Summary of Past Global Fund TB Projects Implemented By ARFH

The Association for Reproductive and Family Health (ARFH) became the Principal Recipient(PR) for the Global Fund (GF)TB grant in July, 2009 – Dec, 2018. The grant was run in phases. Round 5 Phase 2 TB grant commenced in July 2009 and terminated in June 30th 2010. The SRs under ARFH were; National TB and Leprosy Control Program (NTBLCP) for Drug Susceptible (DS) TB intervention, Institute of Human Virology (IHVN) who was responsible for the Multi-Drug Resistant (MDR) component. Also ILEP partners (GLRA, TLM, NLR), and Health Alive Foundation (HAF) for the community component. Subsequently, under Round-9 phase-1, IHVN became a PR for MDR grant based on the recommendation of the CCM because of their experience with laboratory issues while ARFH remained the PR for Drug Susceptible (DS). Focus of Round 5 & 9 TB grant was on DOT and Microscopy expansion as well as addressing the major challenges with drug management and distribution, while the New Funding Model(2015-2018) was more on ‘’**INVESTING FOR IMPACT AGAINST TUBERCULOSIS’’.** Highlights of the phases are as shown below.

Round 9 Phase 1 TB Grant: 1st July 2010 - December, 2012.

Title: DOT Expansion

Goal:
To reduce significantly the burden, socio-economic impact, and transmission of TB in Nigeria

Objectives:

- To promote behavioural change about TB in the community
- To pursue High Quality DOTS expansion and enhancement
- To scale-up TB/HIV collaborative activities and strengthen TB/HIV integration
- To Strengthen MDR-TB Prevention and Control
- To strengthen the technical and managerial capacity of the National Tuberculosis and Leprosy Control programme

Activities:

- Improving case detection practices through DOTS
- Enhancing the technical and managerial capacity of the NTBLCP and other implementing partners
- Strengthening the existing services and establishing new peripheral DOTS centres
- Training of public health workers in DOTS
- Training of private sector health workers in DOTS
- Training of lab technicians in case detection;
- Training of public health staff in program management;
- Training of community volunteers in knowledge of cause, transmission and curability of TB;
- Involvement of community volunteers and treatment supporters in the management of TB patients
- Monitor and manage development of Multi Drug Resistant TB; and
- Identification and treatment of patients with TB/HIV co-infection.

- Strengthen supervision and M&E activities;
- Strengthen partnerships to advocate for increased government commitment and ownership of the programme,
- Inclusion of the private health care providers and community in the delivery of DOTS.

Rd 9 Phase 2 Title: "FURTHER DOTS EXPANSION
Duration: Jan 1, 2013 - 30th June 2015.

SRs: National TB &Leprosy Control Program(NTBLCP), German Leprosy & TB Relief Association(GLRA), Netherlands Leprosy Relief(NLR), The Leprosy Mission Nigeria(TLMN) Damien Foundation Belgium(DFB), Health Alive Foundation(HAF).

Objectives:
1) To promote behavioral change about TB in the community
2) To pursue High Quality DOTS expansion and enhancement
3) To scale-up TB/HIV collaborative activities and strengthen TB/HIV Integration
4) To strengthen the technical and managerial capacity of the National Tuberculosis and Leprosy Control program

There was need for ARFH to appraise the TB program's progress and identify challenges that could hinder achieving the national targets for TB program. The under-listed were the identified challenges and strategies employed to address them

Program-Related Challenges
- Poor government commitment at all levels particularly as evident in the non-release of counterpart funds (State and LGA financial contributions yet to improve)
- Weak supervisory and program management skills at the LGA levels (TBLS)
- Absence of management teams at the State level, most State TBL control programs operate a one-man show and where teams are available, they were not functional/active
- Shortage of HIV rapid test kits for co-infected TB patients.
- Late reporting by the State programs
- Inadequate CTBC data collection & collation at all levels
- Poor utilization of TB suspects registers, INH registers and other new R & R tools in most DOTS centres
- Increasing number of damaged microscopes in microscopy centres
- Civil disturbances in many northern states
- Inadequate coverage of states for supervision of state control programs. The budget only allowed for an average of two supervisory visits per SR to state per quarter
- High attrition rate of trained/experienced staff at the DOTS facilities hence the need for re-training which was not an activity supported in the budget
- Stock out of paediatrics anti-TB medicines (a critical challenge)
- The distance that suspects travel to the DOT Centres for test and treatment is still a challenge
- Lack of IEC materials for community mobilization activities
- General low IPT uptake in the program

Strategies Employed for Program-Related Issues

-ARFH, NTBLCP, ILEP and partners conducted advocacy visits to Government at all levels States to facilitate support for the program. The capacity of CBOs engaged on the program were built to be involved in advocacy and resource mobilization at the local government and community levels. Also, the Stop TB partnership commenced high level and strategic advocacy to the government and private sector using a robust and costed work plan as a shopping list for soliciting support.

