REFLECTED								
		7.1.1.7	Print and distribute 3000 copies of 50-page ATM CSO engagement framework; ONLY TB PORTION OF COST REFLECTED								
		7.1.1.8	Support a two-day annual meeting of ATM CSOs (120 people - 50+ state level and above plus 30 high-performing local CSOs as incentive plus national programme staff) ONLY TB PORTION OF COST REFLECTED								
SI 7.2	**Build the technical, managerial and administrative capacities of CBOs to provide effective support to the implementation of the National Strategic Plan of NTBLCP.**										
7.2.1	Build the capacity of CBOs/CSOs in organizational development and project management	7.2.1.1	Hire 5 local organisational development consultants to work with 10 CSOs at national level and their state-level branches to do 10-day organisational assessments and produce a three-year organisational development plan for each group at 20 days per group. (300 days total of consultancy, local travel, national travel by air for 5 days with DSA x 20 trips): (Budget this x 2, once for 2015 and 2018) ONLY TB PORTION OF COST REFLECTED								
		7.2.1.2	Retain above consultants (based on performance) to mentor 2 groups each (25 days of consulting time per year x 10 groups x 6 years) ONLY TB PORTION OF COST REFLECTED								
		7.2.1.3	Develop a competitive organisational development awards programme for high-performing CSOs at local level. (1 award per state/FCT each year for 2016, 2017, 2018, 2019, 2020. Costs include 5-day organisational								

			assessment and 10-day OD plan preparation by local consultant - total of 1665 consulting days per year with local travel and DSA.) Mentoring to be provided at no cost by state-level CSOs. ONLY TB PORTION OF COST REFLECTED								
7.2.2	Harmonize existing ATM CSS capacity-building activities to update CSO technical competence in behavior change communication, case finding, treatment support, recording and reporting and M&E of projects	7.2.2.1	Organise a 5-day meeting of 30 persons to review training materials on ATM and incorporate updated information and guidance on TB, HIV and malaria. ONLY TB PORTION OF COST REFLECTED								
		7.2.2.2	Organise a 3-day meeting of 15 persons to finalise the training materials on ATM (2015 only) ONLY TB PORTION OF COST REFLECTED								
		7.2.2.3	Conduct a 5-day training of trainers for the lead CSOs in each state (6 trainings at zonal level with 35 people per training). ONLY TB PORTION OF COST REFLECTED								
		7.2.2.4	Support a 5-day cascade training by lead CSOs of 1 CSO member per LGA on ATM activity implementation and reporting, batched in groups of 15 CSOs (2 members per group). (18 trainings in 2015, 17 in 2016, 17 in 2017; 30 participants and 6 facilitators/logistics staff per training with local travel, DSA, hall rental, training materials printing) ONLY TB PORTION OF COST REFLECTED								
SI 7.3	**Strengthening community monitoring and evaluation system in planning, managing and improving programme performance**										
7.3.1	Provide M&E support to assess the activities of CSO strategic planning and implementation	7.3.1.1	Support 25 persons for a 3-day meeting to review and update recording and reporting tools used by CSOs to include comprehensive information for ATM activities ONLY TB PORTION OF COST REFLECTED								
		7.3.1.2	Support training of CSOs members on the developed tools - to be part of the trainings in 7.2.2. (at no cost)								
		7.3.1.3	Print and disseminate tools (to be costed in Obj 9)								
		7.3.1.4	Provide supportive supervision to state and local-level CSOs as part of routine supervision activities of the programmes and incorporate CSO participation in quarterly review meetings (should be included in supervision costs in Obj 9)								
		7.3.1.5	Conduct quarterly supportive visits from the National								

			level CSOs to state (3 day supervisory visits to 10 states per quarter ; 3 staff to cover all the thematic areas per visit) ONLY TB PORTION OF COST REFLECTED								
		7.3.1.6	Conduct quarterly supportive visits from the State level CSOs to LGA (2 day supervisory visits to 5 states per quarter ; 2 staff to cover all the thematic areas per visit) ONLY TB PORTION OF COST REFLECTED								
SI 7.4	**Strengthen the administrative functions of civil society organisations working on TB control**										
7.4.1	Provide basic running costs for CSOs working on ATM	7.4.1.1	Provide personnel support for 3,870 persons contingent on timely recording and reporting and meeting of targets (5 person per 1 CSO per 1 LGA throughout NSP) (SPLIT BETWEEN ATM PROGRAMMES)								
		7.4.1.2	Provide 50,000 naira running cost to 774 CBOs monthly, contingent on timely recording and reporting and meeting of targets (1 CSO per LGA throughout NSP) (SPLIT BETWEEN ATM PROGRAMMES)								
Objective 8: Strengthen political commitment and mobilize domestic resources at all levels to fund essential TB services in Nigeria.											
SI 8.1	**Plan and implement the 100% Campaign, a coordinated and sustained multi-disease advocacy campaign designed to mobilize public support and political commitment for TB, HIV and malaria control as an integral part of essential primary health care services, in collaboration with NACA, NASCP, Malaria, PHCDA, the Stop TB Partnership and civil society organizations**										
8.1.1	Advocacy and education strategy development workshop in collaboration with NACA, NASCP, Malaria, NPHCDA, civil society representatives and the Stop TB Partnership members	8.1.1.1	Obtain TA support from existing technical partners to develop bid documents, advertise, evaluate and select organization to provide a total of 12 months of support over a period of two years								
		8.1.1.2	Hold a 5-day meeting of 50 participants (20 out-of-Abuja participants) to develop advocacy and education strategy for ATM in Abuja								
		8.1.1.3	Circulate draft strategy to constituencies for comments								
		8.1.1.4	Hold a 3-day meeting of 20 participants to finalize the strategy and present to stakeholders at other regular meetings								
		8.1.1.5	Print and distribute 500 copies of the strategy to implementing groups								
8.1.2	Create and sustain a	8.1.2.1	Support the Stop TB Partnership to act as the Secretariat for the campaign (office rent, recruitment of								

	national-level *100% Campaign* Committee to guide advocacy efforts		an admin Secretary, office equipment, office maintenance, communication)								
		8.1.2.2	Identify, recruit and support 15 representatives from the federal agencies, civil society, affected populations and other interested stakeholders to participate in the campaign committee								
		8.1.2.3	Provide advocacy training to the Committee (see 8.2)								
		8.1.2.4	Support 25 members for a 5 day meeting to develop a realistic annual work plan with advocacy targets								
		8.1.2.5	Support 25 persons for 1 day quarterly monitoring meetings								
		8.1.2.6	Conduct advocacy at national and priority states (10 states) to lawmakers and the executive, during World TB, AIDS and Malaria Days (i.e x 3 - for each disease programme each year) by 10 persons								
8.1.3	Engage high-profile 100% Ambassadors at national level	8.1.3.1	Identify 3 high-profile 100% ATM Ambassadors at national level								
		8.1.3.2	Develop one-page information flyer (develop materials for the - ambassadors, champions and recruitment of cooperate sponsors) - include cost of contract on development and printing (3000 copies)								
		8.1.3.3	Develop terms of reference for Ambassadors by the NTBLCP at no cost								
		8.1.3.4	Support 5 persons for a 2-day advocacy visit/meet with candidates to recruit their participation as ambassadors								
		8.1.3.5	Organise a press briefing of 80 participants for the investiture of the ambassador (include cost for media coverage x 10 media houses, meals)								
		8.1.3.6	Recognize the ambassadors' contributions each year on World TB Day (as well as World AIDS Day, World Malaria Day)								
8.1.4	Engage 100 elected officials at state and local levels representing all regions to act as 100%	8.1.4.1	Identify 100 elected officials at state and local levels representing all regions to act as 100% Champions e.g entertainment celebrities								
		8.1.4.2	Use one-page information flyer already developed - refer to 8.1.3.2								
		8.1.4.3	Adapt terms of reference for Champions by NTBLCP								
		8.1.4.4	Meet with candidates to recruit their participation								

	Champions e.g. entertainment celebrities	8.1.4.5	Plan and conduct formal announcement events and recognize high performers on World TB Day each year (as well as World AIDS Day, World Malaria Day) - Entertainment night and media coverage (10 media houses), cost of inviting popular artist								
8.1.5	Engage corporate sponsors for financial and in-kind marketing support	8.1.5.1	Develop informational materials - refer to 8.1.3.2								
		8.1.5.2	Identify potential corporate sponsors								
		8.1.5.3	Identify specific "asks"—what things the corporations will be providing								
		8.1.5.4	Support 5 persons for a 2 days advocacy visit by National Committee representatives to present concept and recruit participation								
		8.1.5.5	Sign MOUs with corporations for partnership								
		8.1.5.6	Publicise partnership through branding, media announcements, recognition events for high-performing partners each year on World TB Day (as well as World AIDS Day, World Malaria Day) - cost for airing time on both radio and television								
8.1.6	Negotiate with media outlets to provide low-cost air time or coverage	8.1.6.1	Identify potential media partners								
		8.1.6.2	Use informational materials already developed - refer to 8.1.3.2								
		8.1.6.3	Identify ambassadors to approach media outlets and coach them on "ask"								
		8.1.6.4	Support 30 persons to hold meetings to present concept and enlist participation								
		8.1.6.5	Sign MOUs with media outlets for partnership								
		8.1.6.6	Publicise partnerships through announcements and annual recognition events on World TB Day (as well as World AIDS Day, World Malaria Day)								
8.1.7	Plan strategic launch events for World TB, AIDS and Malaria Days	8.1.7.1	Support 5 World TB Day preparatory/planning meetings of 20 persons each (local transport, meals and communication)								
		8.1.7.2	Support a 2-day meeting of 15 persons for development of media kits, communication messages during the WTBD, T-shirt designs and messages and other communication materials								
		8.1.7.3	Hold major press conferences on World TB Day to								

			give update on TB control programme and announce 100% Campaign with 100% Ambassadors and Champions								
		8.1.7.4	Advocacy visit to lawmakers and executives to present update on TB control programme as part of World TB Day events annually								
		8.1.7.5	Support the participation of 3 100% ambassadors and 3 champions at the World TB Day press conference including advocacy to lawmakers and executives for 3 days (transportation, DSA, honorarium)								
		8.1.7.6	Print and distribute 15,000 T-shirts and face caps to state programme (350 each), partners and use at the national level								
		8.1.7.7	Plan yearly press conferences for updates on progress toward goals during World TB/AIDS/Malaria Days								
8.1.8	Plan National TB Summit for 2015 and 2017	8.1.8.1	Constitute a 20-man local planning committee including academia, CSOs, technical and funding partners, implementers at all levels, administrators and other stakeholders								
		8.1.8.2	Support five 1-day preparatory/planning meetings of the 20-man planning committee								
		8.1.8.3	Prepare and produce 500 delegate materials including conference bags, badges								
		8.1.8.4	Identify and hire venue for 500 persons for a two-day national TB summit								
		8.1.8.5	Invite stakeholder group representatives, including NTBLCP at all levels, Ambassadors, Champions, state and local level staff, CSOs, FBOs, providers and patient groups/representatives (transport and DSA)								
		8.1.8.6	Develop press kit and hold press conference following the meeting (cost of media coverage)								
8.1.9	Develop branding that can be used on materials and at facilities	8.1.9.1	Work with public relations firm (8.1.1.1) to develop campaign logo								
		8.1.9.2	Print signage for facilities								
		8.1.9.3	Produce campaign materials (lapel pins, stickers, t-shirts, bags or other, depending on local appeal)								
		8.1.9.4	Include logo on all related products (IEC materials, press releases, etc)								

8.1.10	Develop relevant tools for effective advocacy and partnership at federal, state and local levels	8.1.10.1	Collect existing advocacy planning and partnership materials in collaboration with technical partners								
		8.1.10.2	Support 15 persons for a 2 days short-term working group to review and select useful materials								
		8.1.10.3	Support a 4-day field testing of the materials by 2 persons in each of the six geo-political zones								
		8.1.10.4	Support 10 persons for a 2-day meeting to revise the materials based on the result of the field-testing								
		8.1.10.5	Produce and distribute 1,200 materials as part of advocacy trainings described below								
SI 8.2	**Provide advocacy training to key stakeholders, including programme managers, campaign ambassadors, civil society organizations and Stop TB Partnership members**										
8.2.1	Build advocacy capacity at all levels through training and advocacy planning	8.2.1.1	A 2-day meeting of 15 persons to adapt training materials on ACSM								
		8.2.1.2	Organise a 5-day TOT for 50 persons (2 sessions) on ACSM for TB prevention and care								
8.2.2	Cascade training to state and local levels with mentoring to ensure quality	8.2.2.1	Support a five-day cascade training for 30 participants per state each in Year 1 that includes preparation of a one-year advocacy work plan								
		8.2.2.2	Support mentoring by trainers in each state for the first year of the NSP								
SI 8.3	**Support civil society organizations at national, state and local levels to institute targeted advocacy campaigns for funding of TB control activities**										
8.3.1	Support CSOs to develop and cost annual advocacy work plans	8.3.1.1	Provide 1 week external TA to develop advocacy plans at the national level and also advocacy plan templates for the state level								
		8.3.1.2	Conduct a 3-day workshop of 15 persons to develop national advocacy plan and also advocacy plan templates for the state level								
		8.3.1.3	Conduct a 3-day workshop of 15 persons (per state) to develop state advocacy plans based on the template provided								
8.3.2	Provide performance-based financial	8.3.2.1	Award incentive of $2,000 to one high-performing CSOs (per geo-political zone) based on results achieved compared with targets								

	support to implement advocacy work plans	8.3.2.2	Leverage other resources to support advocacy activities through CFCS, GIZ, etc.								
8.3.3	Support CSOs in each State/LGA to produce annual report cards on TB, HIV and malaria performance for their area	8.3.3.1	Support 15 person (from TB, HIV and Malaria) for a 2 days meeting to develop report card template								
		8.3.3.2	Identify and support mentors to assist CSOs in producing report cards								
		8.3.3.3	Support CSOs to collect data for report cards (Local transport and communication funds for 2500 people x 15 days)								
		8.3.3.4	Support events to publicize report card results at local and state levels (Press conferences at State level, at regularly scheduled community meetings for LGA)								
8.3.4	Monitor and evaluate advocacy activities	8.3.4.1	Conduct annual review of performance on advocacy work plans as part of Stop TB Partnership regular meetings and prepare recommendations for improvements or new initiatives going forward								
8.3.5	Recognize high-performing CSOs annually	8.3.5.1	Hold ceremony as part of World TB Day events to recognize top performers in advocacy								
SI 8.4	**Strengthen the Nigeria Stop TB Partnership to be functional, effective and responsive to the challenges of TB control in the country**										
8.4.1	Review and revise the constitution and Strategic Plan of NSTBP to align with the new NSP	8.4.1.1	Hold a 2-day meeting of 25 members of the NSTBP to review issues, including the process for electing the leadership, action priorities and performance of the NSTBP								
		8.4.1.2	Convene a 3-day of 10 persons to finalise the constitution and Strategic Plan of the NSTBP								
		8.4.1.3	Print and disseminate 500 copies of the final constitution and Strategic Plan								
8.4.2	Develop an annual NSTBP work plan and assign responsibility for each activity	8.4.2.1	Organise a 3-day meeting to develop annual work plan of the NSTBP for the 5 years of the NSP								
		8.4.2.2	Conduct annual evaluation of the activities of NSTBP and present results at the annual meeting of stakeholders								
8.4.3	Engage the NSTBP in the	8.4.3.1	Provide training in advocacy campaigning and partnership (costed above)								

	100% Campaign (see above)	8.4.3.2	Develop specific role and responsibilities for NSTBP in relation to the overall advocacy strategy								
8.4.4	Hold regular meetings of NSTBP	8.4.4.1	Hold a quarterly 2-day meeting of 25 members of the NSTBP								
8.4.5	Develop Resource Mobilization Plan for NSTBP and NTBLCP	8.4.5.1	Organise a 3-day meeting of 15 persons to develop a national resource mobilisation plan								
		8.4.5.2	Organise advocacy visits to the executive (including FMOH) on the resource needs for the control of TB								
		8.4.5.3	Organise advocacy visits to the NASS on the resource needs for the control of TB								
		8.4.5.4	Organise advocacy visits to the Ministry of Finance on the resource needs for the control of TB								
SI 8.5	**Promote accountability and transparency of government and partners commitment to TB**										
8.5.1	Institute measures for financial accountability and transparency	8.5.1.1	Recruit a consultant for 4 weeks to carry out a multi-year review of funding to TB programme in Nigeria by the government and partners in 2015, 2018 and 2020								
		8.5.1.2	Conduct a 2-day preparatory meeting of 15 persons to develop tools for the multi-year review of funding to TB programme in Nigeria by the government and partners in 2015, 2018 and 2020								
		8.5.1.3	Support a 5-day field visit of 12 persons (2 per zone) to obtain information on multi-year review of funding to TB programme in Nigeria by the government and partners in 2015, 2018 and 2020								
		8.5.1.4	Conduct a 3-day meeting of 15 persons to develop a report of the multi-year review of funding to TB programme in Nigeria in 2015, 2018 and 2020								
		8.5.1.5	Present the report at National TB Summit/Annual TB review meeting								
		8.5.1.6	Meet with key policy makers on funding for TB (at no cost. Part of advocacy tools for 8.4.5.3)								
		8.5.1.7	Develop an update report on financing on an annual basis and present it as part of the annual NTBLCP meeting and at World TB Day events								
Objective 9: Strengthen NTBLCP systems and capacity to support full implementation of the National Strategic Plan at all levels.											
SI 9.1	**Provide adequate infrastructure to support efficient NTBLCP functions**										

