

## **Factors affecting the implementation of collaborative TB/HIV activities in Enugu State, Nigeria: a qualitative study.**

By

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### **ABSTRACT**

Tuberculosis (TB) continues to be the leading cause of death among people living with HIV (PLHIV) despite the implementation of collaborative TB/HIV activities aimed to reduce the dual impact of the diseases. Using the qualitative research design, we assessed the factors that affect the programme implementation both positively and negatively and explored possible suggestions for improvement of programme implementation in health care facilities in Enugu State. We conducted an in depth interview among 18 purposively selected health care workers. Data were analysed thematically. Results showed that all the activities to reduce the burden of TB among PLHIV were carried out in health facilities studied. Individual based motivators were the factors that affect the programme implementation positively while poor working conditions affected the programme negatively. Suggestions were to improve the programme implementation through more governmental support. We recommend the adoption of the suggestions made in this study to improve the programme.

**Key words:** Tuberculosis, people living with HIV, collaborative TB/HIV activities, implementation, barriers, facilitators.

### **1. INTRODUCTION**

Tuberculosis (TB) has remained the leading cause of morbidity and mortality among people living with HIV (PLHIV). World Health Organisation (2016) reported that globally in 2015, about 400,000 people died of HIV - associated TB in addition to 1.4 million who died of TB alone. The report, (WHO, 2016) further stated that in 2015, 57,000 people in Nigeria died of HIV associated TB and there were approximately 100,000 new cases of TB/HIV co-infection in the country. In Enugu State, Arodiwe, Nwokediuko, and Ike (2014) reported that infections especially from HIV and AIDS and TB alone, or as co infection and septicaemia were the most common causes of death

in medical ward in a tertiary hospital in the State. To reduce the impact of co infection with both diseases, the WHO developed a policy on collaborative TB/HIV activities with three objectives and twelve recommended activities. This study focused on the second objective; which is to reduce the burden of TB in people living with HIV, their families and communities by ensuring the delivery of the three ‘I’s for TB and HIV. Three activities are recommended to achieve the above objective which are; intensify TB case finding, isoniazid preventive therapy, and infection control. These are commonly called the three ‘I’s of TB/HIV. Reducing the burden of TB in people living with HIV will improve their lives as TB is the most common opportunistic infection in HIV. Proper implementation of the above three activities ensures improved life of PLHIV and community members. However, studies have revealed that there are high rates of undiagnosed TB among PLHIV and HIV-negative individuals (Kassa, Jerene, Assefa, Teka, Assefa & Deribew, 2012; Pasipamire, Pathmanathan, Calnan, Simelane, Trong & Haumba, 2016; Galetto, Abate & Egata, 2017). This could be because of poor implementation of the three ‘I’s. Several factors could be responsible for poor implementation of the recommended activities.

The factors that can affect implementation of collaborative TB and HIV activities in health care facilities are numerous depending on the setting. Inadequate infrastructure and staffing are the main challenges that play against the successful integration of TB and HIV services in resource-constrained Republic of Congo (Linguissi et al, 2017). The above authors further identified several bottle necks for the implementation of TB/HIV integration to include; poor case management, poor health system organization and rapid diagnostic tests. Uwiama, Jackson, Hausler and Zarowsky (2012) reported that health system barriers to implementation of collaborative TB/HIV activities in South Africa were challenges related to structure and organisational culture; management, planning and power issues; unequal financing; and human resource capacity and regulatory problems notably relating to scope of practice of nurses and community care workers. Understaffing, lack of capacity to diagnose HIV and TB, lack of guidelines to inform care options of TB/HIV co-infected patients and insufficient knowledge and skills among health workers towards provision of integrated TB/HIV care were mentioned as barriers to provision of integrated TB/HIV services in lower level health units in Uganda (Nansera, Bajunirwe, Kabakyenga, Asiimwe, & Mayanja-Kizza, 2010).

Other factors that can affect implementation of collaborative TB/HIV programme can be location of the facility and facility type. Location of health facility can be urban and rural. Uwiama et al. (2012) asserted that staff retention is difficult in rural areas. These might greatly influence the implementation of collaborative TB/HIV programme as those trained on the job might be transferred to other locations hampering the implementation. Furthermore, facility type in this study are the health centres, general hospital and teaching hospital representing the three levels of health care in Nigeria. Teaching hospitals may have adequate number of trained staff, better equipments and infrastructure to carry out the collaborative TB/HIV programme more than the general hospitals. For instance, Akosu, Toluope and Agbo (2015) reported that some of the infection control equipments like respirators and ventilation systems are not available in secondary health facilities in some states. Unavailability of these equipments will limit to a great extent, the implementation of the programme in the State.