-ARFH supported the ILEP partners for continuous conduct of advocacy to the State Ministry of Health to activate state teams in the implementation of the TB program by employing more staff in each of the state TBL control offices

-The ILEP partners were supported to conduct update workshop for TBLSs to strengthen their supervisory and program management skills. Also, knowledge and skill gaps were improved through on-site mentoring during oversight supervisory visits to State by both the ILEP partners and the National Program.

-ARFH provided to the SRs guidelines for reporting each of the GF TB activities and continued to provide technical support during supervisory visits and via e-mails.

-State TBL Managers/TBLS were encouraged to drive the CTBC program in their states and to report the data appropriately. Review meetings for CVs were held at the last week of the quarter before the conduct of the state review meetings, this was to ensure that the CTBC data is reported at the state review meetings for onward collation at the zonal review meetings. CTBC issues were also discussed at the annual review meeting for control officers.

-ILEP partners supported repair of damaged microscopes.
-The PR (ARFH)recommended that rotational visits should be designed to ensure adequate coverage of supervisions at all level. Adequate tracking of all supervisions conducted should also be done to ensure adequate coverage over the program time.
-On-site mentoring during supervisory visits were employed to build the capacities of DOTS staff that have not been trained due to the high rate of attrition of staff caused by the frequent transfer of civil servants in the country.
-The STBLCOs were liaising with IPs in their states to improve IPT uptake.

PSM-Related Challenges:

- Low capacity at the LGA and facility level on logistics management and information/data collection
- Poor funding for logistics supervision and mentoring on the TB program
- Lack of state contribution especially towards supporting human resources on logistics management
- Poor maintenance of storage facilities at the state and facility levels i.e. patient kits were usually stored on the floor because cupboard were not available in most of the facilities

- Staff attrition: - The supportive supervision revealed that in some facilities trained workers on LMIS data entry are either transferred or retired, untrained DOTS provider were struggling with LMIS data entry

Strategies Employed for PSM-Related Issue

- Capacity building was planned for personnel at the LGA and facility level on LMIS through direct facility based training.
- The program advocated for increased funding support for supervision and mentoring activities on logistics management

Quality Assurance training for Lab participants drawn from SW, SE &SS states 8th-11th Jan, 2013

Data Harmonization meeting, ARFH and SRs

General Health Workers training 24th-28th June, 2013 consisting participants from SW,SE and SS states.

Project Title: Investing For Impact Against Tuberculosis And HIV(New Funding Model)

Grant Duration: 1st July 2015 – 31st December, 2017, Extension to 2018

SRs: National TB &Leprosy Control Program(NTBLCP), German Leprosy & TB Relief Association(GLRA), Netherlands Leprosy Relief(NLR), The Leprosy Mission Nigeria(TLMN) Damien Foundation Belgium(DFB), Health Alive Foundation(HAF) and TBNetwork.

Goal: The overall goal of the TB program under the New Funding Model was to provide Nigerians with universal access to high-quality, patient-centred prevention, diagnosis, and treatment services for TB, TB/HIV, and drug-resistant TB by 2020. Key Intervention areas included Case detection, diagnosis and Treatment of TB.

Objectives: 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

- To increase treatment success rate from 86% in 2013 to 90% by 2020 among drug-susceptible patients

- To enrol 100% of diagnosed DR-TB patients on appropriate treatment by 2020

Strategies:

1.Active TB Case Search

2. DOTS expansion

3. AFB microscopy expansion

4. Supervision of DOTS and microscopy services

5. Provision of drugs and laboratory consumables

6. Provision of recording and reporting tools

7. TB/HIV services

NFM Target Groups:
Key TB-affected populations: A number of different sub-populations were identified as key affected populations in Nigeria, based on globally recognized risk factors for TB. As specified in the NTBLCP National Strategic Plan, the TB key affected population include the PLHIV, Contacts of bacteriologically positive pulmonary TB, Urban slum dwellers, Nomads, Migrants and internally displaced people, Incarcerated population, children, people living with diabetes and Health care workers