9.1.1	Provide adequate office space and conditions for the operations of the central unit of the NTBLCP	9.1.1.1	Annual rent of office space								
		9.1.1.2	Annual maintenance of office space								
		9.1.1.3	Provide office furniture (tables, seats, window blinds, file racks etc) for 50 NTBLCP staff								
		9.1.1.4	Provide office equipment (2 filing cabinets per 8 units, 2 photocopiers, 1 printer per 8 units, printer toners, 1 scanner per 8 unit, 1 shredder per 8 unit, maintenance of office equipment), 1 internet security software (antiviruses) per laptop and desktop annually, 1 fax machines, 40 laptops, 10 desktops (1 for each unit), 40 KVA generator,								
		9.1.1.5	Support for communication (intercom for 20 desks, communication allowance for each officer, 2 G broadband internet service and monthly subscription), internet modem/monthly subscription for 10 remaining staff								
		9.1.1.6	Provide office supplies (paper, pencils, pens, stapler, etc) for 50 NTBLCP staff								
		9.1.1.7	Provide other equipment (fridges, air conditioners, standing fans, dust bins, etc)								
		9.1.1.8	Utility services (security, cleaning services, fumigation, electricity bills, water, generator including fuelling and maintenance, coffee stand, fire alert system)								
9.1.2	Provide programme utility vehicles for the central unit and state TB programmes	9.1.2.1	Procure and register 6 project vehicles per year for CU NTBLCP and the State programmes								
		9.1.2.2	Procure two SUV for the CU NTBLCP								
		9.1.2.3	Deploy 3 additional drivers from the FMOH (no cost)								
		9.1.2.4	Vehicle insurance								
		9.1.2.5	Vehicle fuelling and maintenance								
9.1.3	Provide programme motorcycles for the LGA TB programmes	9.1.3.1	Procure and register 774 motorcycles and accessories (e.g helmets) for LGTBLS								
		9.1.3.2	Motor cycle insurance								
		9.1.3.3	Motor cycle fuelling and maintenance								
SI 9.2	**Develop and implement an HR development plan addressing technical skills, managerial skills and staff recruitment and retention to ensure long-term sustainability**										

9.2.1	Develop a HRD plan	9.2.1.1	Hire an external TA (HRD consultant) for 4 weeks to develop a HRD plan of the NTBLCP								
		9.2.1.2	Conduct a 5-day meeting of 20 persons to develop HRD plan of the NTBLCP								
		9.2.1.3	Conduct a 10-day field visit by3 persons to the central unit, selected 6 states and 6 LGAs on assessment of the HR needs of the programme								
		9.2.1.4	Conduct a one day stakeholder meeting of 30 participants to present the HR Needs Assessment report								
		9.2.1.5	Conduct a 5-day workshop of 18 participants to develop a draft HRD plan (organisational management system and structure, job schedule, job description, performance appraisal, reward and sanction system, capacity building plan)								
		9.2.1.6	Conduct a 3-day workshop of 12 participants to finalise the HRD plan								
		9.2.1.7	Edit and proof read the HRD plan (no cost								
		9.2.1.8	Print and distribute 500 copies of the HRD plan								
9.2.2.	Implement the HRD plan	9.2.2.1	Recruit additional staff based on the HRD plan (deployment from the ministry or hiring of contract staff. Provide for the recruitment of 10 technical staff on contract basis)								
		9.2.2.2	Recruit/hire 1 TB technical officers per state (2 for Lagos and Kano states)								
		9.2.2.3	Support the participation of senior management staff at all levels (20 per year) on international leadership and management course								
		9.2.2.4	Support the training of programme technical officers at all levels (20 per year) on international technical course as appropriate								
		9.2.2.5	Conduct 3 weeks local training of 15 new programme officers per year from central unit and state TB programmes on management and control of TB, TB/HIV, Leprosy and Buruli ulcer								
		9.2.2.6	Conduct 1 week refresher training of 15 programme officers from central unit and state TB programmes on management and control of TB, TB/HIV, Leprosy and Buruli ulcer								

		9.2.2.7	Conduct 6 weeks local training of 60 new LGATBLS on management and control of TB, TB/HIV, Leprosy and Buruli ulcer								
		9.2.2.8	Conduct 1 week refresher training of 60 LGATBLS on management and control of TB, TB/HIV, Leprosy and Buruli ulcer								
		9.2.2.9	Support participation of 10 senior programme staff at all levels per year in an international programme management course								
		9.2.2.10	Support participation of 20 programme staff at all levels for the annual Union conferences								
		9.2.2.11	Conduct a 5-day training of 20 central unit programme officers, zonal pharmacists and state teams on data management for decision making								
		9.2.2.12	Support 5 days TOT for 75 (37 - state, 20 - National, 6 - Zonal and 12 - external trainers) National, Zonal and State programme officers on the training of all cadres of staff for the TB programme using the new guidelines.								
9.2.3	Pay salaries of TB programme staff at national, state, local government and facility level.	9.2.3.1	Pay salaries of TB programme staff at national level (CU and Zaria)								
		9.2.3.2	Pay salaries of TB programme staff at state level x 37 states.								
		9.2.3.3	Pay salaries of TB programme staff at local government level x 37 states.								
		9.2.3.4	Pay salaries of DOTS providers (percentage of time dedicated to TB)								
		9.2.3.5	Pay salaries of TB Lab scientists (percentage of time dedicated to TB)								
SI 9.3	**Upgrade the existing Monitoring and Evaluation system to be more robust and be able to meet up with the increasing demand for the TBL programme at all level**										
9.3.1	Conduct a Needs Assessment required to	9.3.1.1	Support TA to conduct a Needs Assessment of the NTBLCP M&E system at all levels								

	upgrade and sustain the existing M&E system at all levels (including the capacity and resources to use electronic data for recording and reporting at national, state and LGA level)	9.3.1.2	Conduct a 3-day meeting of 39 participants from State, NTBLCP and partners at the national level on Needs Assessment of the NTBLCP								
9.3.2	Strengthen Human resource needs of the M&E unit of the NTBLCP CU	9.3.2.1	Support the recruitment of 2 M&E officers skills to support the central unit for the period of the NSP								
		9.3.2.2	Support the participation of 2 National M&E staff for at least 2 weeks international training on Biostatics and data management (Basic and advance) annually								
		9.3.2.3	Support 4 staff annually for one week international training on impact evaluation								
		9.3.2.4	Support 3 M&E officers annually for 2 weeks (selected at all levels to enrol in any relevant M&E course that can improve and enhance their performance towards successful implementation of the NSP)								
9.3.3	Establish an electronic data management platform and establish linkage with the DHIS 2.0 as well as review supportive supervision checklist	9.3.3.1	Support 4 M&E staffs to participate in basic/advance level DHIS2.0 course at DHIS Academy of Nigeria to enhance better knowledge on functionality and implementation of DHIS in the 1st and 2nd year of the NSP								
		9.3.3.2	Identify an appropriate and sustainable electronic data management system for the National TBL control programme - at no cost								
		9.3.3.3	Adapt the identified appropriate and sustainable electronic data management system for the National TBL control programme - at no cost								
9.3.4	Procure the equipment and infrastructure to support	9.3.4.1	Procure statistical softwares (STATA, SPSS, CS Pro, GIS Software/Health Mapper): 1. STATA v13 for 10 CU staff; 2. SPSS v 18 Multi-user version;								

	electronic data management		3. ArcGIS software v 10.2 for 10 CU staff								
		9.3.4.2	Procure 790 tablets (673-LGA, 27-State, 6-Zonal, 12-National and 72-10% Buffer). Takes into cognizance of what has been done already by Abs Associates and ARFH/GF in 14 states (292 smartphones/Tablets).								
		9.3.4.3	Procurement of 1/3 of the 790 tablets (i.e 264 tablets) as buffer for the replacement of damaged and/lost tablets in the last 4 years of the plan								
		9.3.4.4	Procure 370 laptops (10 high burden facilities per state)								
		9.3.4.5	Procure GPS device/equipment (at least 40 copies): Garmin Etrex 20.								
		9.3.4.6	Provide annual subscription for internet connectivity on electronic devices (tablets) - 870 tablets annually (774 LGAs, 74 states, 10 national, 3 ARFH, 2 Zaria, 6 Zones)								
		9.3.4.7	Purchase121 pieces (this include 10% buffer) of Sim cards for the Gxalert system (This exclude the already available 350 Sim cards pius 45 that have already been installed)								
		9.3.4.8	Provide annual subscription for internet connectivity on GxAlert sim cards								
		9.3.4.9	Support the installation of Gxalert system on each GeneXpert machine for the real time data capturing of all the patients sent for GeneXpert MTB/RIF								
9.3.5	Expand the scope of work of the e-TB manager from its present status for DR-TB to capture patient information for susceptible TB from the facilities	9.3.5.1	Support a 2-weeks international TA to work with local consultants and stakeholders to create and adapt a separate platform on the e-TB manager for susceptible TB from the existing e-tb manager								
		9.3.5.2	Conduct a 5-day meeting of 30 persons to work with the international consultant to plan, create and adapt a separate platform on the e-TB manager for susceptible TB from the existing e-tb manager (This activity will be conducted in the 1st week of visit of the consultant in activity 9.3.5.1 above								
		9.3.5.3	Conduct a 5-day meeting of 30 persons to work with the international consultant to allow for joint finalization of the new separate platform on the e-TB manager for susceptible TB from the existing e-tb								

			manager (This activity will be conducted in the 2nd week of visit of the consultant in activity 9.3.5.1 above								
		9.3.5.4	Support a 1-week international TA to provide annual upgrade, update and maintenance to the e-tb manager and mentoring to the local IT staff for the smooth running of the e-tb manager								
		9.3.5.5	Conduct a 3-day meeting of 15 persons to work with the international consultant on the updating, upgrading and maintenance of the e-tb manager annually (To work with the international consultant - 9.3.5.1 above								
		9.3.5.6	Provide lap tops and tablets for all LGA supervisors and state M&E officers to access the e-TB manager - (at no cost. See activities 9.3.4.2 and 9.2.4.3)								
		9.3.5.7	Host domain of the e-tb manager and the Gx Alert system in the Nigeria work space or cloud - (refer to activity 9.7.3.1)								
		9.3.5.8	Support the annual maintenance of the both servers - refer to activity 9.7.3.1								
9.3.6	Establish linkage between the established electronic recording and reporting system with DHIS 2.0 through harmonization	9.3.6.1	Support the linking of the e-TB Manager to the DHIS 2 National instance								
		9.3.6.2	Support the annual maintenance and replacement of the installed e-TB manager and supportive supervision soft wares								
9.3.7	Develop a comprehensive training curriculum and manual for a National M&E training at all level in line with the new M&E system	9.3.7.1	Conduct a 5-day workshop of 20 persons to develop a draft training manual and user guide for the use of e-TB Manager electronic data system and supportive supervision. Training manual to be reviewed in the year 4 of the NSP								
		9.3.7.2	Conduct a 2-day workshop of 10 persons to finalise the training manual and user guide for the use of e-TB Manager, GX alert, use of technology for supportive supervision and the means of keying into the DHIS2 instance								

		9.3.7.3	Quantify, Print and distribute the finalised training manual and user guide for the use of e-TB Manager, GX alert, use of technology for supportive supervision and the means of keying into the DHIS2 instance								
9.3.8	Establish a National pool of trainers of trainees on the on the use of tablets for supportive supervision and how to use each module of the e-tb manager for Programmatic management of patient and capturing of patient level data	9.3.8.1	Identify 24 core trainers (4 per team per zone) across the country at no cost								
		9.3.8.2	Conduct a 5-day TOT for 24 core trainers on the use of the new electronic system using e-tb manager and the use of technology (tablets) for suportive supervision								
9.3.9	Build the capacity of the central unit staff, state staff, LGA staffs, Facility staffs, zonal pharmacists and lab staffs, focal persons, partners as well as selected high burden TB/HIV health facilities on the use of the electonic data capturing device	9.3.9.1	Conduct a 2-week training of 80 persons from the CU NTBLCP, State level and Partners on advanced data management skills using relevant statistical softwares (STATA, SPSS, EPI-INFO) and data analysis, presentation/interpretation and data use								
		9.3.9.2	Conduct a 5-day workshop of 18 technical officers to design an appropriate template (registers) and software for data capturing (develop database and reportable indicators) and supportive supervision checklist - This can be combined with activity 9.3.5.1 and 9.3.5.2								
		9.3.9.3	Conduct a 5-day training (40 users - CU NTBLCP, NTBLTC Zaria and other partners) for the use of the new electronic data reporting system using e-tb manager and technology for supportive supervision at the national level								
		9.3.9.4	Conduct a 5-day training for the use of the new electronic data reporting system using e-tb manager								

	and supportive supervision tools		and technology for supportive supervision at the State and LGA level (All states with the exception of Oyo and Kano states to have 1 session each)								
		9.3.9.5	Identify the 2 trainees from each of high burden TB/HIV facilities (approximately 10 facilities per state x 37 states) i.e. 370 Health facilities - no cost								
		9.3.9.6	Conduct a 3-day training of 2 trainees from each of high burden TB/HIV facilities (approximately 10 facilities per state x 37 states) i.e. 370 Health facilities								
9.3.10	Review of all R&R tools	9.3.10.1	Convene a 5-day meeting of 30 persons (lab and programme) to review all recording and reporting tools used in TB programme in years 1, 3 and 5 of the NSP								
		9.3.10.2	Convene a 5-day meeting of 15 persons (lab and programme) to finalise all recording and reporting tools used in TB programme in years 1, 3 and 5 of the NSP								
9.3.11	Conduct specific TB surveys and studies that will help bridge the information gaps and promote learning	9.3.11.1	Conduct inventory study on TB case notification in at least 6 states involving a core team of 36 persons								
		9.3.11.2	Conduct operational research to assess barriers to health care for TB high risk groups including key affected population (see 9.8.3.1and 9.8.3.2)								
		9.3.11.3	Conduct periodic reviews and analysis (epi-analysis) of routine data and findings from some of the studies								
		9.3.11.4	Support the conduct of a TB Knowledge, Attitude and Practice Survey								
		9.3.11.5	Support 1 day meeting to plan the process of the establishment of a national TB Programme vital registration system through the engagement of other stakeholders like the NPC								
9.3.12	Develop and Disseminate National and state annual TBL reports	9.3.12.1	Hold a 4-day meeting of 15 participants to produce National annual TBL report								
		9.3.12.2	Print and distribute 1500 copies of National annual TBL report (distribution to States, LGA, Partners)								
		9.3.12.3	Organise a 3-day meeting of 8 persons to produce state annual TBL report								
		9.3.12.4	Print and distribute 100 copies of State annual TBL report per state								
		9.3.12.5	Upload all National and State annual reports on the NTBLCP website								