Enugu State is one of the 36 states in Nigeria located in the South East geopolitical zone. It is the capital of the old Eastern region of the country. People of different cultures and nationalities inhabit the state. Enugu State is adorned with different health care facilities providing primary, secondary and tertiary levels of care for its citizens. Tuberculosis and HIV services are totally free in public health care facilities. State owned public health care facilities were investigated in this study. This is because most of the PLHIV accesses care in those facilities. Some private and mission health care facilities also provide these services but sometimes, cost is attached to their

services, so limiting the number of people accessing care in their facilities. Comprehensive care and support services including ART services for PLHIV are provided only at the general and teaching hospitals. These hospitals represent the secondary and tertiary levels of care. There are eight general hospitals, and one teaching hospital in Enugu State providing the comprehensive care and support including ART to PLHIV. These hospitals were studied. The primary level facilities provide some of the services such as: HIV counseling and testing, prevention of mother to child transmission (PMTCT), but not the comprehensive care and support services including ART services as obtainable in the other levels. Despite the collaborative TB/HIV activities in health care facilities, co - morbidity of TB/HIV has continued to be a leading cause of morbidity and mortality among PLHIV in Nigeria, Enugu State inclusive. The purpose of the study was therefore to find out the factors that affect the implementation of collaborative TB/HIV activities in Enugu State, Nigeria. Specifically, the study sought to find out:

- i. Activities to reduce TB among PLHIV implemented in health care facilities in Enugu state;
- ii. Factors that affect the implementation of collaborative TB/HIV activities positively( facilitators, motivators, enablers) in the state;
- iii. Factors that affect the implementation of collaborative TB/HIV activities negatively (challenges, barriers, ) in the state;
- iv. Suggestions to improve the implementation of the programme.

## **2. METHODS**

We employed qualitative research design to find out the implementation of activities to reduce TB among PLHIV, factors affecting the implementation as well as suggestions for improvement of the programme implementation. We conducted the study in the nine public health care facilities that provide ART services for PLHIV in Enugu State, Nigeria. The population for the study comprised all health care workers in those health care facilities

Purposive sampling was used to select eighteen health care workers (two from each facility). These were the TB and HIV focal persons or their representatives in the facility. The choice of the focal persons was that they are the ones directly involved with implementation of the programme and will be able to give adequate responses to the researchers. Researchers' structured in-depth interview (IDI) guide on Implementation of collaborative TB/HIV programme in Enugu State was the instrument for data collection. The in-depth interview guide consisted of four steps – introduction, informed consent document, demographic information of respondents and the instrument for IDI. Ten questions were asked in the IDI which collected information on TB/HIV activities implemented in the facility, availability and adequacy of resources for the implementation of the programme, factors affecting the implementation positively and negatively with probes where necessary and suggestions for improvement.

Three research experts from the Department of Human Kinetics and Health Education, University of Nigeria Nsukka carried out content and face validity of the instrument. These experts examined critically whether the instruments covered the specific objectives of the study and clarity of item diction. Their criticisms and corrections were used to modify the instrument before applying them to the study. Reliability of the in depth interview guide was ensured through proper documentation of the steps and procedure used in data collection.

A total of 18 health care workers were interviewed. The interview session was tape recorded to avoid any loss of information. This was done after obtaining informed consent both verbally and written from the participants. The respondents were assured of confidentiality. Data were collected between February and May, 2019. The collected data was analysed thematically.

Ethical approval for this study was granted by the research ethics committee of Enugu State ministry of health (MH/MSD/REC19/050).

### 3. RESULTS

Indepth interview was conducted among 18 participants involved in the implementation of TB/HIV programme in the facilities studied. The results are presented according to themes that emerged from the interview and are grouped under four major subheadings. The characteristics of the respondents are presented in table 1.