Core activities that ARFH performed included:

- Procurement of Drugs and reagents through GDF
- Clearing of drugs and reagents at the ports of entry and distribution to the Zonal and state stores for onward delivery to the facilities

- Monitoring and evaluation
- Printing of R & R tools and IEC materials
- Supportive supervision to provide technical assistance to the SRs
- Review of SR's financial and programmatic quarterly reports
- Prompt disbursement of funds to SRs on a quarterly basis
- Coordination of activities of the SRs
- Ensuring appropriate TB-HIV collaboration
- Convening quarterly review meetings with SRs, partners and other stakeholders
- Facilitate effective mechanism for procurement and supply chain management to maintain uninterrupted commodity supply in the program
- Perform M & E functions on the project activities of SRs
- Ensure that Project Objectives and targets are achieved
- Support States in Advocacy and Resource mobilization

The SR were supported to provide these specific roles to states

- Providing technical assistance to STBLCP, LGA and facilities to ensure effective implementation of TB activities in alignment with the NFM Program Implementation plan.
- Promoting/facilitating advocacy to state and LG for sustainable political commitment.
- Conduct capacity building (training) for all cadres of health workers to be involved in TB control at GF supported DOTS centers.
- Conduct regular supportive supervision and monitoring of State programs to ensure improvement in service quality.
- Supervise the distribution of drugs, laboratory reagents and consumables at the state level in line with the national PSM plan.
- Provision of TA for effective monitoring of state review meetings
- Support sputum transportation and logistics at the Local Government, State and Zonal levels.
- Coordinate effective management of active case search interventions for rapid scale-up of TB case finding in among key affected populations.
- Ensure timely accurate and complete reporting of all program activities in line with the NFM performance framework.
- Ensure effective collaboration with relevant stakeholders in the state, LGA and community to promote visibility of Global Fund supported TB program.

Project vehicles: Project vehicles were procured under ARFH for NTBLCP and the states TB Control program.

A total of thirty (30) project vehicles were procured and distributed to various states from 2011 – April, 2016.

The DFA of ARFH handing over a Hilux key to Plateau State TB Control Manager

Another Hilux vehicle handed over to another states TB program through one of Directors in NTBLCP.

Microscopes:

- A total number of 2,489 microscopes was procured and distributed from 2009 till 2018

Engagement of Third Party Logistics Companies for Product Distribution. The PSM Engaged the services of third party logistics companies for the distribution of TB medicines, laboratory reagents and other commodities in the NFM. This innovation resulted in improved product security (availability and safety).

(*Distribution Truck of one of the logistics companies*)

- **Capacity Building on Commodity Management**

Trainings on LMIS and Pharmacovigilance were held in all 36 states plus FCT in the NFM. The training had impacted on the capacity of the state officers, TBLS, and DOT Facility officers in the management of TB medicines and commodities with noticeable improvement reporting rates (over 95%) and less than 3% stock out rates.

(LMIS and Pharmacovililance Training Delta and Lagos States)

- **Renovations of State, Zonal and Federal Medical Stores**

Renovation of the 37 state and 6 zonal stores and continuous support (routine maintenance, provision of security and payment of electricity bills) of the Federal Medical Stores Oshodi ensured the quality of TB medicines and laboratory reagents throughout the TB supply chain. This is evidenced in the result of the Quality Assurance Survey conducted in June 2018 where all TB medicines passed all pharmacopeia tests they were subjected to.


(Renovation works at Akwa Ibom State Stores (New Air Conditioner, Generator and Iron Door)

Trainings on Procurement, Quantification Supply Planning and Supply Management

Training of National and Zonal officers in improved quantification techniques using the QUAN-TB and procurement systems improved the quantification and supply planning of TB medicines and commodities resulting in adequate stock levels of all TB commodities throughout the grants with minimal drug expiries and stock outs.

National Survey on the Quality of TB Medicines

A National Quality Control Survey for TB medicines was conducted in 2018, where all TB medicines stored across the different storage levels had 100% compliance with all pharmacopeia test performed thus justify the various investments in the TB supply chain.