9.3.13	Ensure safety of all previous and future data of the NTBLCP	9.3.13.1	Support a 5 day meeting for 10 persons to ensure that all NTBLCP historical data are entered into the new data base for periodical analysis								
		9.3.13.2	Ensure a back-up system for all level (This includes external back-ups for 37 states and 3 national). For the web based back up system e.g. Galaxy -								
9.3.14	Provide mentoring and onsite data validation visit to the States, LGAs and facilities to ensure quality assurance and improve performance on the newly established reporting and supportive supervisory systems (DHIS2 inclusive)	9.3.14.1	Support the review and adaptation of checklist for supportive supervision and OSDV for uploading into the electronic devices.								
		9.3.14.2	Support 3 days OSDV and mentoring visit of 2 persons/state to 3 challenged/weak State (to visit at least 3 LGAs) per quarter - 2 persons per state per 3 states per quarter								
		9.3.14.3	Support 5 days joint national DQA of 3 persons/state to 1 challenged/weak State per zone (to visit at least 6 LGAs) bi annually								
		9.3.14.4	Support each State M&E officer to provide a one day mentoring and onsite data verification to 1 LGA per year (to visit all facilities in the LGA visited and ensure that data captured into the e-tb manager by the LGTBLS is verified as per national M&E guidelines)								
		9.3.14.5	Support 2 persons to provide TA to 6 states each during the state review meetings (an opportunity to provide technical assistance to the use of the new electronic reporting system and ensure data quality)								
		9.3.14.6	Support the initial Supportive supervision and mentorship to states and LGA on the new e-reporting and supervisory system. It also entails to institute regular feedback mechanism. All LGA per state within 1 month of their training on the use of the e-tools. 1 visit per state with the exception of Oyo and Kano (will have 2 visits because of the large number of LGAs)								
		9.3.14.7	National M&E TWG to regularly review and provide oversight on the operations and use of e-TB manager and data. Preferably to be done after each joint national DQA visits								
SI 9.4	**Further develop the NTBLCP financial management system**										
9.4.1	Strengthen the	9.4.1.1	Recruit and retain a Finance manager, Compliance								

	capacity of NTBLCP to effectively manage programme finances		Officer, 2 accounts clerks, 1 IT officer, 1 Procurement officer, Internal auditor								
		9.4.1.2	Review financial management policy for NTBLCP								
		9.4.1.3	Produce financial management policy								
		9.4.1.4	Conduct a 2-day workshop on financial management policies for 50 central unit staff								
		9.4.1.5	Conduct a 2-day workshop on financial management policies for 37 state programme officers								
		9.4.1.6	Appoint external auditor for the NTBLCP								
		9.4.1.7	Conduct annual external audit of the NTBLCP								
SI 9.5	**Develop an efficient Procurement Supply Management system for all products at all levels**										
9.5.1	Institute efficient drug management and Pharmaco-vigillance practices in all DOTS sites	9.5.1.1	Conduct a 4-day meeting of 12 participants to review and revise the existing training curriculum and trainers guide on drug management and pharmacovigillance to meet contemporary needs								
		9.5.1.2	Print 850 copies of the training curriculum and trainers guide								
		9.5.1.3	Conduct a 2-day training of one DOTS provider for each of the remaining existing 5184 DOTS centres in the country, 774 LGATBLS on basic LMIS and pharmacovigilance at a maximum of 25 participants per 3 facilitators and one support staff								
		9.5.1.4	Conduct a 2-day bi-annual supply review meeting of 30 participants in each of the 36 states plus FCT (to include 3 central unit officers plus a zonal pharmacist)								
		9.5.1.5	Conduct a 2-day annual meeting of 15 participants to review PSM supportive supervision and mentoring checklist								
9.5.2	Enhance efficient use of Electronic logistics data management for routine performance monitoring and improvement	9.5.2.1	Conduct advocacy to state ministries to appoint duly qualified and self-motivated state TBL Pharmacists for post of State Supply Chain Manager in 36 states plus FCT (at no cost. see 9.5.6.2)								
		9.5.2.2	Procure 37 laptops and 37 internet modems for use in states for logistics data management								
		9.5.2.3	Conduct on-the-job training of 1 state Supply chain manager, 1 M&E officer and 1 Lab focal person per state (111) on NTBLCP logistics electronic data								

			management by the Central level officer (no cost)								
		9.5.2.4	Carry out 3-day quarterly mentoring and supportive supervisory visits to 3 states TB control programme by 3 persons from national and zonal levels								
9.5.3	Improve the capacity of FCMS staff to effectively manage NTBLCP products	9.5.3.1	Conduct a 4-day Training for 15 FCMS staff on TBL basics, forecasting and distribution management to enable them supervise the 6 Zonal stores and manage NTBLCP products and pipeline as well as to effectively collate and analyze national distribution data for performance monitoring								
		9.5.3.2	Conduct a 2-day Training of 49 personnel (15 NTBLCP staff, 12 zonal officers, 2 FCMS, 8 ILEP, 6 PR staff, 3 FDS, 2 CCM) on the use of the comprehensive PSM software.								
		9.5.3.3	Conduct a 3-day workshop (6 FCMS, 4 national, 2 PRs, 3 zonal officers and 2 Partners) to Integrate NTBLCP products in the information management system of the FCMS.								
9.5.4	Develop system to coordinate the distribution of Xpert cartridges	9.5.4.1	Conduct a three - day Meeting of partners and programme officers (20 participants - 6 FCMS, 4 national, 2 PRs, 3 zonal officers, 1 ILEP rep, 2 STBLCO and 2 Partners) to inaugurate bilateral coordinating team and develop plans & tools								
		9.5.4.2	Conduct a one - day bi-monthly meeting of 20 participants to review data and plan interventions								
9.5.5	Develop a system to coordinate the shift from ZN to FM microscopy logistics.	9.5.5.1	Conduct a 2- day meeting of 20 participants to develop schedule (Plan) and appropriate monitoring tools for switch								
		9.5.5.2	Conduct a day bi-annual meeting of 10 participants to monitor implementation of the schedule								
9.5.6	Upgrading and/or re-locating state TBL stores	9.5.6.1	Conduct a 2-day site assessment of existing state stores by 2 Logistics experts to identify and cost areas that need upgrading (costed in 9.5.3.1)								
		9.5.6.2	Conduct advocacy to ministries of health in states with stores that are in very bad shape that require upgrading and/or relocation								
		9.5.6.3	Upgrade 26 state TBL stores and 6 zonal stores.								

		9.5.6.4	3-Day Training of 6 zonal & 37 state store officers on warehousing operations management and QA practices								
9.5.7	Store Maintenance Allowance	9.5.7.1	Provision of N15M annually as TB Programme contribution to FCMS store maintenance								
		9.5.7.2	Provision of N72M annually as TB programme contribution to the 6 Zonal stores								
		9.5.7.3	Provision of N185M annually as TB programme contribution to the 37 state stores								
9.5.8	Review/harmonization of LMIS curriculum and SOP for the management TBL medicines, DRTB medicines and diagnostic products	9.5.8.1	Conduct a 3-day meeting of 15 participants to review and harmonize national logistics system SOP for drug-susceptible as well as drug-resistant TB								
		9.5.8.2	Print and distribute 1700 booklets of harmonized SOP for DS-TB and DR-TB								
		9.5.8.3	Conduct a 2-day training of 774 LGTBL on the revised SOPs								
9.5.9	Conduct forecast of NTBLCP drug and commodity needs	9.5.9.1	Conduct a 3-day meeting of 15 participants consisting of logistics, programme and M&E staff to develop a 3-year forecast of Adult and Paediatric First Line Drugs, Rifabution 150mg, INH 100mg and 300mg, DRTB Medicines, Ancillary, Patient Support, Lab commodities and R&R Tools								
9.5.10	Develop and publish quarterly PSM bulletin	9.5.10.1	Conduct a day Meeting of 10 TB PSM stakeholders to constitute an Editorial/Publishing committee; configure layout and content (no cost. See Activity 9.6.2)								
		9.5.10.2	Quarterly meeting of 10 participants drawn from PSM and other stakeholders to validate edition (no cost. See Activity 9.6.2)								
		9.5.10.3	Publishing of Quarterly editions - 500 copies quarterly (no cost. See Activity 9.6.2)								
9.5.11	Institute and maintain quality assurance procedures in all stores	9.5.11.1	Conduct a 2-day meeting of 10 participants to develop a standardized TB QA Protocol								
		9.5.11.2	10 participants to develop Tools (system) for tracking and ensuring compliance to Key Performance Indicators for 2 days								

		9.5.11.3	Carry out a quarterly 2-day assessment of stores and facilities in 5 states by 2 PSM experts to determine compliance to QA protocol								
9.5.12	Coordination Meetings	9.5.12.1	Conduct a quarterly coordination meeting in Abuja of 20 participants of partners that support PSM								
		9.5.12.2	Conduct a 2-day bi-annual coordination meeting for 18 Pharmacist from DR TB treatment centres and 6 Central Unit and Zonal Officers to resolve issues around medicines management, reporting, stock management, Pharmacovigilance etc.								
9.5.13	Develop an efficient PSM system for all products at all levels	9.5.13.1	Conduct a 4-day meeting of 20 PSM experts to develop a plan and protocol for an LMIS web-based software								
		9.5.13.2	Develop a web- based software for an efficient PSM for all products through the support of the IT unit								
		9.5.13.3	Develop customised web-based LMIS software in line with the PICKnPACK concept of PSM including hiring of a consultant								
		9.5.13.4	Conduct a 2-day meeting of 10 PSM experts to review the software and approve use before roll out								
9.5.14	Build Capacity of PSM officers at Central and Zonal Levels	9.5.14.1	3 weeks international Training on Warehousing Operations management by Imperial Health Services (South Africa) for 3 Central Unit Pharmacists, 6 Zonal Pharmacists and 2 Central Store Pharmacists								
		9.5.14.2	2 weeks international training course on Procurement for 3 Central Unit Pharmacist to build their capacity to be able to handle properly Procurement issues using Best Practices								
		9.5.14.3	2 weeks International Training Course on Quality Assurance of Medicines and Medical Products for 3 Pharmacists								
		9.5.14.4	2 weeks International training Course organised by the UNION (or any other Organisation) on commodity management - 2 persons								
		9.5.14.5	One week International Training Course on use of the Quant TB (forecasting/Pipeline monitoring Tool) organised by SIAPS/MSH for 3 Pharmacists								
9.5.15	Strengthen Pharmaceutical	9.5.16.1	Conduct a 2-day meeting of 15 persons to develop a system for tracking the logistics of patients on								

	and Medicine management of DR TB		ambulatory phase of DRTB treatment								
		9.5.16.2	Support 3 Central Unit Pharmacists and 3 Zonal Pharmacist and 6 Pharmacists from DR TB treatment centres to attend a one week international conferences relating to Phamaceutical Management of DR TB patient and DR TB Medicine management								
		9.5.16.3	Procure 43 Laptops and modems for internet system for Pharmacists at DR TB treatment centres								
		9.5.16.4	Provide for internet subscriptions for Pharmacists at DR Treatment centres								
SI 9.6	**Develop an effective advocacy, communication and social mobilization system and provide adequate staff and resources for an ACSM unit at NTBLCP**										
9.6.1	Establish a communication and public relations unit of the central unit	9.6.1.1	Hire a communication specialist								
		9.6.1.2	Procure basic communication equipment for the communication specialist (Camera, cam coder and accessories, digital recording device, lap top, internet connectivity (modem)								
9.6.2	Support modern communication strategies for the NTBLCP	9.6.2.1	Support the use of social networking (SMS, BBM, WhatsApp, Facebook, Twitter, Google+ etc) to distribute TB messages coordinated with the radio campaigns of obj 1 linked to NACA-NCC call centre service								
		9.6.2.2	Maintain and regularly update the programme website including internet security systems								
		9.6.2.3	Maintain an office mailing outlook system								
		9.6.2.4	Conduct a 2 day meeting of 15 participants including the communication unit to develop quarterly bulletin/newsletter and fact sheet (editing, cost for tea break and lunch)								
		9.6.2.5	Print and distribute 1500 copies of quarterly bulletin								
		9.6.2.6	Upload quarterly bulletin on the NTBLCP website								
SI 9.7	**Develop an effective information and communications technology system and unit for the programme**										
9.7.1	Establish an IT unit for the TB programme	9.7.1.1	Engage an IT consultant for 1 year to support the central unit								
		9.7.1.2	Recruit 2 IT staff for the duration of the NSP								
9.7.2	Maintain The IT infrastructure of the NTBLCP	9.7.2.1	Configuration and maintenance of NTBLCP.ng email and office outlook system								
		9.7.2.2	Develop IT specifications and provision of IT								

			equipment including laptops, browsers, phones and other IT infrastructure for Programme.								
		9.7.2.3	Repair and maintenance of IT equipment (laptops, printers)								
		9.7.2.4	Renewal and maintenance of internet access for the programme - costed in SI 9.1								
9.7.3	Establish and maintain a central data bank system for the NTBLCP	9.7.3.1	Procurement and installation of a server to host NTBLCP web based tools e.g e-TB Manger and GXlaert, data backup system and website								
		9.7.3.2	Maintenance of the server								
		9.7.3.3	Annual subscription for the server								
		9.7.3.4	Purchase 14 batteries (?voltage) and a 5000 KVA inverter for regular power supply to the server								
9.7.4	Support the M and E unit in Maintaining a database for the NTBLCP	9.7.4.1	Maintain and regularly update the DHIS for the NTBLCP (at no cost)								
		9.7.4.2	Maintain and update NTBLCP electronic database (at no cost)								
SI 9.8	**Develop and implement an operations research agenda to support attainment of TB control targets**										
9.8.1	Build strategic partnership with research and academic institutions	9.8.1.1	Identify research institutions through a competitive process								
		9.8.1.2	Develop MOU with the research institutions (at no cost)								
		9.8.1.3	Sign MOUs with the research institutions (at no cost)								
9.8.2	Build capacity of NTBLCP staff on operational research	9.8.2.1	Recruit 3 staff for the operation research unit of the central unit								
		9.8.2.2	Provide a long-term (one year) external TA to the NTBLCP on operational research								
		9.8.2.3	Organise a 3 week master training for 10 persons on epidemiology and biostatistics (include cost for 2 external TAs)								
9.8.3	Conduct operational researches to address Programmatic challenges to	9.8.3.1	Hold a 2-day meeting of 20 persons to develop research agenda for TB, TB/HIV and DR-TB								
		9.8.3.2	Provide research grant ($100,000) to the research institution for 4 operational researches per year x 6 years of the NSP								

	implementation of TB control activities										
9.8.4	Dissemination of research findings	9.8.4.1	Present research finding in local and international conferences (sponsor participation of 2 person per conference x 4 conferences per year)								
		9.8.4.2	Organise advocacy to policy makers for the adoption of research findings to effect policy changes (part of advocacy activities in obj 10)								
SI 9.9	**Engage professional bodies, academic institutions and others to support training, task shifting and/or and other HSS activities**										
9.9.1	Conduct a consultative meeting with representatives of professional health bodies to reach a consensus on TB management in special conditions	9.9.1.1	Identify representatives of professional bodies								
		9.9.1.2	Support a day annual meeting with 2 representatives each per 15 professional health bodies including participants from NTBLCP and partners (40 participants) on working with professional health bodies on TB control								
9.9.2	Support the annual conferences of the professional bodies	9.9.2.1	Provide support for annual conferences of 5 professional bodies selected based on relevance to the control of TB throughout the duration of the NSP								
		9.9.2.2	Support the participation of 2 NTBLCP staff at each of the annual conferences of the 5 professional bodies above (conference fee, DSA for 5 nights and transportation)								
Objective 10: Strengthen linkages between levels of the health system to improve management and accountability.											
SI 10.1	**Conduct joint results-based action planning at federal-state and state-local levels**										
10.1.1	Disseminate 2015 - 2020 National TB strategic Plan	10.1.1.1	Print 3000 copies of the 2015 - 2020 National TB strategic Plan								
		10.1.1.2	Conduct a-day meeting for the dissemination of the 2015 - 2020 National TB strategic Plan (a day meeting of FMOH, NTBLCP, NACA, NASCP, members of House commitee on Health, NPHCDA, Partners, stakeholders from National and States, line ministries, CSOs, Press, Private etc 120 participants)								

10.1.2	Develop annual workplan at National level	10.1.2.1	Conduct meeting of NTBLCP staff and partners to draw the annual operational plan from the NSP (2 day meeting of 15 participants, lunch and tea break only)								
10.1.3	Develop strategic plan for all the 36 states and FCT	10.1.3.1	Identify and Train pool of experts to support the development of state TB Strategic Plan (5 days training of 20 experts)								
		10.1.3.2	Conduct Expert/stakeholders meeting at the state level to develop draft state strategic plan (5 days meeting of 15 participants per state including the expert)								
		10.1.3.3	Conduct Expert meeting to finalize draft state strategic plan (3 days meeting of 15 participants per state including the expert)								
		10.1.3.4	Print 100 copies of State TB strategic plan per state for the 36 states and FCT								
		10.1.3.5	Conduct Dissemination workshop for the State TB strategic plan (a day meeting of an average of 50 participants per state)								
10.1.4	Develop annual work plan at State level	10.1.4.1	Conduct meeting of STBLCP staff, SASCP, SACA and partners to develop annual operational plan from the State Strategic Plan (3 day meeting of 15 participants, transportation, lunch and tea break only)								
		10.1.4.2	State team to present the annual work plan at the state quarterly review meeting (no cost)								
10.1.5	Develop annual work plan at LGA level	10.1.5.1	State team to develop template for LGA work plan and share with TBLS during state review meetings (at no cost)								
		10.1.5.2	State team to introduce the LGA annual work plan template to the LGA TBLS during one of the State TBL quarterly meeting								
		10.1.5.3	Meeting of LGA TBLS, State team to develop annual plan for the LGAs (to be developed during the state programme review meeting)								
SI 10.2	**Maintain federal-level NTBLCP liaisons for each zone to facilitate communications, planning and supervision with zones and states**										
10.2.1	Identify Zonal and deputy	10.2.1.1	Identify Zonal and deputy Coordinator from the NTBLCP (at no cost) with clearly defined ToR								