**Table 1: Characteristics of Health Care Workers (HCWs) Interviewed (n=18)**

Characteristics	Frequency(F)	Percentage(%)
<b>1.Gender</b>		
Male	6	33.3
Female	12	66.7
<b>2.Age range</b>		
Less than 25 years	1	5.6
25-35 years	2	11.1
36-45 years	8	44.4
Above 45 years	7	38.9
<b>3.Profession of health care worker</b>		
Nurse	15	83.3
Laboratory scientists	2	11.1
Laboratory technicians	1	5.6
<b>4. Qualification</b>		
Diploma/certificate in professional course	8	44.4
Bachelor of Science (B.Sc)	10	55.6
<b>5. Place of work</b>		
Secondary facility	16	88.9
Tertiary facility	2	11.1
<b>6.Ever trained on collaborative TB/HIV programme</b>		
Yes	15	83.3
No	3	16.7
<b>7.Work experience in years</b>		
Less than 10 years	7	38.9
10-20 years	5	27.8
21 years and above	6	33.3

Majority of the respondents were from the secondary health care facilities (88.9%), nurses (83.3%), and had received some training on collaborative TB/HIV programme (83.3%). More than half of the respondents were females (66.7%) and had B.Sc degree (55.6%). Also, greater percentage were aged between 36 and 45 years (44.4%) and has worked for less than ten years (38.9%).

#### 3.1 Implementation of the three 'I's of TB/HIV collaborative programme in health care facilities

Several themes emerged from implementation of TB/HIV collaborative activities which include; routine screening for TB, IPT administration in most facilities, varied standards of infection

control practices, most material resources available and adequate, and human resources available but highly inadequate.

### 3.1.1 Routine screening for TB

Screening of PLHIV for TB was done routinely in all the facilities studied, at any point in time and at various units in the facilities. All the interviewees responded yes to TB screening. Place of screening was reported as various units of the hospital. For instance, Participant 3 when asked where TB screening is done responded *“In this facility, at the TB unit they screen them, at the HCT they screen them, at the maternity they screen them, sometimes in the ward they screen them and the main lab they screen them”*. Also Participant 8 had this to say; *“We screen them at the DOTS unit, the consulting room doctors do that, at each point of care we screen for TB”*. Most participants reported following the screening algorithm. Participant 1 when asked about the screening algorithm/sequence had this to say; *“Ask about cough, ask about night sweats, ask about fever, loss of weight”*. Equally Participant 13 reported TB evaluation for those that screened positive thus; *“If the score is above 1, you now refer the client for AFB, gene expert as necessary to rule out TB”*. On investigation about the frequency of the screening, they reported that they do it routinely... *“At any point in time, any time they come for refill (collection of drug). Regularly”* (Participant 16).

### 3.1.2 Isoniazide Preventive Therapy(IPT) administration in most facilities

Isoniazide preventive therapy(IPT) is administered to PLHIV after ruling out TB in most facilities and it is given for six months coverage. Almost all the respondents reported administration of IPT to PLHIV who are not active for TB. When asked how IPT is provided, some of the participants had these to say; *“We provide them (IPT) to all the clients for six months coverage”* (Participant 13). *“It is done. They take for six months (HIV positive patients are given isoniazide for six months) they stop, after a year and six months you resume and give them six months again and is recorded in care card and IPT register”* (Participant 16). *“For prevention of TB, we are giving them isoniazide for six months”* (Participant 17). Most of the respondents also follow the eligibility pattern for the administration of the isoniazide prophylaxis which is after active TB has been ruled out for instance, when asked about eligibility for IPT Participant 1 said *“Yes we do that here, if the person is not active for TB we provide for every positive HIV patient”*. *“If somebody.. any person who has clinical signs of TB but on investigation, the person shows negative”*(Participant 8). However, one of the participants, Participant 18 when asked whether IPT is provided to HIV positive patients says she does not know whether IPT is provided or not.

### 3.1.3 Varied standards of infection control practices

Various standards of infection control practices were practiced by the different facilities studied. Cough etiquette, fast tracking, triage and ventilation were the frequently mentioned infection control practices by the facilities.

A two-thirds (67%) of the participants mentioned cough etiquette as the the infection control they practice. When asked which infection control measures are in place in the facility some of the respondents had these to say; *“...we teach them the coughing etiquette, to use handkerchief to close their mouths while coughing, or cough on their elbow”*(Participant 1); *“They are doing coughing etiquette like using handkerchief or using their elbow when coughing...”* (Participant 5). Other practices are fast tracking (39%) and triage (33%). Some of the respondents said these on the measures that are in place; *“First of all we normally triage them. Those ones that are coughing, we attend to them first so that they leave the environment to avoid infecting other clients”*(Participant 13); *“...here at the OPD we have TB infection control somebody there who*



*separate people that cough from people that are not coughing. Once you are coughing they will separate you and doctor will attend to you on time... to avoid much spread*”(Participant 3). Adequate ventilation of waiting areas was also practiced by 28 percent of the respondents. Some of the participants stated; *“Like if you see this our place (the facility) it is well ventilated. You know we don’t use fan, we don’t use AC but there is opening windows, this place is well ventilated and...”*”(Participant 11); *“we have ventilation...”*”(Participant 17).