Continuous Logistics Monitoring and Supervisory Visits to State and DOTS Facilities

Regular quarterly logistics monitoring and supervisory visits were conducted in states and to DOT facilities throughout the NFM resulting in improved capacity of officers managing TB commodity throughout the supply chain.



(Logistic MSV Visit General Hospita Ikotokoro and Ikot Epene in Akwa Ibom State)

Supportive supervision on Logistic by ARFH Staff.

Development of Harmonized Logistics Standard Operating Procedure Manual

The ARFH supported the harmonization of logistics Standard Operating Procedure Manual of FLD and SLD. This is the template being used for the harmonized supply chain for both first and second line medicines and reference manual to logistics officer across all levels in the management of TB medicines and other commodities.

Impact of On Site Data Verification Visits and Supportive Supervisions

The involvement of ARFH in the routine On Site Data Verification Exercise (OSDV) and Supportive Supervision have positive effects on the TB programme in Nigeria. On Site Data Verification visits are aimed to verify recently reported TB data by the state to NTBLCP with the objective to conduct data quality checks before the data is reported to the Global Fund. It is also meant to provide technical assistance to the state M&E officer, the LGA TB supervisors, and the DOTS focal person on Monitoring and Evaluation (M&E). Essentially, the goal of OSDV is to improve the quality of the data reported within the quarter under review and to take inventory of anti-TB drugs, consumable kits, Sputum cups, and Recording & Reporting (R&R) tools in the state store.

For oversight and supportive supervisions, the objectives of the visit were to determine the extent of implementation of planned activities for the year, ascertain key achievement recorded by the programme during the previous quarters, identify major constraints and challenges to successful programme implementation and proffer recommendations for addressing identified challenges militating against the success of the state TB programme visited.

Using a structured checklist, the methodology employed included discussion with key programme staff, site visit to observe service delivery, discussion with DOTS and laboratory personnel, community visit to DSTB patients and advocacy visits to heads of facilities visited.

Major impact included, addressing the programmatic gaps in the state visited including sub-optimal documentation and conduct of advocacy to stakeholder. Oversights to the SRs and CBOs enhanced their capacity to work with the states to provide quality TB services.

OSDV at Comprehensive Health Center, Kofar Kaura, Katsina, Katsina State

OSDV at Gombe Specialist hospital, Gombe state

oversight supervision to CBO at a PHC in Oyo State

Human Resources Development (including CTWs up to 2020)

S/N	Category of Training with GF Support	Year Trained										Total Trained
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019-2020	
1	General Health Care Workers (GHWs)	313	987	892	953	1281	613	462	1,383	2,236		8,849
2	Lab staff trained to conduct Acid Fast Bacilli (AFB) test	111	484	293	245	375	456	744				2,064
	Microscopy sites established cumulatively			1455	1602	1765	1913	2574	2856			
3	Medical Officers	69	419	44								532
4	Community Volunteers (CVs)	2201	1646	593								
5	CTWs (NFM)									870	2000	7,310
6	CBO Capacity built	420								87	36	507(The 36 CBOs in 2019-2020 are part of 87 CBO in 2015-2018 NFM period).

Training of Laboratory staff form Lagos, Ondo, Oyo and Osun states on AFB Smear Microscopy at Chest Hospital, Jericho-Ibadan

Phases of Active TB Finding:

Active TB Case Finding:

24 states – 2010- 2015

20 states – 2015- 2018(in 365 slums)

2019-2020- 10 states (saturation of all LGAs)

Kaduna, Lagos, Kano, Yobe, Benue, Rivers, Oyo, Katsina, Akwa Ibom, Imo, Jigawa, Borno, Sokoto, Anambra, FCT, Bauchi, Niger, Benue, Ondo, Cross River, Enugu, Delta, Osun, Zamfara),

CTWs, CBO (Human Development and Public Health Initiative), Community Leader, Lagos State TBL-Manager & Representatives of WHO, DFB & ARFH@ Makoko/Iwaya Community

Supervision of CTWs in Kano State

Supervision of CTWs during house to house TB search by WHO and DFB staff to Makoko Community