	Coordinator from the NTBLCP and support their functionality	10.2.1.2	Support Zonal coordinators to conduct mentoring/supervisory visits to the state (each state to be visited twice a year by zonal coordinator, 5 day visit per state); NTBLCP Zonal coordinator to Plan, coordinate visits, conduct programme review with WHO Zonal NPOs								
		10.2.1.3	Provide communication support for the Zonal coordinators (modem - 6500 (one off), call card, Internet access of at least N15,000 per month per zonal coordinator for 6 coordinators)								
SI 10.3	**Standardize the composition and mandate of the State and LGA TBL teams to include all relevant stakeholders, especially CSO representatives and improve team function**										
10.3.1	Develop a guide for the composition of the state team including ToR	10.3.1.1	NTBLCP staff meeting to develop a guide for the composition of the state team including ToR								
		10.3.1.2.	Disseminate a guide for the composition of the state team including ToR to the states (during zonal review meeting, annual control officers meeting) including formal communication to the SMOH (cost for courier to 36 states and FCT)								
SI 10.4	**Institute rigorous supportive supervision at all levels**										
10.4.1	Harmonize and produce tools for supervision	10.4.1.1	Conduct expert meeting to review programme supervisory checklist (DOTS, CTBC, PPM, TB/HIV, PMDT, Lab, PSM) (3 day meeting of 15 participants with tea break and lunch)								
		10.4.1.2	Conduct a 3-day expert meeting of 15 persons to review Lab supervisory checklist (AFB, Molecular, Culture and DST)								
10.4.2	Produce and disseminate NTBLCP Workers manual	10.4.2.1	Conduct expert meetings to review NTBLCP Workers manual (in year 3 and 6 of the NSP, 5 days meeting of 25 participants)								
		10.4.2.2	Conduct expert meetings to Finalize NTBLCP Workers manual (in year 3 and 6 of the NSP, 3 days meeting of 15 participants)								
		10.4.2.3	Print and distribute NTBLCP Workers manual (10000 copies in year 1 and 12000 copies in year 4)								
		10.4.2.4	Place NTBLCP workers manual on the web site (at no cost)								
10.4.3.	Conduct	10.4.3.1	Conduct a day planning meeting for supervisory visits								

	supportive supervisory visits from National level		to the state (cost of tea break and Lunch only for 15 participants)								
		10.4.3.2	Conduct quarterly supportive visits from the National level to state (5 day supervisory visits to 10 states per quarter ; 5 staff to cover all the thematic areas per visit - DOTS, PPM, TB/HIV, PMDT, CTBC, LAB, PSM)								
		10.4.3.3	Conduct a day post supervisory meeting to collate outcomes and identify follow up actions (cost of tea break and Lunch only for 15 participants)								
		10.4.3.4	Conduct quarterly supervisory visits from the national (NRLs and NTBLCP), 2 staffs to visit the zonal TB reference laboratories; 8 in 2015, 8 in 2016, 8 in 2017, 8 in 2018, 8 in 2019 and 8 in 2020.								
10.4.4.	Conduct supportive supervisory visits from Zonal level to the state	10.4.4.1	Conduct supportive visits of NTBLCP Zonal coordinator and the WHO Zonal NPOs to each state at least twice a year (5 day supervisory visits of 4 persons including zonal lab scientists)								
		10.4.4.2	Conduct quarterly supervisory visits from zonal TB reference laboratories to state TB reference laboratories; 2 staffs to visit the state TB reference laboratories; 1 in 2015, 3 in 2016, 5 in 2017, 8 in 2018, 11 in 2019 and 13 in 2020.								
10.4.5.	Conduct supportive supervisory visits from State level to the LGA	10.4.5.1	Meeting of State TBL team to develop quarterly supervisory schedules (no cost)								
		10.4.5.2	Conduct quarterly integrated supportive supervisory visits covering DOTS, TB/HIV, PMDT, CTBC, LAB, PSM by 3 staff from the state TB programme to LGAs, facilities and communities (2-day supervisory visits per LGA x 10 LGAs per quarter)								
		10.4.5.3	Disseminate reports of State quarterly visits to the NTBLCP Zonal coordinator, WHO Zonal NPOs and partners (at no cost during quarterly meeting)								
		10.4.5.4	Conduct quarterly supervisory visits from the state to peripheral labs; 37 State Laboratory Supervisors to visit 2302 labs in 2015, 2802 in 2016, 3302 in 2017, 3802 in 2018, 4152 in 2019 and 4352 in 2020.								
10.4.6	Conduct	10.4.6.1	Meeting of LGATBL team to develop quarterly								

	supportive supervisory visits from LGA level to the Facilities		supervisory schedules (no cost)								
		10.4.6.2	Conduct monthly integrated supportive supervisory visits to health facilities and communities by LGA TBLS (5-day supervisory visits per month per LGA x 774 LGAs) throughout the duration of the NSP								
10.4.7	Conduct supportive supervisory visits to Zonal and National Reference laboratories	10.4.7.1	Conduct quarterly supervisory visits from the national (NRLs and NTBLCP) to the zonal TB reference laboratories (2 persons to conduct 2-day visit per Laboratory x 8 Laboratories per quarter) throughout the duration of the NSP								
		10.4.7.2	Conduct quarterly supervisory visits from zonal TB reference laboratories to state TB reference laboratories (2 persons to conduct 2-day visit per Laboratory x 37 states per quarter) throughout the duration of the NSP								
		10.4.7.3	Conduct quarterly supervisory visits from the state to peripheral labs (1-day supervisory visit per lab x 15 labs per quarter x 37 states) throughout the duration of the NSP								
10.4.8.	Disseminate quarterly National, Zonal and State supervisory reports	10.4.8.1.	Identify and designate NTBLCP staff to collate quarterly supervisory reports from National, Zonal and State levels								
		10.4.8.2.	Place quarterly supervisory reports from National, Zonal and State levels on the NTBLCP website								
10.4.9	Conduct annual DQA on the data entry into the electronic platform from national to state levels	10.4.9.1	Support 1- day meeting of 15 persons to review the DQA checklist for 15 NTBLCP staff & partners at the national level								
		10.4.9.2	Conduct 5-day field visits to 18 states per year involving 3 persons per team x 6 teams								
10.4.10	Quarterly dissemination and production of fact sheets	10.4.10.1	Disseminated during zonal review meetings, via the website and quarterly newsletters								
SI 10.5	**Provide a results-based incentive scheme (monetary or non-monetary) to high-performing State, LGA and facilities**										
10.5.1	Provide	10.5.1.1	Identify states based on verifiable criteria								

	incentive/reward for high performing state annually	10.5.1.2	Provide reward/incentive for one best performing state (N500,000 per year) during the National annual TBL Control officer meeting								
		10.5.1.3.	Provide recognition certificates for the 3 best performing states during the National annual TBL Control officer meeting								
		10.5.1.4.	Support the best three performing states to attend International conference (cost for participation annually)								
10.5.2.	Provide incentive/reward for high performing LGA and facility annually	10.5.2. 1	Identify high performing LGAs and facilities based on verifiable criteria								
		10.5.2. 2	Provide reward/incentive for one best performing LGA per state (N50,000 per year) during the during the first quarter state review meeting								
		10.5.2. 3	Provide reward/incentive for one best performing facility per state (N30,000 per year) during the during the first quarter state review meeting								
		10.5.2.4.	Place pictures and biography of best performing State and LGA in the NTBLCP website (no cost)								
SI 10.6.	**Programme review at all levels**										
10.6.1	Programme review meetings	10.6.1.1	Conduct annual National Programme review meeting (3 day meeting of 80 participants)								
		10.6.1.2	Conduct annual Control officer retreat (2 day meeting of 50 participants)								
		10.6.1.3	Conduct quarterly zonal TBL programme review meetings- 2 day meetings (average of 7 STBLCOs, 7 QA officers, 1 Zonal Lab officer, 1 Zonal Pharmacist, 1 civil society representative and 3 NTBLCP officers - M&E, Zonal coordinator, Laboratory representative and 1support staff, 1 WHO NPOs and 8 partners per zone) per zone								
		10.6.1.4	Conduct quarterly State TBL programme review meetings (3 day meetings of STBLCO, Lab QA, LGA TBLS, SASCP, CSOs, facilities and partners per state); the last day of the meeting is for technical groups meeting(TB/HIV, CTBC, PP, ACSM)								

10.6.2	Mid-term review of the NSP	10.6.2.1	Develop concept for the midterm review and identify TA support (no cost)								
		10.6.2.2	Conduct 2 preparatory 3-day meetings to develop and finalise tools for the mid-term review of the NSP								
		10.6.2.3	Conduct Mid-term review of the NSP (50 internal participants and 10 external TAs for 2 weeks)								
10.6.3	Joint annual monitoring mission	10.6.3.1	Conduct annual joint monitoring mission (year 2 and year 4 of the plan, Cost for 60 participants with 8 TAs)								
10.7.1		10.7.1.1	Convene a 5-day meeting of 30 persons (lab and programme) to review all recording and reporting tools used in TB programme								
		10.7.1.2	Convene a 5-day meeting of 15 persons (lab and programme) to finalise all recording and reporting tools used in TB programme								
		10.7.1.3	Print copies of the recording and reporting tools annually								
		10.7.1.4	Revise all recording and reporting tools used in TB programme in years 3 and 5 (5-day meeting of 20 persons)								
Objective 11: Contribute to the strengthening of the health care system, especially primary health care, in collaboration with other disease programmes and agencies for integrated delivery of prevention, diagnosis and treatment services for TB, HIV and malaria.											
SI 11.1	**Strengthen the existing interagency partnership with NTBLCP, NACA/NASCP, Malaria and PHCDA to coordinate and implement efforts for health system strengthening, including PHC**										
11.1.1	Hold quarterly meeting of the ATM to include all agencies that are involved in service delivery at the PHC level (NPHCDA, Family health)	11.1.1.1	Advocacy to the DPH to update the TOR of the ATM meeting including harmonization of HSS								
		11.1.1.2	Conduct a one-day meeting of 15 people to review the TOR for the ATM to reflect current realities								
		11.1.1.3	Conduct 1 day meeting of the ATM and the stakeholders quarterly - for 30 persons								
11.1.2	Establish state management & implementation team in all states	11.1.2.1	Advocacy to the Honourable commissioners for health/DPH to Constitute SMT/SIT in all the 36 states + FCT- 5 person each from the National (5x37)								

	to include all agencies that are involved in service delivery at the PHC level (SPHCDA, Family health)	11.1.2.2	Meeting of 10 people to review the TOR for the SMT/SIT to reflect current realities								
		11.1.2.3	Conduct 1 day meeting of the SMT/SIT quarterly- 30 people								
11.1.3	Establish LGA Health management/implementation team in all the LGAs in the state to include other agencies that are involved in service delivery at the PHC level	11.1.3.1	Advocacy to the LGA chairman and the PHC coordinator LGA Health management/implementation team from the state - 5 per LGA(5x774)								
		11.1.3.2	Constitute or adopt the committee								
		11.1.3.3	Develop a TOR for the LGA management team								
		11.1.3.4	Conduct a 1-day meeting the LGA health management team quarterly - 15 people (meals)								
11.1.4	Establish Ward Health Committees where they are absent	11.1.4.1	CBOs to advocate to Local Government Chairman for formation of Committee								
		11.1.4.2	CBOs to provide training to WHCs on roles and responsibilities and to educate them on ATM issues								
SI 11.2	**Develop and implement a plan for PHC system strengthening in geographic areas critical for the three diseases**										
11.2.1	Support facility upgrade to provide support diagnostic and treatment services for TB	11.2.1.1	As contained in the facility renovation plans of objectives 1 and 2								
11.2.2	Develop a plan for PHC System strengthening (PSS)	11.2.2.1	Conduct a 5-day meeting of 15 persons to review NPHCDA guidelines to integrate ATM national policies								
		11.2.2.2	Conduct a 5-day meeting of 15 persons to review NPHCDA training manuals to integrate ATM training modules								
		11.2.2.3	Conduct a 5-day meeting of 15 persons to review								

			NPHCDA supervisory checklist to integrate ATM activities are covered								
		11.2.2.4	Integrate ATM into the PHC logistics management system								
11.2.2	Implement the PHC system strengthening plan	11.2.2.1	Conduct a 5-day meeting of 15 persons to review NPHCDA guidelines to integrate ATM national policies								
		11.2.2.2	Conduct a 5-day meeting of 15 persons to review NPHCDA training manuals to integrate ATM training modules								
		11.2.2.3	Conduct a 5-day meeting of 15 persons to review NPHCDA supervisory checklist to integrate ATM activities are covered								
		11.2.2.4	Integrate ATM into the PHC logistics management system								
SI 11.3	**Develop and implement a plan to prevent or address service disruptions**										
11.3.1	Identify labour unions involved in health sector	11.3.1.1	1 day Advocacy visit to Executives of NLC on the dangers of service disruption in the health sector as it relates to ATM and other essential services led by TB ambassador (10 persons)								
		11.3.1.2	1 day Advocacy to Executives of TUC on the dangers of service disruption in the health sector as it relates to ATM and other essential services led by TB ambassador (10 persons)								
		11.3.1.3	1 day Advocacy to Executives of professional unions (NMA, Nursing union, JOHESU) on the dangers of service disruption in the health sector as it relates to ATM and other essential services led by TB ambassador (10 persons)								
		11.3.1.4	Organize a one day consensus meeting with the executives of the NLC, TUC and professional bodies (35 persons) annually								
11.3.2	Support the enactment of a law to ensure continuity of essential services	11.3.2.1	10 person advocacy visit to national assembly on the need for the law to ensure continuity of essential services during industrial action (3 Visits)								
		11.3.2.2	Conduct a 5-day meeting of 20 people to develop a draft bill to be submitted to the National assembly								
		11.3.2.3	Conduct a 2-day stakeholders meeting of 50 people to								

			finalize the bill								
		11.3.2.4	Submit the bill to the National Assembly to submit								
SI 11.4	**Develop and implement a plan to provide access to TB services in areas of civil unrest**										
11.4.1	Identify non-public facilities that can support TB case-finding and treatment in areas of civil unrest	11.4.1.1	Map emergency organizations working in these areas (Appropriate section for TB case finding in crisis-ridden areas).								
		11.4.1.2	Organize 2 day meeting with 20 participants drawn from organisations/agencies providing emergency health care services in crisis-ridden areas with the view of identifying and defining roles and responsibilities.								
		11.4.1.3	Organize 5 day training of 20 participants among organisations/agencies providing health care services per each of the 37 states								
		11.4.1.4	Provide diagnostic equipment and supplies (see PSM).								
		11.4.1.5	Evaluate performance annually								

PART THREE:

Monitoring and Evaluation Plan

7. The Monitoring and Evaluation Plan

7.1 Purpose:

The purpose of the M&E Plan for the NSP-TB 2015 – 2020 is to describe how and by what metrics the programme will evaluate the effect of the strategies and interventions described in the Core Plan on the TB epidemic in Nigeria and monitor progress on implementation of the activities described in the Operational Plan to meet the NSP's goals and objectives. It also briefly describes the current recording and reporting as well as data management systems, summarizes the findings of the recent epidemiological analysis conducted by WHO and presents the recommendations of that review. The NTBLCP will endeavour to address those recommendations as an integral part of this NSP-TB (refer to objective 9 activities in the operational Plan).

The objectives of the NTBLCP M&E Plan 2015 - 2020 are to:

1. Track progress and monitor the outcomes and outputs of the NSP-TB 2015 - 2020
2. Build upon the requisite infrastructure for monitoring and evaluation in Nigeria
3. Strengthen the required human resource capacity at all levels from federal, state, LGA and facility level
4. Ensure standardization of TB indicators and harmonize recording and reporting tools for use by all entities within the NTBLCP
5. Define clear roles and responsibilities in monitoring and evaluation across different levels of the system
6. Facilitate efficient data transmission and feedback flow
7. Facilitate processes for ensuring good data quality and availability at all levels of the health system
8. Promote the use of information and M&E products for policy decision-making and improving quality of service
9. Strengthen mechanisms to ensure dissemination of critical information to all stakeholders
10. Coordinate and strengthen surveys and operations research
11. Mobilize adequate financial and material resources to support full operationalization of the M&E plan.

7.2 Recording and reporting and data management practices

7.2.1 Organization of the system

The National Tuberculosis & Leprosy Control Programme (NTBLCP) coordinates TB and Leprosy Control activities throughout Nigeria. The NTBLCP structure corresponds to the three tiers of Government: federal, state and local government area. The national level (referred to as the NTBLCP Central Unit) is responsible for policy development, resource mobilization, logistics/commodity management, human resource development, supervision, monitoring and evaluation. The NTBLCP M&E unit at the central level currently comprises five staff members consisting of an M&E consultant, a statistician, scientific officer, a medical officer and the head of unit. All of these staff members have different skills that complement each other. However, there still remains a gap in the human resource capacity.

NTBLCP will make concerted efforts to ensure that the gaps identified in the mid-term review and epi analysis are addressed to ensure efficient monitoring and evaluation of NTBLCP strategic plan. The human resource gaps identified and what are needed to fill them include:

1. A dedicated senior officer with requisite competence and skill to head the M&E unit.
2. Established specific desks:
    a. Data management: database manager and database officer
    b. Communication/Information management: website officer and documentation officer
    c. Research: At least 2-3 persons
    d. Biostatistician/epidemiologist: Based on the epi-analysis, a dedicated biostatistician/epidemiologist will be required to strengthen the NTBLCP to analyze and effectively manage the surveillance data and surveys and other research activities planned within the programme.
    e. M&E officers: at least six persons, each to provide support and oversight for one of the six geo-political zones.