However, none of the participants mentioned that TB infection control among staff are immediately investigated and reported as one of the infection control practices in the facility. Although one of the participants said *“...and you know we lost a staff here as a result of TB, and in this facility we have so many staff that have been cured”*”(Participant 3). Furthermore, the other minimum standard- *“facility specific infection control plan”* was not mentioned by any of the participants and only one participant reported that there is designated person responsible for implementing TBIC in the facility *“...here at the OPD we have TB infection control somebody there who separate people that cough from...”*”(Participant 3).

### **3.1.4 Most material resources available and adequate**

Most of the materials necessary for implementation of TB/HIV programme were available and adequate in most facilities. The ones that were not available at all were respirators and ventilators. The participants reacted on the issue of availability of materials thus: *“We have some, we don’t have ventilators... but we have drugs, we have laboratory, we have registers...”*”(Participant 2); *“We have laboratory equipments, we have drugs, the gene expert machines, we do AFB here. but we don’t have respirators, ventilators and other..”*”(Participant 1); *“There is a policy guideline in use, there are laboratory equipments we have gene expert we have microscopy. Respirators and ventilators are out of place. We have drugs regular never out of stock...”*”(Participant 16). All the participants unanimously stated that the ones they have are adequate for instance, Participant 8 said *“The ones we have are adequate based on the number of patients we have”*.

However, Participant 11 from an urban secondary facility reported non availability of laboratory equipments for TB diagnosis in PLHIV *“...We don’t have gene expert here. For long now we have not done AFB because they say that everybody must do gene expert so we send our specimen to eastern Nigeria medical centre (another health facility in the town)...”*. It is worthy to note that this is the only facility reporting non availability of gene expert machine among all the facilities studied.

### **3.1.5 Human resources available but highly inadequate**

Trained staffs are available in all the facilities across the state but highly inadequate. When asked about availability of staff, all the participants responded that the categories of staff needed for the implementation of TB/HIV programme were available. However, when asked about whether the available staff were adequate, almost all the participants said that they were not adequate. Some of the participants had these to say on the matter: *“not adequate at all”*”(Participant 10); *“we are not adequate, we don’t have enough hands in the facility”*”(Participant 4); *“no no no no they are not adequate at all”*”(Participant 7). Only the participants from a tertiary facility reported that their staff were adequate

### **3.2 Factors that affect the implementation of the programme positively (facilitators, motivators, enablers)**

Several themes emerged from factors that affect the implementation of the programme positively. These were; to curb TB spread, to save/prolong life, passion/empathy/humanitarian and to compliment the efforts of donor agencies

#### **3.2.1 To curb TB spread**

Because TB is a highly infectious disease, most of the participants said that the only thing that affect the implementation positively is the desire to minimize the spread of TB among people not that there is any motivator. For instance when asked about facilitators or motivators for the job, Participant 3 said *“one of the major factor is that if you didn’t carry out these activities, you are spreading the disease more. If the facility is being maintained, the rate of spread will be less so to avoid the spread you have to make sure that all these activities have to be maintained and taken care of...”*. Also, Participant 1 said *“We don’t want TB to spread to other people, we need to eliminate the infection”*.

#### **3.2.2 To save/prolong life**

The will to save or prolong life was another major factor identified to influence implementation positively. Reacting to the question at hand, Participant 5 had this to say *“TB on its own is a very severe disease, then to combine it with HIV the prognosis will be poor so that’s why we started the collaboration so that those patients at least they will have a long life span when they are being prevented from contacting the tuberculosis”*. Equally, Participant 2 responded that she is doing the activities to save life *“to save life and that of entire community”*.