Makoko community

Major achievement and impact under ARFH as PR during the NFM period

Through the Global Fund New Funding Model TB Grant, there were outstanding contribution towards strengthening of the TB control response and strengthening of the health system in Nigeria. The following are a few of the achievements:

a. The rapid scale up and expansion of TB treatment services (DOTS expansion) resulted in 32% facility coverage from 12% in 2010. This effort is already yielding results in additionality of TB case finding as more private and public facilities expanded to increase access to effective TB services.
b. The expansion of TB diagnostic services resulted in scale up of TB diagnostic capacity and treatment follow up towards increasing TB treatment success rates recorded in the program. Most states recorded TSR higher than 90%.
c. The several cascades of capacity building in response to the capacity gaps at National, state and LGA levels, resulted in improved capacity for patient management, and use of program data for improving program performance.
d. The strengthening of the health system through gradual transition from paper-based to electronic TB manager and its eventual integration with DHIS is an effort that will improve case-based management and information management at all levels.
e. Despite the lingering insurgencies in some parts of the country and the incessant strike actions in most states during grant implementation, the effort of the PR, NTBLCP and other implementers have sustained the treatment coverage rate at 25% annually.
f. Through the sustained effort at scaling up chest x-ray screening among children, the proportion of childhood TB cases have also increased remarkably to 8% from less than 6% in 2010.
g. The community active case search (house to house TB case search) has continued to demonstrate potential to facilitate the increasing yield of TB cases in the country. In 2018,

the contribution of ACF to TB case finding in the five states where it was implemented rose to 30%.

Surveys:

Some national surveys were conducted during the life of the TB/HIV NFM grant. These are:

I. Knowledge, Attitude and Practice (KAP) Survey - 2017

This is a nationally representative cross-sectional survey with mixed research methodology entailing the use of both quantitative and qualitative approaches, and designed to assess changes in the TB-related knowledge, attitude and behaviour/practice between 2012 and 2017. This survey was conducted in 12 states; two states each representing a Geo-political region. The states are; Ondo, Benue, Akwa-Ibom, Katsina, Ebonyi, Gombe, Lagos, Plateau, Delta, Kaduna, Imo and Adamawa. The aim of the study was to determine the knowledge, attitude and practices regarding TB in Nigeria and compare current level with that reported from the 2012 national study. The specific objectives were to:

1. Determine the level of knowledge, attitude and behaviour of the general population regarding tuberculosis;
2. Determine the level of knowledge, attitude and behaviour of patients with tuberculosis and people living with HIV regarding tuberculosis;
3. Assess the level of knowledge, attitude and practices of health workers regarding the management of tuberculosis;
4. Compare the level of TB-related knowledge, attitude and practice of the focal population groups – general population, patients with TB, people living with HIV, and health workers – in 2017 with the level reported in the 2012 national survey.

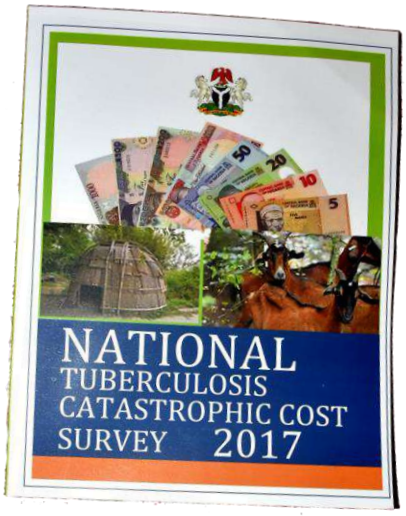
A total of 10,079 respondents were interviewed. The result of the survey shows that knowledge of the general population about the cause of TB was 24%.

II. TB Patient Cost Survey – 2017

The TB Patient Cost Survey (PCS); also known as the catastrophic cost survey, was conducted for the first time in Nigeria with funding support from Global Fund, USAID and WHO. The WHO provided technical support for the survey. This was a cross sectional survey with retrospective data collection and projections. All consecutive Drug Susceptible TB (DS TB) and Drug Resistant TB (DR-TB) patients registered for treatments that are attending DOTS facilities/DR-TB treatment centers within the selected cluster for a Direct Observation of Treatment (DOT) or follow up visit participated in the survey. The survey sample size was 1,200 patients in 40 survey clusters spread across 22 states of the country.

The primary objectives of the survey were:

- To document the magnitude and main drivers of patient costs in order to guide policies on cost mitigation for the purpose of reducing financial barriers to access and adherence
- To determine the baseline percentage of diagnosed TB patients treated in the network of facilities under the NTBLCP and their households, who incur direct



and indirect costs beyond a defined threshold of their annual income.