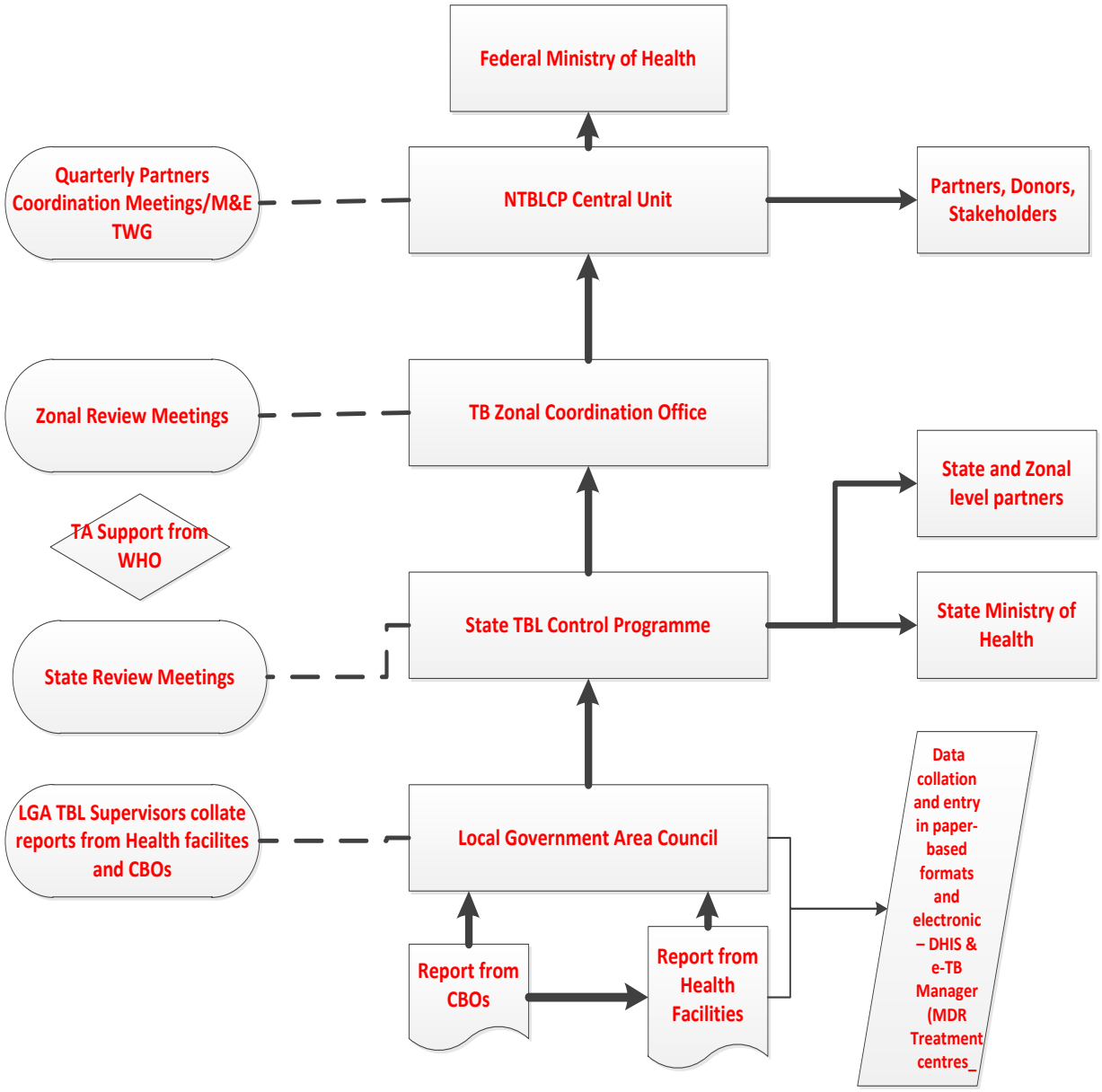
The state level coordinates, monitors and supervises TB and leprosy activities in the 37 states of the country, while the local government level is responsible for data collation, monitoring and supervision in the 774 LGAs in the country and the service delivery points. Information is generated from health facilities providing TB and leprosy services and a network of CBOs providing TB, TB/HIV and leprosy services. It is then collated at the LGAs, then states and lastly national level.

7.2.2 Data collection and storage system

7.2.2.1 Flow of information

Figure 19 shows how and in what form information flows from one level of the system to the next. DOTS services are implemented in most government health facilities especially primary health care centres, secondary health facilities, ART comprehensive centres, FBOs/Mission hospitals, private and prison facilities. GHCWs who are heads of the DOTS clinics in these facilities are responsible for screening individuals with suspected symptoms of TB, case-finding, infection control and treatment of TB, as well as HIV counselling and testing for TB patients. To effectively perform these tasks, they receive technical and logistical support from the LGA TBL Supervisors and the State TBL team. Support includes regular supportive supervision, capacity-building through training, technical assistance and supply of drugs, recording and reporting (R&R) tools and other commodities.

Figure 19: Information flow chart.



The GHCWs play a vital role in the day-to-day management and control of TB services and data collection. With respect to reporting and recording and data management, they:

- Register TB patients in the treatment register.
- Ensure laboratory results are adequately entered in to the right registers.
- Prepare and fill default tracing form and trace patients who have defaulted from treatment in close collaboration with CHEWs and other community based health providers.
- Complete and update patient -record cards, treatment registers and drug ledgers.
- Ensure timely ordering of TB commodities to maintain sufficient stocks of drugs, IEC materials, laboratory supplies and R&R tools (registers, patient cards, etc) at the health facility.
- Give adequate and prompt information to facility in-charge and LGA TBLS on issues affecting TB management in the facility and the community.
- Participate and give feedback to facility health management team on TB issues.

At the LGA level, the LGA TBL Supervisor (LGA TBLS) collects and compiles all health facility data in the LGA into a central register and at the end of the quarter submits the report to the State Control Office. The State TBL Control Office collates all LGA TB data into standardised reporting form. At the zonal level, data is collated on a zonal basis and reported on a quarterly basis. At the national level, the NTBLCP Central Unit collates all state TB data and shares the information with the PRs of Global Fund grants.

On a quarterly basis, the PR uses the national summary statistics submitted by the NTBLCP to prepare the Dashboard and PUDR, which is then submitted to the CCM and LFA respectively.

The NTBLCP M&E system has an inherent mechanism for validation of data quality at various levels through review meetings at the state and zonal levels, described below. This focuses on the data consistency and completeness.

Paper-based system

A traditional, paper-based system is used in Nigeria, starting from the primary data collection point at health facilities within each LGA (public, some private and some FBO), using standard WHO recording and reporting forms. The health worker at the health facility has the primary responsibility of ensuring that all components of these forms are completed accurately and correctly. A list of forms used by the programme is provided in the table below. The Workers' Manual and R&R forms are currently under revision to reflect the new WHO case definitions and will be distributed in 2014.

Table 28: TB recording and reporting tools used by the NTBLCP

R&R tool	Description	Level of usage	Responsible person	Frequency
TB Clinic Suspects Register	Records of patients presenting with cough 2weeks or more	Health facility	General Health Care staff	Daily
Sputum Examination Request Form	Request information and Results of AFB smear microscopy	Health facility	General Health Care staff	Daily
TB Laboratory Register	Results of AFB smear microscopy	Laboratory	Lab Scientist or technician	Daily
TB Culture/Sensitivity Request/Report	Request information and Result of DST	Laboratory	Lab Scientist or technician	Based on need
TB Treatment Card	Patients treatment records and progress	Health facility	General Health Care staff	Daily
TB Appointment Card	Daily patient's treatment records	Health Facility	General Health Care staff	Daily
INH Treatment Card	Daily records of INH taking	Health Facility	Health care staff	Daily
TB Referral/Transfer Form	Patient's up-to-date treatment status	Health Facility	General Health Care staff	Based on need
TB Facility Register	Patient's daily treatment records	Health Facility	General Health Care staff	Daily
INH Prophylaxis Register	Patients daily treatment records	Health Facility	General health staff	Daily
LGA TB Central Register	Patient's daily treatment records	LGA	TBL Supervisor	Weekly/ Monthly
LGA Quarterly Report on TB Case Finding	Report on TB cases detected in a quarter by category	LGA/State	State TBL CO /LGA TBL	Quarterly, Annually

Form			Supervisor	
LGA Quarterly Report on Sputum Conversion Form	Report on treatment outcome of TB cases started on treatment 3-6 months earlier	LGA/State/ Zonal/ National	State TBL CO /LGA TBL Supervisor	Quarterly, Annually
LGA Quarterly TB Cohort Report Form	Report on treatment outcome of TB cases started on treatment 12-15 months earlier	LGA/State/ Zonal/National	State TBL CO /LGA TBL Supervisor	Quarterly, Annually
Stock Card	Drugs and commodities received and issued out	Facility/ LGA/ State/Zonal/ National	Facility staff/LGA TBLS, Store officers at various levels	At every transaction
Delivery Voucher	Drugs and commodities issued out	At all levels except facilities	LGA TBLS, Store officers at various levels	At every transaction or quarterly
QRRIF Form	Quarterly LGA or State drug , lab and R&R utilization and request	LGA/State/Zonal/National	State TBL CO /LGTBLS	Quarterly, Annually
Community TB Care (CTBC) Tools				
CTBC Referral form	Request for screening of presumptive TB clients identified in the community	Community/CBO	Community volunteer/CBO	Daily
Community Volunteer register	Daily records of referrals for presumptive TB clients referred from the community	Community/CBO	Community volunteer/CBO	Daily
Patient treatment support card	Patients treatment records and progress	Community/CBO	Community volunteer/CBO	Daily
DR-TB R&R TOOLS				
DR TB Request for Sputum Examination	Details of patient information and DOTS site	DOTS clinics	DOTS staff	When suspects are identified
DR TB Sputum Dispatch Form	Number of samples and referring DOTS centres and designated DR-TB labs	DR TB treatment centre	DOTS staff/ LGTBLS	When suspects are identified
DR-TB Suspect register.	Number of samples and referring DOTS centres and designated DR-TB labs	DR TB treatment centre	DOTS staff/ LGTBLS	When suspects are identified
DR-TB referral form	Number of samples and referring DOTS centres and designated DR-TB labs	DR TB treatment centre	DOTS staff/ LGTBLS	When suspects are identified
Category IV Treatment Card	Patient details of daily intake of drugs, follow up of lab results, details of referring sites	DR TB treatment centre	DR TB treatment staff	At enrolment for treatment and ongoing
Patient Identity (Hand) Card	Patient details of daily intake of drugs, follow up of lab results, details of referring sites	DR TB treatment centre	DR TB treatment staff	At enrolment for treatment and on going
Category IV Treatment Register (Parts A – D)	Patient details of daily intake of drugs, follow up of lab results, details of referring sites	DR TB treatment centre	DR TB treatment staff	At enrolment for treatment and on going
Laboratory Register for DR-TB.	Smear and cultures results	DR TB designated lab	Lab focal person at designated DR TB lab	Daily as needed
6 monthly Report	Details of treatment outcomes	DR TB treatment	DR TB focal	6 monthly

on Category IV Case Registration (Include suspect).		centre	person at DR TB treatment centre	
Six Month Interim Outcome Assessment	Patient details	DR TB treatment centre	DR TB focal person at DR-TB treatment centre	6 monthly
Annual Report of Treatment Outcome of Category IV Regimen.	Details of patient treatment outcome at end of treatment	State	DR TB focal person	Annually
MD (X)R-TB monthly notification form		State	DR TB focal person	Monthly
Discharge form (from DR-TB Treatment centre to DOTS Clinic.).	Patient details, facility referring and facility discharged to	State and the treatment centre	DR TB focal person	Upon completion of intensive phase of treatment

At the Local Government level, the LGTBLS provides oversight of the health clinician and has custody of the LG central register which captures relevant information on patients initiated on treatment in health facilities during the reporting quarter. Data generated from all health facilities providing DOTS (and leprosy) services are updated regularly and collated quarterly by the LGTBLS in the LGA central register. Following verification by the LGA supervisor, collated data from all the DOTS facilities within the LGA are summarized into the quarterly LGA summary report. Currently data collection is manual at the facility and LGA level.

The LGTBLS as part of his/her responsibility monitors the treatment of patients registered to ensure their adherence to the treatment regimen and to ensure that all patients initiated on treatment from all DOTS and leprosy facilities within the LGA are captured and accounted for at the completion of treatment.

Electronic systems

The reporting system is partially computerized with an Excel-based platform at the state level; while fully computerized at the zonal and national levels. Data from the LGA levels in each state are entered into pre-designed Excel quarterly reporting templates during the state quarterly review meetings, where data verification and validation takes place. Aggregated data for the state are summarized and reported to the NTP central unit via the internet. While records are available, the data are not readily accessible for analysis and decision-making purposes. A recent assessment of Nigeria's TB surveillance and vital registration systems reflected the need for increased investment in Nigeria's TB surveillance and a need to migrate to a more relational database that will facilitate detailed time series analysis.

In addition to the Excel-based reporting of TB data, the NTBLCP is using two additional pieces of software for TB programme management. GxAlert (developed by Abt Associates) tracks testing and results for *GeneXpert* testing of patients and eTB Manager (developed by Management Sciences for Health) currently tracks DR-TB data. These initiatives are in the

early stages of roll-out and there is a need to ensure compatibility with the national health information system (DHIS2-based).

GXalert

Abt Associates' GxAlert Initiative is designed to improve the TB test reporting times and information sharing from *GeneXpert* and other rapid TB diagnostic machines by networking *GeneXpert* machines to the Internet-based GxAlert system. The system can generate SMS alerts and also populate the database automatically with real-time TB/HIV co-infection data flowing from GxAlert. Data can then be used for decision making and to improve national level policy. Data are uploaded automatically and disaggregated when GxAlert is configured on *GeneXpert* systems. SMS alerts are sent to the LGA supervisor and state programme manager upon diagnosis of an MTB detected/Rif resistance detected case to speed recruitment, treatment and patient management. Based on data uploaded by the GxAlert, an email showing error rates and utilization of each machine for optimal placement and efficiency is sent to the NTBLCP. GxAlert also can track maintenance, use or effectiveness of the machines and cartridge utilization. GxAlert can be linked with the national health database (DHIS2) and eTB Manager via the existing GxAlert API.

e – TB Manager

e-TB Manager is a system strengthening web-based tool that can address all information management needs of TB programmes. The benefit of this tool is the integration of all aspects of TB control from diagnosis to treatment outcome, medicines and commodities management, as well as real-time information on processes for prompt decision-making. The challenges with the paper-based reporting system and the need for a more rapid decision-making process gave birth to the e-TB Manager, which is widely used in a number of countries. The tool was developed by Management Sciences for Health and adapted for Nigeria through the TBCARE I project in support of the NTBLCP. It is cloud-based, where it is currently hosted with an uptime reliability of 99.5% for access by DR-TB Treatment Centres, Labs, NTP and State DR-TB Teams across the federation and can be used on any device that is internet-enabled. It has undergone a few customizations to meet Nigeria-specific TB demands. Since piloting in 2011, there have been challenges of power supply and internet access, which initially constituted a setback; these had been overcome with the development of the e-TB Manager Desktop version which helps save data offline which will be synchronized upon availability of internet and cloud-based hosting.

Currently, the e-TB Manager serves all the 11 DR-TB treatment centres in the country; all the six DR-TB reference labs; the NTBLCP and all the State TBL Control Programmes with an in-built capacity to accommodate more should there be need for expansion. It is used for both hospital and ambulatory care for DR-TB patients. Acceptance and usage by both users and decision-makers has grown tremendously with about 90% of DR-TB data in Nigeria uploaded into the e-TB Manager. Successful implementation of this tool included the following steps: assessment of the existing algorithms for DR-TB patient management and second-line anti-TB medicines and commodities; evaluation of the available health facility infrastructure (i.e., human resource capacity, computer availability, internet connectivity); customization of the e-

TBM system, based on assessment findings; a training-of-trainers programme on e-TBM implementation for users and NTP staff.

While taking into consideration the lessons learnt with the deployment of e-TBM for patient management and monitoring on DR-TB programme of NTBLCP, the NTBLCP plans to scale-up the utilization of the e-TBM to capture patient level data on the Drug susceptible TB (DS-TB) in order to improve patient management and ensure effective monitoring and tracking. Thus, both the DS-TB ad DR-TB data system will be hosted and run on the same electronic data platform and stored on the same server. This has the advantage that it will enhance and make integration easier and adequate follow up of TB patients will be seamless since this initiative will afford a continuum of care for all enrolled DS-TB who may become a DR-TB patient. It also will minimize the challenges associated with migration of data from software to another and reduce cost of running business as there will be no need to invest in two data platforms (server maintenance, trainings, user-time management and mismatch errors etc). Consequently, appropriate standard operating procedure (SOP) and training manuals will be developed to guide the fully deployment of the e-TB manager across the country.