#### **3.2.3 Passion/empathy/humanitarian**

Some of the participants interviewed were of the opinion that they are doing the job out of passion/empathy for the patients and on humanitarian ground. Some of the participants responded thus; *“It is just that I feel empathy for those who are suffering from the problem not that there is any motivator”* (Participant 8); *“Ehhh we do our job because it’s just a humanitarian job to help our fellow human being to live a healthy life”* (Participant 13); *“Just because of the passion for the patient. That’s the only thing. As a health worker if you don’t have good conscience you cannot work in health”* (Participant 15).

#### **3.2.4 To complement efforts of donor agencies**

Another factor identified as influencing implementation of TB/HIV programme is the donor agencies sponsorship of the programme. The programme is being sponsored by donor agencies and because of that, workers felt they should do their own part to compliment the efforts of these agencies. For instance, Participant 10 said *“... and if these donor agencies are helping our people, I also need to compliment their efforts...”*. *“The drugs and all these things are being sponsored from outside so if people are able to sponsor it, we will be able to play our own part”* (Participant 16).

### **3.3 Factors that affect the implementation of the programme negatively (challenges, barriers)**

Several factors were identified to influence the implementation of TB/HIV programme negatively. The themes that emerged were; poor working conditions, lack of space, government insensitivity and no update training.

### 3.3.1 Poor working conditions

Almost all the participants reported poor staffing and poor remuneration as posing challenge to them. For example, Participant 15 said “*challenge is inadequate staff, lack of incentives*”; “*challenge is workload, we need manpower*”(Participant 14). For Participant 10 poor environmental condition in addition to poor salary poses a great barrier “*Many many, you can see the office how it looks like. Like toilet look at the ceiling so environmental problem. Poor...they are not taking care of workers the salary is poor nothing nothing, we are just doing it by the special grace of God*”. However, two participants reported that they have no challenge to the implementation of the programme. For instance, when asked whether they are facing challenges or barriers to the implementation of the programme, Participant 17 said “*As far as we get drugs, we get all the reagents no challenges*”.

### 3.3.2 Lack of space

Lack of space was also majorly reported as having negative influence on the implementation of the programme. Enough space to carry out the activities to prevent TB among PLHIV. The participants had these to say: “*Number one challenge we have in our department is the issue of space have been our challenge because we don’t have enough space to take care of both HIV positive clients and also TB patients*” (Participant 13); “*Like I have mentioned before like in the ward if we have at least isolation ward separately well ventilated and equipped ...and all what not*”(Participant 5).

### 3.3.3 Government insensitivity

Another major theme that emerged was government insensitivity to health issues. The participants described that the donor agencies supporting the programme provides the materials while government is to provide staff and facilities for the programme. However, the government is failing in their own part. Some of the participants had these to say “*the government is not doing their best to support this facility, the NGO are trying but the government is failing, if the NGO now move what is going to be the effect... the NGO is trying but the government is not trying anything* (Participant 3); “*it seems our government are insensitive to health issues*”(Participant 16).

### 3.3.4 Poor supervision and no update training

Poor supervision of the programme and lack of update workshops also emerged as affecting implementation negatively. For instance, one of the participants said “*we have poor supervision of the programme. When they establish the programme they don’t follow it up to know whether we are doing the right thing or not and they don’t call us for workshop often to update us on the new trend*” (Participant 1); “*... we are not being motivated and some of us need training like workshop to update our knowledge on the current trend*”(Participant 6)

## 3.4 Suggestions for improvement

The participants interviewed made several suggestions to promote and improve implementation of collaborative TB/HIV programme in their facilities. These were; adequate staffing, proper remuneration, more governmental commitment, materials provision and regular training and supervision of staff.

### 3.4.1 Adequate staffing and proper remuneration

Because poor staffing was identified as a challenge to implementation of the programme, participants suggested that to improve implementation, there should be more staff in the system coupled with proper remuneration. Talking on this issue, Participant 9 said “*I will encourage the government to open their employment gate and employ people more in the health sector because*



*they are really short staffed”; “provide adequate manpower and remuneration of staff” (Participant 16); “I am appealing that if you people can appeal to the state government to at least give us more staff so that the work should be... we can share duty so that we cover all the rounds every aspect must be covered not only one person doing all the work” (Participant 7).*

### **3.4.2 More governmental commitment**

Other suggestion made was that government should show more commitment to the programme by improving on their part. For example one of the participants said, *“What I will suggest is that government should improve on their part... government should improve, provide adequate man power and remuneration of the staff.” (Participant 16); “The only suggestion I will give is advice the government so that they make sure that this issue of HIV and TB if they don’t take proper care of it, the rate of spreading will be more and instead of for us to control it, it will be spreading” (Participant 3).*