- To assess cost effectiveness of Tuberculosis diagnosis and treatment in public and private facilities in Nigeria

There are two approaches to calculating catastrophic cost, the output approach and the human capital approach. Adopting the output approach to catastrophic cost estimation, a threshold of 20% was set to determine the experience of catastrophic costs. Overall, 71% of household experienced catastrophic cost due to TB. The result of this survey is being used in the country to develop health policies that will enhance TB services in the country with the technical support of WHO.

Key survey results: On the basis of the output approach which compute household expenditure on the basis of actual income losses and not the time loss. There were estimated 71% of patients and households who experienced catastrophic cost during TB treatment (69.9% among Drug susceptible TB and 89.5% among DR-TB patients). Men, DR-TB patients, patients experiencing delays in diagnosis and poorest patients were most at risk of incurring catastrophic costs. Payments for TB care led to significant increase in the proportion of households that live below the poverty line (<$1.25 per day) to 58%. While only a quarter of TB patients were employed at the time of survey, 30% of these lost their job as a result of TB. Over half of patients (54%) were unable to pay for TB treatment from income alone and had to rely on borrowing (45%) or selling of assets (29%) to pay for TB-related care. The majority of patients sold livestock (37%) and farm produce (25%).

III. Evaluation of TB Radio Jingle Survey (2017)

The TB radio jingle was aired under the grant and an evaluation was conducted. This was a cross-sectional quasi-experimental study design covering sampled households and among men (15 – 54 years) and women (15-49 years). This study design allows for comparison between intervention and non-intervention sites (referred to as controls). This concept is based on the fact that it is suitable to estimate the level of attribution of programme intervention within specific population and to inform subsequent changes in project design.

The use of this research design adopted a two-pronged approach. The first was to evaluate the immediate effect of the TB radio jingles from persons who were exposed to the broadcast and secondly, to re-appraise the messages and the channels of disseminating the information. Consequently, this study entailed the use of a mixed research methodology.

The specific objectives of the study were:

- Determine the extent of coverage of radio broadcasting in terms of frequency, reach, regularity, duration and quality of content
- Assess the level of population exposure to the jingles (through aided recall)
- Determine the public knowledge, awareness of the radio jingles and perception of the media communication
- Assess the attitude and practice of general public and listeners to the radio jingles in respect to TB service uptake

The target groups of the study were; the general population, the media organizations that were involved in the broadcast of radio jingles, the organization responsible for regular tracking of media communication, TB patients attending DOTS clinics and other stakeholders at health facilities, community, LGA and state levels. The survey was conducted in 9 states (6 intervention states; each from the 6 Geo-political zones and 3 from the none intervention states). A total of 3,238 respondents were interviewed.

The finding results indicated that the overall radio reach was 79%. Frequency of radio listenership was found to cut across all demographic categories- gender, age, region and literacy. Results shows that TB awareness is high among respondents. The awareness of information about tuberculosis on the radio in the last three months preceding the survey was significantly higher among respondents in the intervention states (53%) than those in the non-intervention state (38%). The TB radio jingles evaluation highlight the need for government and donors to support scale up of radio and TV messaging at frequencies that will reinforce increased awareness and saturation of listenership on TB, thus facilitating increased health seeking behaviour among the public.

Publications in Peer reviewed journals

1. Implementation of the Active TB Case Finding in Nigeria; Processes, Lessons Learnt and Recommendations. *Journal of Tuberculosis Research*, 2018, 6, 10-18, http://www.scirp.org/journal/jtr
2. Knowledge about Tuberculosis: A Precursor to Effective TB Control—Findings from a Follow-Up National KAP Study on Tuberculosis among Nigerians, *Tuberculosis Research and Treatment*, vol. 2017, Article ID 6309092, 8 pages, 2017. doi:10.1155/2017/6309092, https://www.hindawi.com/journals/trt/2017/6309092/cta/
3. Role of treatment supporters beyond monitoring daily drug intake for TB-patients: Findings from a qualitative study in Nigeria. *Journal of Public Health and Epidemiology*, Vol. 9(4), pp. 65-73, DOI: 10.5897/JPHE2017.0909, http://www.academicjournals.org/JPHE
4. Evaluation of Tuberculosis Treatment Outcome of TB/HIV Co-infection: A Four-Year Retrospective Cohort Study in HIV-Prevalent Setting of North Central Nigeria. *Journal of Tuberculosis Research*, 4:122-133. (http://www.scirp.org/journal/jtr).