DHIS2

The NTBLCP information management system is aligned with the national health information management system. The recording and reporting tools are also partly incorporated into the national harmonized tools and are being used for data capturing. There are four TB indicators captured in the national electronic information management system, DHIS 2.0 and reported through the national tools from the health facilities through the LGA M&E officers and LGA TBL supervisors to the state and federal ministries of health. Efforts to ensure full integration of additional TB data elements into the NHMIS reporting system are ongoing. The Department of Health Planning, Research and Statistics (DPRS) under the Federal Ministry of Health (FMOH) is responsible for coordination of this activity and the roll out of the DHIS 2.0, which was initially funded through the Global Fund HSS grant. That effort was implemented in approximately 5 LGAs in selected states; however with incremental funding and support, there is plan to scale up the DHIS 2.0 to all LGAs in the country. This initiative is also aimed at promoting and facilitating integration of data from all disease programmes within the confines of the FMOH, with particular focus on HIV/AIDS, tuberculosis, malaria and expanded programme on immunization (EPI) disease surveillance systems. The NTP is committed and supportive of the initiative to ensure reporting of TB routine and surveillance data on the NHMIS tools and also on the DHIS 2.0 being deployed by the FMOH. NTBLCP has developed a more comprehensive set of data to complement the data requirement on the NHMIS for TB monthly/quarterly summary data from the DOTS facilities and LGAs. Efforts to ensure data quality at all level will be intensified in collaboration with other stakeholders, government ministries, departments and agencies.

7.2.2.2 Data storage

NTBLCP has a backup policy to safeguard NTBLCP data, prevent the loss of data in the case of accidental deletion or corruption of data, system failure or disaster and to permit timely restoration of information in case such events should occur. The policy stipulates that data from NTBLCP, STBLCP and LGA TBLS are stored in waterproof and fireproof locations as well as on dedicated desktop computers designed for this purpose. Currently, data storage and

back up is done on personal computers at the zonal level (WHO NPOs) and the national level (NTBLCP). There is currently no server for shared TB data management and storage.

Water proof files: Records of patients on treatment, as well as patients who have completed treatment should be stored in individual folders and where possible, waterproof files and folders to ensure easy retrieval and protection from rains or flooding. In line with the Federal Government of Nigeria policy of document archival, all project and patient medical records must be kept safe for at least more than 5 years after the expiration of the project.

Fireproof/security shelf: This will be used to store paper-based recording and reporting tools like treatment cards, registers and forms. The storage facilities will be provided and ensure utilization at all levels of data generation within the health system from National, state, LGA to health facility as well as community level.

External backup/ hard drives. All electronic data from state to National level should be systematically backed up using an external hard drive. External backup/ hard drives that are used for storage/ backup must be stored securely in a locked safe and at a sufficient distance away from the original data to ensure both the original and backup copies are not compromised.

The computer server: The use of a relational, open source database will allow data to be backed up on a server which will give users equal rights over the internet, sharing of files and storage of files produced by each user. The method provides a network for all users to access the server. This will enable all data generated by each user from service delivery points to be saved on the server. At intervals, the server will automatically backup all the data on all the workstations connected to the network at a scheduled period. Consequently, a unified server system will be established at NTBLCP to allow for effective coordination and management of programme data and information systems. Where this is not possible, NTBLCP M&E team in collaboration with the IT unit will seek for suitable alternatives within the country e.g. GALAXY Backbone.

7.2.3 Data products, dissemination and use

7.2.3.1 NTBLCP annual report:

The annual report provides a brief description of activities implemented during the year and evaluates progress on the objectives of the National Tuberculosis, Leprosy and Buruli Ulcer Control Programme. It also provides information on the country progress towards the achievement of global targets for TB control. The annual report is distributed to stakeholders, partners, state TBL control programmes, CSOs, relevant government ministries, departments and parastatals and donors in hard copy or electronically.

7.2.3.2 NTBLCP website:

As part of this NSP, NTBLCP will upgrade its website to provide relevant TB data to public users.

7.2.3.3 NTBLCP fact sheet:

As part of this NSP, NTBLCP will produce a fact sheet on quarterly and annual basis to showcase progress and achievements in meeting the set goals and objectives of the NSP.

7.3 Data quality assurance

Data quality is a measure of the fitness of data for decision making. Data quality involves ensuring the accuracy, timely reporting, completeness and consistency of data used for decision making. Good quality data depends not only on the availability of the tools but also on the appropriate, complete and accurate documentation of data in relevant tools.

7.3.1 Zonal and state review meetings

The NTBLCP conducts two (state and zonal) quarterly review meetings which are used for data verification and validation. Identified inconsistencies are reconciled where feasible; where not feasible, feedback is provided to the lower levels to reconcile the data using primary source documents. Zonal and state TBL review meetings improve the timeliness of reporting to the national programme. The state meetings usually take place within two weeks of the beginning of a new quarter, while the zonal meetings usually take place between the third and fourth week of a new quarter. During the meetings, state or zonal-level data are compiled and a data audit performed. Meeting objectives include the following:

1. To review the progress made each quarter of NTBLCP implementation at the sub-national level – including implementation of TB, TB/HIV and Leprosy control activities in the states in relation to key performance indicators of the NTBLCP.
2. To collate, analyze and review quarterly statistical and logistics and Laboratory Quality Assessment (QA) data relating to management of TB, TB/HIV and Leprosy patients.
3. To identify key problems hindering the successful implementation of DOTS, TB/HIV and leprosy activities in the states.
4. To proffer solutions to identified problems.

Participants at the zonal quarterly meeting include:

1. Central Unit of the NTBLCP
2. State TBL Control Officers
3. Zonal Pharmacist and Zonal logistics assistants for each zone
4. Laboratory EQA Focal Persons
5. WHO NPO officer
6. Partners supporting NTBLCP
7. CSO/CBO representatives

Participants at the state quarterly meeting include:

1. State TBL Control Officer and team in each state including phamacists and laboratory officers
2. All LGTBLS in the state
3. Partners supporting the state TB programme

7.3.2 Onsite data validation exercises

This is a routine M&E activity designed to improve the quality of reported data across all relevant levels; from the health facility to LGA and the state. The exercise allows for the audit of data by comparing what has been reported to what is obtainable at the source of reporting. This exercise acts as a cross-check for the correctness, completeness and validity of data while checking against over-reporting or under-reporting that may have been caused by human or system error. The NTBLCP regularly conducts OSDV to states on a quarterly basis with the

support of partners. States noted to have consistent data quality issues are visited and supported most frequently. Similarly, those observed not to have problems are visited to verify the authenticity of the reports.

7.3.3 Data Quality Assessments

Data Quality Assessments are carried out bi-annually with the aim of providing technical assistance to enhance the existing quality assurance system. The aim of the DQA is to assess data that have been reported over a longer period of time and also assess the M&E system of the reporting structures at the LGA and states level. This exercise is usually participatory in nature and involves multiple stakeholders and partners of NTBLCP. A report is presented to document the findings of the stakeholders and recommendations are expected to be implemented at LGA, state and national level.

7.3.4 Supportive supervision

This activity involves visit to states and health facilities to provide mentorship and support for all the components of the TB control programme. This include advocacy visit to canvass for political commitment for the TB control programme at state and LGA level. It also extends to supervising the management of the TBLCP, including the procurement and supply management of commodities, drugs and R&R tools and data management. Supportive supervision is done quarterly. States identified as challenged states based on some set criteria are prioritized by NTBLCP for supportive supervision using the appropriate revised supervisory checklists. A one-day a supervisory meeting is held to collate outcomes and identify follow-up actions.

7.4 M&E coordination

The M&E Technical Working Group (TWG) was inaugurated in November 2011 by the National Coordinator, NTBLCP with membership drawn from NTBLCP, TBCARE, WHO, ARFH, CIHP, FHI360, MSH, IHVN, NASCP, MEASURE Evaluation and ILEP organizations (TLMN, GLRA, NLR and DFB). The main goal of the M&E TWG is to support strengthening of the M&E systems at all levels, facilitate effective utilization of health information and promote linkages between NTBLCP and other stakeholders. The M&E TWG is scheduled to meet quarterly, however, lack of funding to do so has prevented the TWG from functioning effectively. The terms of reference of the TWG include:

1. Foster the coordination of all M&E activities among different partners, especially TB/HIV implementing partners
2. Provide technical guidance to partners in addressing M&E issues
3. Engender the promotion of best practices around TB/HIV M&E
4. Strengthen linkages between the M&E, laboratory and logistics systems within the programme
5. Develop SOPs for management of data discrepancies at all levels of the programme
6. Develop data feedback/dissemination mechanism for the programme at all levels
7. Undertake periodic review of the NTBLCP M&E Plan.

7.5 Technical assistance from WHO

The WHO country team and global staff play a vital role in strengthening the coordination and managerial role of the NTBLCP. This includes technical assistance across the different

components of programme management, survey coordination, proposal development, evaluation and assessment/review activities, policy development and strategic plan development. The WHO National Programme Officers also facilitate coordination and regular review of quarterly statistical data generated by the states at zonal and national level. This review includes analysis and recommendations for programme management.

7.6 Findings from 2014 TB epidemiological assessment (Epi-analysis)

As part of the NSP-TB development process, WHO conducted an epidemiological assessment in collaboration with programme staff in February, 2014. The following information is excerpted from the final draft of the report.[43]

7.6.1 Main findings

The TB surveillance system in Nigeria has some strengths but also important gaps that need prompt action. Increased investment is required to address the gaps identified by the assessment. Based on the assessment, the greatest strengths of TB surveillance in Nigeria include the external consistency of its data, its adherence to best-practices in recording and reporting as described by WHO guidelines, the ongoing dialogue for the transition from paper to electronic case-based system and its monitoring of the level of HIV among TB cases. The primary challenges of the system include the inappropriate storage of aggregated national and sub-national level TB surveillance data that make any attempts at analysis cumbersome; the weak capacity of available human resources to maintain large datasets, regularly analyse and critically review surveillance data; lack of certainty that all diagnosed TB cases are reported and that reported cases are accurate; the lack of a national vital registration system with standard coding of causes of death and the low coverage of the existing system of civil events registration; and achieving up-to-date coverage for paediatric TB data. Increased investment is required to address these gaps and build a system that can accurately measure TB incidence and mortality.

Overall TB case notifications in the country have been consistently on the rise. Large variability of case notification rates at zonal and state levels could reflect differences in disease burden, but also differences in TB detection and reporting coverage or errors in reporting. The national %age of successful treatment outcome reached the 85% international target in 2011, but with large zonal and state level variability. Relatively low levels of MDR-TB have been measured in a national drug resistance survey, but TB prevalence levels are 2-3 times higher than previously thought as measured from a national pulmonary TB prevalence survey among adults (15+ years), with clear sex, age and geographical subgroup differentials. Time trends of TB disease burden in Nigeria are not measured directly, but are probably sustained at a high level.

7.6.2 Key recommendations

The following key recommendations were made to the NTBLCP to strengthen its epidemiological data reporting and analysis capacity. These recommendations have been taken into account in developing Objective 9 of the NSP in particular and have been costed as part of the overall health systems strengthening efforts under the NSP.

[43] Sismanidis, B. Epidemiological review of TB disease in Nigeria. February 2014. p. 40.

7.6.2.1 Short-term, high-impact recommendations

1. **Strengthen M&E capacity:** Sustain the existing M&E team at national level and increase their capacity for good data management and analysis practices through courses or on-the-job training.
2. **Capture all historical sub-national level data in a single aggregated database:** Transfer all available retrospective surveillance data (LGA and state level) into an appropriate database to facilitate detailed analysis.
3. Promote the analysis and critical review of surveillance data and improve dissemination of results at all levels (federal, state, LGA).
4. Support the ongoing transition from a paper to an electronic case-based recording and reporting system.
5. **Identify specific challenges to TB recording and reporting:**
    a. Link up with WHO/GF to conduct the Service Availability and Readiness Assessment (SARA) of the health information system (including the TB data quality assessment component).
    b. Draw on results from the prevalence survey to understand characteristics of cases that had gone undiagnosed and untreated by the NTBLCP and assess barriers to health care for TB high risk groups including key affected populations. These prevalence survey results, in conjunction with findings from the 2013 mid-term joint review, will form the foundation to address issues related to low case detection and case reporting.

7.6.2.2 Longer-term, high-impact recommendations

1. **Improve case finding.**
    a. Proactively engage with local governments for the decentralisation of TB diagnostic and treatment services as close as possible to the primary health care level.
    b. Develop a policy document for making TB notification mandatory (legal requirements) and include recommendations for its successful implementation at all levels (national, state, LGA).
2. **Support development of vital registration system:** NTBLCP should proactively engage with the National Population Commission to increase demand and ultimately strengthen the quality and coverage of reporting of causes of death through the national vital registration system, ensuring inclusion of accurate cause of death coding for TB.
3. **Conduct studies to improve direct measurement of TB disease:** Conduct a pilot inventory study in FCT to monitor levels of under-reporting.

7.7 Special assessments and surveys

In addition to routine monitoring and evaluation activities, the NTBLCP will plan and implement some special assessments and surveys during the NSP period.

7.7.1 Joint International Monitoring Mission

The National Tuberculosis and Leprosy Control Programme conduct an assessment of its programme, implementation of strategies and follow-up of previous assessments through a Joint International Monitoring Mission (JIMM) every two years. Participants include a team of national and international experts, major partners, federal and state ministries of health, representatives of civil society organizations, the media and staff of the NTBLCP. Following

the conclusion of the mission, recommendations will be made to strengthen the national TB control efforts towards reaching the set objectives and targets. The terms of reference include:

1. Review progress in implementation of the NSP
2. Assess the implementation of the previous JIMM recommendations
3. Assess the implementation of Global Fund grants and make recommendations.

7.7.2 Operations research

Operations research is one of the key components of the Stop TB strategy. However, in previous years this component has not been given due priority. In order to address this concern, the NTBLCP reconstituted the National Operations Research Committee in January 2010 with the following terms of reference:

1. Review all research carried out in the programme and maintain a research database
2. Provide technical support to programme managers who are currently carrying out operations research
3. Provide technical support to programme managers to publish completed research projects in peer reviewed journals
4. Support capacity-building of programme managers on research
5. Identify and deploy resources for research and support the national programme to participate in conferences
6. Provide support to the development of a national TB newsletter
7. Coordinate and link up with other organizations on TB-related research in the country
8. Provide technical advice to the national programme on changes to national TB policy and guidelines based on findings from local research

7.7.3 TB KAP survey

The first TB KAP survey was conducted in 2007, in 3 states in the 3 geo – political zones in the country. Findings from the survey showed that correct knowledge on the causes of TB was only 19%. A follow up study was conducted in 2012 in 6 states of the 6 geo – political zones in the country. It was discovered that despite several interventions to increase awareness of TB in the community, those with correct knowledge on the causes, diagnosis and treatment of TB increased by only 8%. Other findings showed that stigma related to TB is still very high in the communities and that radio is the most widely used medium for accessing TB messages. Another KAP survey will be due after 5 years (2017).

7.8 Monitoring and Evaluation of NSP-TB 2015 - 2020

Monitoring and evaluation of the NSP-TB will continue to follow the practices above and will be aligned with the definitions and guidance provided in the *TB & Leprosy Indicator Reference Book*. The logical framework presented in figure 20 shows the chain of expected inputs, processes, outputs, outcomes and impact that the objectives of the NSP-TB comprise. It is not an exhaustive list, but an illustration of key elements that the NTBLCP will track as part of the implementation of the NSP-TB.

The M&E plan will focus heavily on results—some key outputs and all outcomes associated with the NSP-TB objectives. Routine monitoring of progress on activity and sub-activity

implementation will be achieved through the operational plan, which will be reviewed and updated on both a quarterly and annual basis. Interim outcome data analysis will be used to identify implementation challenges at an early stage and correct them to support progress toward the targets. If necessary, activities and approaches will be changed, halted or added in response to the evidence provided to achieve the desired outcomes.

The overall goal of the NTBLCP is to achieve a 50% reduction in the TB prevalence rate and 75% reduction in the TB mortality (excludes HIV-related TB) rate in Nigeria by 2025 relative to the 2013 level. This translates to a prevalence rate of 163/100,000 and a mortality rate of 24/100,000 by 2025. While overall impact is important, new data to support evaluation of progress on these impact indicators (in the form of another prevalence survey or improved vital registry data) are not likely to be available during the period of the NSP. In addition to tracking WHO modeled estimates of these indicators, NTBLCP will rely on rapid changes in case notification and sustained treatment success to demonstrate progress.

The M&E framework for the NSP-TB with the key indicators and targets is presented in Table 29, linked with specific objectives and strategic interventions of the NSP-TB.

Figure 20: M&E Logical framework for the NSP-TB.