### **3.4.3 Materials provision and space**

Facilities that identified lack of other materials like gloves, masks, respirators ventilators, space among others made the suggestion that implementation will improve if such provision are made. Some of the participants reacted thus: *“I suggest that even this drugs that they are bringing, they don’t come with gloves, they don’t come with ... sanitizers, face masks so they don’t bring it, we will cry and cry before the hospital can give us and all these lab something if they bring I hope it will improve the programme. They are bringing the drugs but only the drugs cannot do the job” (Participant 11); “If the state government or the people that are in charge of the implementation will be able to provide space where our department can be to minimize the spread of TB among HIV infected clients and also we the health workers” (Participant 13).*

Other suggestions were regular meeting and regular training. *“There should be regular meeting with those that handle HIV and TB cases...” (Participant 8); “The suggestion I am proffering is that there should be routine training, refresher courses on those aspects of the programme so that people can update themselves on the new trend” (Participant 15).*

## **4. DISCUSSION**

We carried out a qualitative study on 18 health care workers in Enugu State to find out the implementation of collaborative TB/HIV activities, factors that affect the implementation as well as suggestions for improvement of programme implementation. Majority of the respondents were from the secondary health care facilities, nurses, and had received some training on collaborative TB/HIV programme. More than half of the respondents were females and had B.Sc degree. Also, greater percentages were aged between 36 and 45 years and have worked for less than ten years. Finding showed that there is satisfactory implementation of the three ‘I’s of TB/HIV which are intensified TB case finding through routine screening for TB at each clinic visit, isoniazid preventive therapy after ruling out active TB disease and TB infection control. However, there were several issues identified which could hamper the implementation.

Human resource were available but inadequate. The issue of human resource adequacy need to be seriously adressed. Most of the study participants said that they were not adequate at all. The finding is in line with that of Rathore, Meena, Ayubb, and Singh (2016), who found out that there were vacant posts of all cadres of health care workers in health facilities in Rajasthan

The availability but inadequacy of some of the human resources in health care facilities in the Enugu State found in this study has implication for public health and health care practice. The collaborative TB/HIV programme need permanently, skilled and committed staff to be able to carry

out the activities effectively. However, these activities will be greatly impaired if the job is left to only a few staff. This is illustrated by one of the participants thus;

*“I am appealing that if you people can appeal to the state government to at least give us more staff so that the work should be... we can share duty so that we cover all the rounds every aspect must be covered not only one person doing all the work”* (Participant number 7).

Above was a pathetic plea from one of the participants for the IDI. This goes a long way to show how staff inadequacy is affecting discharge of duties. Therefore, Rathore et al. (2016) asserted that the issues of availability of dedicated, skilled and permanently available human resources need to be improved on in order to effectively carry out health work.

Furthermore, we found out that the factors that affect implementation negatively were poor staffing, poor remuneration, poor environmental condition, government insensitivity and no update training. These findings are consistent with other findings. For instance, Nansera et al. (2010) reported understaffing and lack of knowledge and skills among health care workers as barriers to provision of integrated TB/HIV services, Okello (2016) showed that staff attitude, irregular supply of ICF related materials, high workload were the barriers to implementation of ICF in Uganda. In Lagos state, Kuyinu et al. (2016) found the barriers to implementation of infection control as weak managerial support, poor funding, understaffing and lack of space. Inadequate infrastructure and staffing are the main challenges that play against the successful integration of TB and HIV services in resource-constrained Republic of Congo (Linguissi et al., 2017). The identified barriers need to be urgently tackled by appropriate bodies in order to boost implementation of collaborative TB/HIV programme for achievement of TB elimination among PLHIV and the general public.

The study generated findings on the factors that affect implementation of the programme positively (motivators/facilitators/enablers) as; to curb TB spread, to save/prolong life, passion/empathy/humanitarian and to compliment the efforts of donor agencies. The need to stop the spread of tuberculosis and prolong peoples life made health care workers to implement TB/HIV collaborative programme not any other motivator. This supports the fact that health care work is a work of conscience. Also the fact that people (donor agencies) are sponsoring the programme and the need to play active part in TB elimination motivated some health workers to carry out the programme. These findings are at variance with that of Okello, (2016) who reported that training, supportive supervision, proper coordination and support from implementing partners were the facilitators of the programme implementation in Uganda. The above facilitators identified in this study are individual based not system based. It therefore means that the health care system in the study area does not motivate its workers to carry out their duties effectively. This can greatly undermine the implementation of several health policies and programmes including collaborative TB/HIV programme. Consequently, the achievement of the targets could be a mirage. This does not augur well for TB/HIV elimination and control.