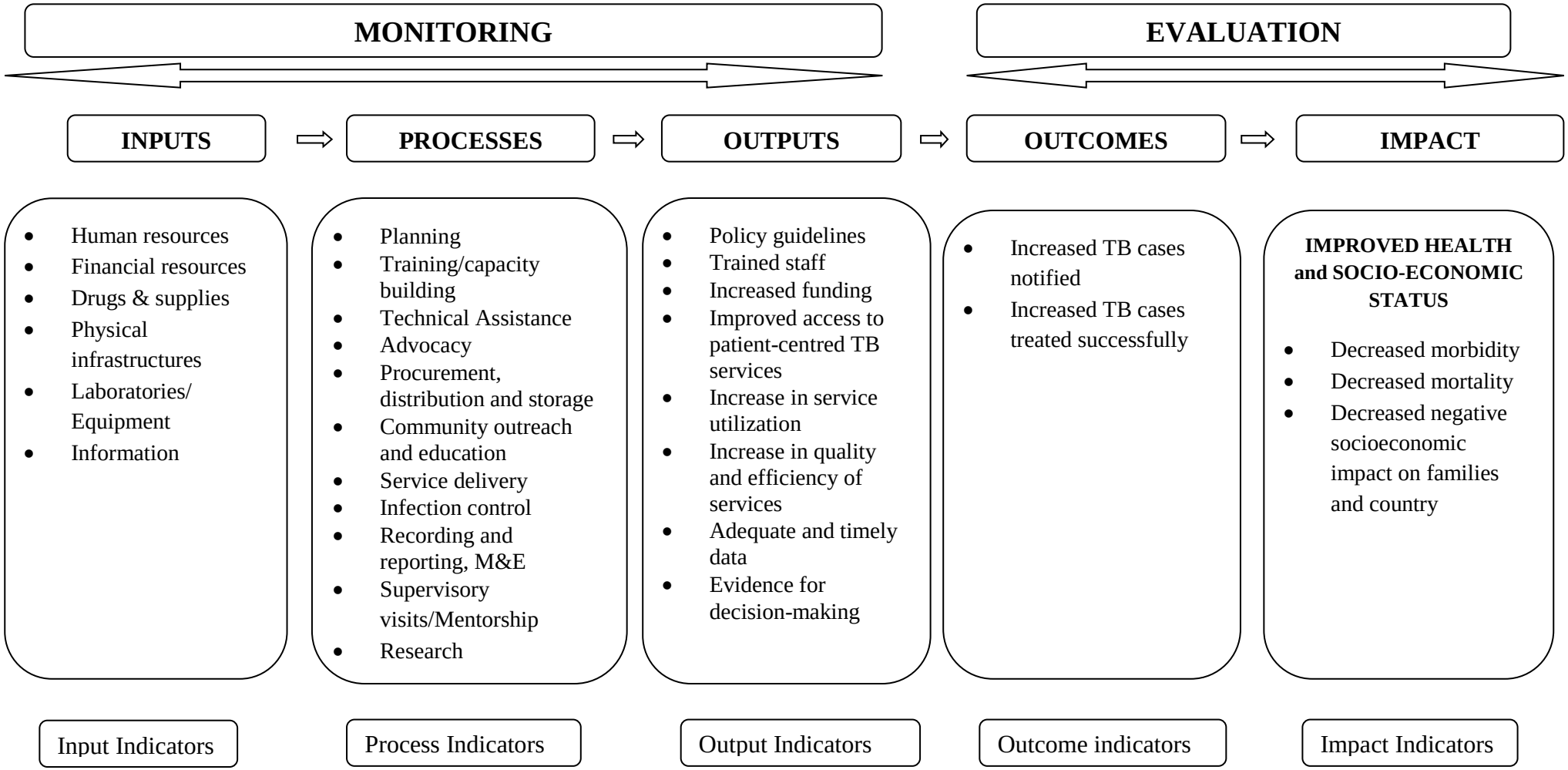


Table 29: M&E Framework for the National Strategic Plan for Tuberculosis, 2015 – 2020.

Objective 1: Rapidly increase case finding activities and diagnostic capacity to achieve an increase in the case notification rate of all forms of TB from 57.3 per 100,000 population in 2013 to 287 per 100,000 population in 2020.

Ind. No	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
1.1	Case notification rate (all forms)	2013	57.3	58	88	119	131	191	235	287	NTBLCP annual report
1.2	Number of cases notified (all forms)	2013	100,401	105,000	163,383	229,063	304,126	391,700	496,788	625,844	NTBLCP quarterly reports
1.3	Total number of new TB patients diagnosed by bacteriological tests (Xpert, smear or culture)	2013	52,901	54,976	85,544	119,933	159,234	205,086	260,109	327,679	NTBLCP quarterly reports
Output indicators											
1.4	Ratio of microscopy centres to population	2013	1:109,000	1:95,000	1:81,000	1:69,000	1:60,100	1:54,000	1:51,000	1:50,000	NTBLCP annual report
1.5	Number of AFB sputum microscopy laboratories	2013	1,602	1,902	2,302	2,802	3,302	3,802	4,152	4,365	NTBLCP quarterly reports
1.6	EQA coverage	2013	77%	95%	100%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
1.7	Percentage of laboratories showing adequate performance in EQA (where adequate performance is concordance rate of not less than 98%)	2013	97%	98%	99%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
1.9	Number of GeneXpert sites	2013	68	169	269	329	369	409	439	469	NTBLCP quarterly reports
1.10	Number of TB cases referred for evaluation by first points of contact	2013	NA								NTBLCP quarterly reports
1.11	Proportion of cases notified through public facilities	2012	76%	72%	70%	70%	70%	70%	70%	70%	NTBLCP quarterly reports
1.12	Proportion of cases notified through private/FBO facilities	2012	24%	28%	30%	30%	30%	30%	30%	30%	NTBLCP quarterly reports

Objective 2: Align treatment capacity scale-up with the increased diagnostic capacity to increase treatment success rate from 86% in 2013 to 90% by 2020.

Ind No	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
2.1	Number of all bacteriologically diagnosed (New and re-treatment) TB cases successfully treated	2013	45,417	46,680	73,470	104,176	139,868	180,143	228,473	287,826	NTBLCP quarterly reports
2.2	Percentage of all new (bacteriologically diagnosed and clinically diagnosed) TB cases successfully treated.	2013	86%	86%	87%	88%	89%	90%	90%	90%	NTBLCP quarterly reports
2.3	Percentage of all bacteriologically diagnosed new TB cases successfully treated.	2013	NA	86%	87%	88%	89%	90%	90%	90%	NTBLCP quarterly reports
2.4	Percentage of all bacteriologically diagnosed new TB cases successfully treated in private facilities.	2013	NA	86%	87%	88%	89%	90%	90%	90%	NTBLCP quarterly reports
Output indicators											
2.5	Number of functional DOTS treatment sites	2013	5,398	5,689	6,189	6,789	7,389	7,889	8,339	8,739	NTBLCP quarterly/annually reports
2.6	Number of private/FBO facilities providing TB treatment services	2013	775	569	619	679	739	789	834	8739	NTBLCP quarterly reports

Objective 3: Implement new strategies to improve the control of TB in children in line with the global road map for childhood TB.

Ind. No	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
3.1	Number of children diagnosed with TB notified (all forms)	2013	6024	6,300	11,437	18,325	27,371	39,170	54,647	75,101	NTBLCP quarterly reports
3.2	Proportion of children diagnosed with TB (all forms) among all TB cases	2013	6%	6%	7%	8%	9%	10%	11%	12%	NTBLCP quarterly reports
3.3	Number of children diagnosed as new TB cases who were successfully treated	2013	NA	5,418	9,950	16,126	24,360	35,254	49,183	67,591	NTBLCP quarterly reports
3.4	Proportion of children diagnosed as new TB cases who were successfully treated among those started on treatment	2013	NA	86%	87%	88%	89%	90%	90%	90%	NTBLCP quarterly reports
3.5	Proportion of children placed on IPT who successfully complete prophylaxis	2013	NA	50%	70%	85%	85%	85%	85%	85%	NTBLCP quarterly reports
Output indicators											
3.6	Proportion of under 6 child contacts of bacteriologically positive TB cases screened for TB.	2013	NA	60%	>80%	>80%	>80%	>80%	>80%	100%	NTBLCP quarterly reports
3.7	Proportion of under 6 child contacts of bacteriologically positive TB cases placed IPT.	2013	NA	60%	>80%	>80%	>80%	>80%	>80%	100%	NTBLCP quarterly reports

Objective 4: Provide access to high-quality integrated services for all people co-infected with TB and HIV.

Ind No	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
4.1	Percentage of notified TB cases who are HIV-positive	2013	22%								NTBLCP quarterly and annual reports
4.2	Number of notified TB cases who are HIV-positive	2013	19,423								NTBLCP quarterly/annual reports
4.3	Percentage of death of HIV-positive registered TB patients	2012	<5%	<5%	<5%	<5%	<5%	<5%	<5%	<5%	NTBLCP quarterly/annual reports
Output indicators											
4.4	Percentage of TB patients who had an HIV test result recorded in the TB register	2013	88%	92%	95%	98%	100%	100%	100%	100%	NTBLCP quarterly/annual reports
4.5	Percentage of presumptive TB cases tested for HIV	2013	NA	50%	75%	85%	90%	100%	100%	100%	NTBLCP quarterly reports
4.6	Percentage of HIV-positive patients who were screened for TB at last visit to an HIV care or treatment setting	2013	68%	100%	100%	100%	100%	100%	100%	100%	ART Quarterly/Monthly Summary report
4.7	Percentage of HIV-positive registered TB patients placed on co-trimoxazole preventive therapy (CPT) during TB treatment	2013	87%	92%	95%	98%	100%	100%	100%	100%	NTBLCP quarterly reports
4.8	Percentage of HIV-positive registered TB patients placed on anti-retroviral therapy (ART) during TB treatment	2013	67%	75%	80%	85%	90%	95%	100%	100%	
4.9	Percentage of PLHIV without active TB who receive isoniazid preventive therapy	2013	1.7%	15%	30%	40%	50%	60%	70%	80%	ART Quarterly/Monthly Summary report

4.10	Number of presumptive TB cases among PLHIV on care who receive evaluation with GeneXpert	2013	127,987	358,867	372,495	386,969	401,996	417,159	432,276	447,932	ART Quarterly/Monthly Summary report

Objective 5: Provide access to DR-TB diagnosis to all presumptive DR-TB cases people who require it by 2018 in line with the national diagnostic algorithm.

Ind No	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
5.1	Number of DR-TB cases notified (RR-TB and/or MDR-TB)	2013	665	833	2,158	4,833	8,007	12,351	19,539	29,469	NTBLCP quarterly reports
5.2	Number of MDR-TB cases notified	2013	89	524	1,356	3,038	5,033	7,764	12,283	18,526	NTBLCP quarterly reports
Output indicators											
5.3	Proportion of all presumptive DR-TB cases (according to the national diagnostic algorithm) examined using rapid tests among total presumptive DR-TB cases notified	2013	48%	100%	100%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
5.4	Number of all presumptive DR-TB cases (according to the national diagnostic algorithm) examined using rapid tests	2013	10,410	11,410	21,078	34,106	51,189	73,354	97,112	127,332	NTBLCP quarterly/Annual reports

Objective 6: Enrol 100% of diagnosed DR-TB patients on appropriate treatment between 2015 and 2020.

Ind. No	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
6.1	Proportion of culture-positive MDR-TB cases who have a negative culture at the end of eight months of treatment	2010	65.2%	>85%	>85%	>85%	>85%	>85%	>85%	>85%	Six Month Interim Outcome Assessment
6.2	Proportion of DR-TB cases who were successfully treated at twenty month – preliminary treatment outcome	2010	61%	62%	63%	64%	65%	66%	68%	70%	Annual Report of Treatment Outcome of Category IV Regimen.
6.3	Proportion of DR-TB cases who were cured at twenty month – preliminary treatment outcome	2010	52%	53%	54%	55%	56%	57%	58%	60%	Annual Report of Treatment Outcome of Category IV Regimen.
6.4	Proportion of DR-TB cases who failed treatment at twenty month – preliminary treatment outcome	2010	0%	<5%	<5%	<5%	<5%	<5%	<5%	<5%	Annual Report of Treatment Outcome of Category IV Regimen.
6.5	Proportion of DR-TB cases who died at twenty month – preliminary treatment outcome	2010	30%	25%	20%	15%	10%	<5%	<5%	<5%	Annual Report of Treatment Outcome of Category IV Regimen.
6.6	Proportion of DR-TB cases who were lost to follow-up at twenty month – preliminary treatment outcome	2010	9%	8%	7%	6%	5%	<5%	<5%	<5%	Annual Report of Treatment Outcome of Category IV Regimen.
Output indicators											
6.7	Number of diagnosed DR-TB (RR-TB and/or MDR-TB) cases started on treatment	2013	432	583	1,618	3,866	6,806	11,116	18,562	29,469	NTBLCP quarterly/annually reports
6.8	Proportion of diagnosed DR-TB (RR-TB and/or MDR-TB) cases started on treatment stratified by RR- and MDR-TB, gender and age	2013	65%	70%	75%	80%	85%	90%	95%	100%	NTBLCP quarterly/annual reports

6.9	Proportion of diagnosed DR-TB (RR-TB and/or MDR-TB) cases started on treatment at the DR-TB treatment centre	2013	NA	60%	50%	40%	30%	<30%	<30%	<30%	NTBLCP quarterly/annual reports
6.10	Proportion of diagnosed DR-TB (RR-TB and/or MDR-TB) cases started on treatment in the community	2013	NA	40%	50%	60%	70%	>70%	>70%	>70%	NTBLCP annual reports

Objective 7: Strengthen the collaboration with and capacity of community-based organizations and networks to support NTBLCP objectives and activities.

Ind, No.	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
7.1	Proportion of TB cases who were referred by CVs/CBOs	2013	11%	13%	20%	30%	>30%	>30%	>30%	>30%	NTBLCP quarterly/annual reports
7.2	TSR among TB patients (all forms) supported by TS throughout their TB treatment	2013	NA	86%	87%	88%	89%	90%	>90%	>90%	CSO quarterly reports
Output indicators											
7.3	Proportion of LGAs with formally established /community structure for providing TB care services	2013	25	25%	27%	28%	30%	30%	35%	40%	NTBLCP quarterly reports
7.4	Proportion of participating ATM CSOs with operational work plans	2013	NA	20%	50%	60%	70%	80%	90%	100%	NTBLCP quarterly/annually reports
7.5	Proportion of all presumptive TB cases examined who were referred by community volunteers/CBOs	2013	11%	20%	20%	30%	>30%	>30%	>30%	>30%	NTBLCP quarterly/annually reports

Objective 8: Strengthen political commitment and mobilize domestic resources at all levels to fund essential TB services in Nigeria

Ind No.	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
8.1	Proportion of NSP annual budget funded by domestic sources	2013								50%	Annual NTBLCP report
8.2	Total domestic funds available for NTBLCP from all sources (in naira)	2013									Annual NTBLCP report
Output indicators											
8.3	Total federal funds promised for NTBLCP (in naira)	2013									Annual NTBLCP report
8.4	Proportion of federal funds promised that are released for NTBLCP during the year	2013									Annual NTBLCP report
8.5	Proportion of states making a financial commitment to STBLCP	2013								100%	Annual NTBLCP report
8.6	Proportion of state funds promised that are released for STBLCP during the year	2013								100%	Annual NTBLCP report
8.7	Proportion of LGAs making a financial commitment to LGTBLCP	2013								100%	Annual NTBLCP report
8.9	TB is addressed as an integral part of major national health legislation	2013	No	No	Yes	Yes	Yes	Yes	Yes	Yes	NTBLCP quarterly/annual reports

Objective 9: Strengthen NTBLCP systems and capacity to support full implementation of the National Strategic Plan at all levels.

Ind. No.	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Outcome indicators											
9.1	Proportion of DOTS facilities reporting no stock out of first line anti-TB drugs on the last day of the quarter	2013	87%	89%	90%	91%	92%	94%	96%	98%	NTBLCP quarterly reports
9.2	Proportion of DOTS facilities reporting no stock out of lab reagents on the last day of the quarter	2013	NA	100%	100%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
9.3	Proportion of DOTS facilities reporting no stock out of R&R tools on the last day of the quarter	2013	NA	100%	100%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
Output indicators											
9.4	Proportion of DOTS facilities participating in Drug Quality Assurance testing	2013	NA	50%	50%	50%%	50%	50%	50%	50%	NTBLCP quarterly reports
9.5	Proportion of DOTS facilities reporting timely (DHIS/e-TBM)	2013	NA	100%	100%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
9.6	Proportion of State TBLC programmes submitting quarterly reports timely (paper-based/DHIS/e-TBM)	2013	NA	100%	100%	100%	100%	100%	100%	100%	NTBLCP quarterly reports
9.7	Number of annual reports issued by NTBLCP within 6 months of year-end reporting	2013	0	1	1	1	1	1	1	1	NTBLCP annual reports
9.8	Number of quarterly NTBLCP newsletter produced by the ACSM unit and uploaded to the	2013	0	0	2	4	4	4	4	4	NTBLCP quarterly reports

	NTBLCP website										
9.9	Number of completed operations research studies	2013	NA	4	4	4	4	4	4	4	NTBLCP Annual report
9.10	Proportion of people among general population who can name three symptoms of TB and know where to access services	2012	19%	NA	NA	NA	60%	NA	NA	NA	KAP survey. KAP survey is planned to be conducted every five years.

Objective 10: Strengthen linkages between levels of the health system to improve management and accountability.

SI	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Output indicators											
10.1	Number of states with annual work plans developed	2013	NA	18	37	37	37	37	37	37	NTBLCP quarterly reports
10.2	Number of states with State Strategic Plans developed	2013	NA	18	37	37	37	37	37	37	NTBLCP quarterly reports
10.3	Number of supervisory visits from national to state level per year	2013	NA	37	37	37	37	37	37	37	Annual NTBLCP report
10.4	Number of supervisory visits from Zonal to state level per year	2013	NA	37	74	74	74	74	74	74	Annual NTBLCP report
10.5	Number of supervisory visits from state to LGA level per year	2013	NA	TBD	3096	3096	3096	3096	3096	3096	Annual NTBLCP report
10.6	Number of supervisory visits from LGA to facility level per year	2013	NA	TBD	9288	9288	9288	9288	9288	9288	Annual NTBLCP report
10.7	Number of supervisory visits to national and zonal reference laboratories	2013	NA	32	32	32	32	32	32	32	Annual NTBLCP report
10.8	Number of quarterly review meetings held at national level	2013	NA	4	4	4	4	4	4	4	Annual NTBLCP report

10.9	Number of quarterly review meetings held at zonal level	2013	NA	24	24	24	24	24	24	24	Annual NTBLCP report
10.10	Number of quarterly review meetings held at state level	2013	NA	148	148	148	148	148	148	148	Annual NTBLCP report
10.11	Number of annual review meetings held at national level	2013	1	1	1	1	1	1	1	1	Annual NTBLCP report
10.12	Number of joint monitoring missions	2013				1		1			JIMM Report
10.13	Mid-term review of NSP	2013					1				MTR report

Objective 11: Contribute to the strengthening of the health care system, especially primary health care, in collaboration with other disease programmes and agencies for integrated delivery of prevention, diagnosisand treatment services for TB, HIVand malaria.

SI	Indicator	Baseline		Performance target							Data source & frequency
		Year	Value	2014	2015	2016	2017	2018	2019	2020	
Output indicators											
11.1	Number of state management/implementation teams established to support ATM services	2013	NA	10	37	37	37	37	37	37	NTBLCP quarterly/annually reports
11.2	Number of LGA management/implementation teams established to support ATM services	2013	NA	185	370	540	774	774	774	774	NTBLCP quarterly/annual reports
11.3	Number of functional Ward Development committees	2013	3602	TBD	9962	9962	9962	9962	9962	9962	NTBLCP quarterly reports
11.4	Proportion of PHCs providing integrated ATM services	2013	NA	50%	60%	70%	80%	90%	100%	100%	NTBLCP quarterly reports

NOTE: NA = Not Available; TBD = To Be Determined.

PART FOUR: The Budget Plan

8. The Budget Plan

8.1 Introduction

The NSP operational and technical assistance plan describes all activities and sub-activities articulated by NTBLCP and stakeholders to achieve the goal of universal access to high-quality TB prevention, diagnosis and treatment services by 2020. The efforts required to do so are massive and include a rapid expansion of services to reach far more of the people who are at risk of TB in Nigeria than are being reached through the current predominantly passive case-finding approach and to address the growing problem of drug-resistant TB. The overall cost of reaching the ambitious goal of universal access to TB services by 2020 is estimated at US$2.53 billion, approximately 393 billion naira.

8.2 Budget for NSP-TB 2015-2020

The detailed budget for the NSP is provided in an excel file, which does not form part of this document. Budgets are provided for each objective, by activity and sub-activity and tied to the NSP descriptions. The first tab for each objective provides the summary budget, broken down in two ways: by cost category and by intervention, according to the WHO planning and budgeting tool categories. The second tab provides the operational plan text with which the budget is associated. The third tab provides a detailed budget broken down by activity costs per year. The fourth tab provides assumptions on the unit costs of each activity and subsequent tabs provide the cost basis for consumables, equipment and other standard items. This detailed budget is summarized by objectives (table 30).

Estimated cost of the NSP-TB in US Dollars									
Obj.	**Area**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**	**Percentage**
1	TB diagnosis	57,512,888	60,885,409	65,236,068	65,074,109	69,287,652	71,435,224	**389,431,350**	15.4%
2	TB treatment	15,982,852	18,023,076	21,407,957	19,219,195	23,772,604	29,285,737	**127,691,421**	5.0%
3	Paediatric TB	2,551,131	2,719,576	3,517,794	4,428,705	5,751,158	7,374,430	**26,342,794**	1.0%
4	TB/HIV	17,404,955	12,804,578	13,096,188	15,153,505	13,052,987	15,169,549	**86,681,762**	3.4%
5	DR-TB diagnosis	20,915,650	27,251,840	47,433,226	56,958,344	82,979,591	117,270,108	**352,808,759**	13.9%
6	DR-TB treatment	33,169,393	57,322,730	98,508,658	152,496,309	253,408,409	406,273,684	**1,001,179,183**	39.5%
7	CSS	5,002,238	5,111,680	5,367,264	5,373,952	5,572,239	5,850,851	**32,278,224**	1.3%
8	Resource Mobilisation	4,844,028	2,286,500	2,180,992	2,573,507	2,314,937	2,479,291	**16,679,255**	0.7%
9	HSS	59,046,480	61,648,274	70,026,434	77,265,165	81,410,180	89,700,025	**439,096,558**	17.3%
10	Supervision & linkages	8,261,870	7,208,211	7,522,912	8,794,579	8,328,435	8,834,772	**48,950,779**	1.9%
11	PHC strengthening	3,159,389	1,603,785	1,683,974	1,768,172	1,856,581	1,949,410	**12,021,311**	0.5%
Total		**227,850,874**	**256,865,659**	**335,981,468**	**409,105,542**	**547,734,773**	**755,623,082**	**2,533,161,396**	**100%**

The first six out of the 11 objectives in the NSP consists of core technical objectives covering diagnosis and treatment of TB, while the last five are supporting objectives that address

health system and CSS activities required to support attainment of the technical objectives. The budget summary by objectives shows that 53% of the estimated budget is required to deal with the growing problem of drug-resistant tuberculosis. To reduce the estimated costs of DR-TB over the next six years, several actions will be required:

1. Preventing additional cases of DR-TB by ensuring complete treatment of drug-sensitive TB patients through community-based treatment support and better strategies for adherence in mobile populations such as urban migrants and nomads
2. Preventing ongoing transmission of DR-TB by finding and treating presumptive DR-TB cases as quickly as possible through provider education and expansion of access to *GeneXpert*
3. Reducing hospitalisation period for the treatment of DR-TB from eight months to three months or less and finding more cost-efficient ways to provide patient adherence support.

Cost savings will also be realised by integration of TB control activities with those of HIV and malaria programmes in particular. This includes an integrated approach to community-based interventions aimed at outreach, demand creation and treatment support; integrated TB/HIV services through the creation of one-stop shops for both diseases; integrated monitoring and supervision; integrated procurement and supply chain management of equipment and commodities; integrated information systems; coordinated advocacy for resource mobilisation; and a coordinated approach to primary health care strengthening for the delivery of services.

8.3 Funding sources for the NSP-TB 2015 - 2020

Funding for TB control in Nigeria comes from the Government of Nigeria and donors (international and local) including the private sector. However, with the exclusion of funding for human resources, funding of TB control activities is heavily dependent on external funders, particularly the Global Fund and USAID. External donors have contributed the majority of funding available to the programme: in 2012, for instance, approximately 72% of available funding came from external sources. Total available funding that year represented only 20% of the expressed need to implement appropriate TB control measures.

8.4 Funding strategy for NSP-TB 2015-2020

Far more funding is needed than is currently available from all sources to implement the ambitious activities described in the NSP. Without additional funds, NSP targets cannot be met. This shortfall translates to real human suffering as well as economic losses at family, community and national levels as people fall ill with TB, stop working and some of them die needlessly in the most productive years of their lives.

The NTBLCP will aggressively pursue additional sources of funds to implement essential TB activities. One objective of the NSP is to mobilise significantly more domestic resources for TB, so that domestic funds represent at least half of the funding available for TB control in Nigeria. This will be done through an intensive advocacy campaign to mobilise resources at federal, state and local levels, in collaboration with civil society organisations that are best placed to demand and monitor the financial commitments of the government to the health and welfare of its citizens.

In addition, NTBLCP will reach out to the business sector to identify opportunities for TB integration within corporate social responsibility initiatives for mutual benefit. It will actively pursue integration of TB within federal social insurance schemes and policies aimed at reducing the burden of TB-related costs on individuals seeking care. It will integrate TB services into other general health activities to provide access to basic services at the lowest possible cost.

At the same time, NTBLCP will continue to work with donors to access funds, including Global Fund, USAID, TB REACH, ILEP partners, the World Bank and others. It will build its internal capacity to manage finances to make the best possible use of available resources. On a yearly basis, NTBLCP will reassess its available funding with respect to the NSP budget and will adjust activities and targets as needed to achieve the maximum impact possible, coupled with strong advocacy for additional funds.

ANNEX I: *Assessment of strategic priorities in response to the TB epidemiological assessment and TB prevalence survey*

Estimating magnitude of TB control challenges at state level

There is no state-specific estimate of TB burden as well as determinants of TB disease in the epi-report. It is noted that the TB prevalence survey was not powered to provide information on state-level TB prevalence rates (Epi-report). However, it is imperative that some form of ranking of the magnitude of TB case notification challenges across the states be established. Following a broad stakeholder consultation during the national dialogue for the development of the HIV and TB concept note, some criteria/factors were identified, scored and used to rank states by the magnitude of the TB case notification challenges.

Criteria/factors for estimating state-specific TB case notification challenges

Gap in TB Case notification

For each state, the gap in TB case notification in 2013 was calculated i.e. the difference in the estimated incident TB cases (all forms) in 2013 and the notified TB cases (all forms) in 2013. The calculation of the estimated incident TB cases was based on an incidence rate of 338 per 100,000 population (2013 prevalence survey result) and the 2013 projected population based on 2006 national population census with a population growth rate of 3.2%. The states were subsequently ranked according to the magnitude of the calculated gap in TB case notification.

Determinants of TB

The key determinants of TB in Nigeria include HIV prevalence, under-nutrition, diabetes, alcohol misuse, smoking and indoor air pollution (TB Epi-report). Of these, HIV prevalence has the highest population attributable fraction, at 25.6%. Since no data exist for the other key determinants, the state-level HIV prevalence alone (National HIV&AIDS and Reproductive Health Survey, 2012) was used to rank the states by the magnitude of HIV burden.

Population coverage of TB service points

The population coverage of basic TB service points (sputum smear microscopy centres and TB treatment (DOTS) centres) largely determines the accessibility of patients to TB services. So, states were ranked in the order of the population coverage for a) sputum smear microscopy and b) DOTS centres.

Limitations of the criteria

The identified criteria are obviously not without limitations. The identified limitations include:

- The national TB incidence rate applied across all states may not correctly reflect the true incidence of TB at state levels. However, this will be useful for the purposes of hypothesizing and investigating further differences at state level (Epi-report).
- There are state variations in population growth rate. The national population growth rate applied across board does not reflect the true situation. For example, based on anecdotal observation, the population growth rate in FCT far outweighs that of most states.
- Apart from HIV prevalence, other key determinants of TB burden were not taken into consideration either because of lack of data on such determinants or absence of state level data. However, it is noted that HIV prevalence has the most population attributable fraction for TB disease (Epi-report).
- Access to TB services is not only based on the population coverage of the TB service points. Other important considerations include; the distribution of the points of service (sometimes, there are skewed distribution), awareness about TB and TB services, stigma and discrimination, indirect costs to obtain TB services, client's health-seeking behavior and attitude of health workers among others.

Because of the limitations noted above, a combination of criteria with a weighted scoring system was used to cancel out other factors that were not taken into consideration.

Scoring criteria

A weighted scoring system was used to score each state based on the criteria above. The weight was assigned to each criterion based on the perceived contribution of each criterion to the overall TB case notification challenges**.** The weights and justification are shown in Table 31.

Table 30: Scoring criteria for TB case notification challenges.

S/N	Criteria/Factor	Weight	Justification
1	Gap in TB case notification	3	Refers directly to the TB case notification challenges. Describes the actual burden of un-notified TB case
2	HIV prevalence	2	Most important population attributable fraction (PAF) of different risk factors for TB disease in Nigeria
3	AFB smear microscopy centres	1.5	Sputum smear microscopy remains the mainstay of TB diagnosis in the country. A correlation has been established with the number of AFB microscopy centres and TB case notification in the country (MID-Term review report).
4	DOTS centre	1	This has the least score. DOTS providers may serve to identify presumptive TB cases and the fact that there are DOTS centres available may influence a client's willingness to seek for TB diagnostic services, because s/he knows that there is a facility for treatment should s/he be diagnosed of TB.

All states were ranked in a descending order (3.7 for the highest ranked state to 0.1 for the least ranked state) according to the position of each state per criterion. The weight of each criterion was multiplied by the ranking of each state to obtain the score for each state per criterion.

Composite score

The score of each state for all the criteria were added to obtain the composite score for each state. All states were then ranked in a descending order to describe the magnitude of TB case notification challenges across all states (Table 32).

Summary

Table 32 shows the summary of the weighted composite score for all states based on four criteria.

Table 31: Scoring of TB case notification challenges by state.

States	Total score (Gap in TB Case notification + HIV prevalence + AFB Microscopy + DOTS centres)	Ranking by magnitude of TB case notification challenges	Percentage contribution to Gap in TB case notification in 2013
Kaduna	26.0	1st	4.4%
Lagos	25.8	2nd	5.9%
Kano	25.4	3rd	6.8%
Rivers	25.1	4th	3.9%
Oyo	23.8	5th	3.3%
Katsina	21.1	6th	4.5%
Jigawa	20.6	7th	3.4%
Borno	20.2	8th	3.2%
Imo	19.1	9th	3.1%
Akwa Ibom	19.1	10th	2.8%
Sokoto	18.7	11th	2.5%
Anambra	18.4	12th	3.2%
Bauchi	18.2	13th	3.5%
Delta	17.0	14th	2.9%
Niger	16.3	15th	3.1%
Ondo	16.2	16th	2.7%
Benue	15.9	17th	2.4%
Zamfara	12.2	18th	2.5%
Osun	12.2	19th	2.4%
Cross River	12.1	20th	2.0%
Enugu	11.7	21st	2.4%
Ogun	11.5	22nd	2.7%
Abia	11.3	23rd	2.1%
Kogi	11.2	24th	2.4%
Yobe	10.7	25th	1.7%
Kebbi	10.2	26th	2.3%
Taraba	10.0	27th	1.4%
Adamawa	9.8	28th	2.0%
Edo	9.2	29th	2.4%
Plateau	8.8	30th	2.1%
Gombe	7.9	31st	1.6%
Nasarawa	7.7	32nd	1.0%
FCT	6.2	33rd	0.8%
Kwara	6.1	34th	1.8%
Ekiti	4.6	35th	1.9%
Bayelsa	4.5	36th	1.3%
Ebonyi	3.4	37th	1.6%

State prioritization based on magnitude of TB notification challenges

As a result of the ranking, states were categorized into four bands based on the percentage contribution to estimated gap in TB case notification (Table 33). Band 1 describes the first 13 states that account for 50% of the estimated gap in TB case notification. Band 2 describes the first 21 states that account for 71% of the estimated gap in TB case notification. Band 3 describes the first 25 states that account for 80% of the estimated gap in TB case notification. Band 4 refers to all states and the FCT. Because of the central status of FCT and the rapid population growth rate (as mentioned earlier) as well as fast growing urban slum population, FCT is classified under band 1 priority for the purpose of programme implementation.

Table 32: Categorization of states into bands based on estimated gap in TB case notification.

S/N	States	% contribution to estimated gap in TB case notification		
1	Kaduna	Band 1: 50% of estimated TB notification challenges *NB: Band 1 states + FCT accounts for 51% of estimated TB notification challenges in the country*	Band 2: 71% of estimated TB notification challenges	Band 3: 80% of estimated TB notification challenges
2	Lagos			
3	Kano			
4	Rivers			
5	Oyo			
6	Katsina			
7	Jigawa			
8	Borno			
9	Akwa Ibom			
10	Imo			
11	Sokoto			
12	Anambra			
13	Bauchi			
14	Delta			
15	Niger			
16	Ondo			
17	Benue			
18	Osun			
19	Zamfara			
20	Cross River			
21	Enugu			
22	Ogun			
23	Abia			
24	Kogi			
25	Yobe			