The participants interviewed made several suggestions to promote and improve implementation of collaborative TB/HIV programme in their facilities. These were; adequate staffing, proper remuneration, more governmental commitment, materials provision and regular training and supervision of staff. The findings are in line with other studies. For instance, Okello (2016) suggested that training and support supervision of health care workers should be addressed for better ICF implementation in Uganda; in Ethiopia, Tamir et al. (2016) similarly opined that supportive supervision and training should be given to health care workers who are working other than TB clinics to improve their knowledge of TB infection control; Emerson et al. (2016) reported that continued infrastructure support as well as monitoring and evaluation are needed to support the

scale up and sustainability of TB infection control programmes in facilities in low resource countries.

The findings on factors affecting implementation of collaborative TB/HIV programme in the Enugu State have some implications. First, the finding of individual based motivators and not system based is a cause for concern. The health system is not motivating its workers to bring out their best. Health care workers exercise their duty based on their consciences. This should not be so. In addition to individual based motivators, there is need for the system to encourage its workers through several measures. It therefore implies that if this situation is neglected, there will be poor implementation of collaborative TB/HIV programme in health care facilities. Poor programme implementation will result to non achievement of the goal of the programme which is to mitigate the dual impact of both TB and HIV in people infected or affected by the diseases. The burden of the disease will be high in communities thereby endangering the lives of the public. Public health educators are therefore called upon to liaise with relevant stakeholders by making them aware of the implication of poor staffing in health care facilities in the Enugu State. This can be achieved through advocacy. A very important stakeholder in this regard is the State government. Government should find ways of encouraging staff retention in the civil service and also adopt the suggestions made in this paper to improve programme implementation.

## **5. CONCLUSION AND RECOMMENDATIONS**

The findings of the study have shown that all the activities to reduce TB among PLHIV were implemented in health care facilities in Enugu State. Individual based motivators were the motivators for the programme implementation. Identified challenges include staffing and infrastructure among others.

Therefore, all relevant stakeholders in TB/HIV activities (Enugu State Ministry of Health, donor agencies, non-governmental organizations, TB and HIV programme officers, health care workers, public health educators, patients and community members) will find this study very useful. These stakeholders should improve on the programme inputs in order to achieve the output indicators and outcome of the programme implementation which is to reduce TB transmission among PLHIV and improve the lives of PLHIV and the community members. Based on the findings of the study, the following recommendations are made;

1. The implementation of all the activities to reduce TB among PLHIV revealed in this study need to be sustained through regular and update training of health care workers on the programme implementation.
2. The suggestions for improvement revealed in this study should be applied in the implementation of collaborative TB/HIV programme in health care facilities by relevant agencies.
3. State governments should wake up to its responsibility by making necessary provisions (human and material resources) for health including TB/HIV programme.

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## In depth interview Guide on implementation of collaborative TB/HIV programme in Enugu State

### Step 1

#### Introduction

Thank you so much for agreeing to discuss with me. My name is \_\_\_\_\_. I am going to ask you a few questions on implementation of collaborative TB/HIV activities with respect to the activities to reduce the burden of TB among PLHIV in your facility. This is to help us develop ways of improving the implementation of the programme so as to help reduce TB infection among PLHIV and community members and improve the lives of people affected by the disease. The discussion will take about 10-12 minutes. I will like to tape the session so that I will not miss any part of your comment. I will also take down some notes during the session. Because we are on tape, please be sure to speak up so that I don't miss your comments.

All responses will be kept confidential. This means that your responses will be shared with research team members for the purpose of this study only. Be assured that any information that is included in the report will not identify you as the respondent.

Do you agree to participate in this discussion?

Yes  No

### Step 2

#### Create rapport and obtain informed consent

##### Informed consent document

Declaration: I have been informed on the purpose of this study and I freely agree to participate in this study

Name of participant \_\_\_\_\_

Signature of participant \_\_\_\_\_

Date \_\_\_\_\_

### Step 3

#### Get the demographic information

##### Demographic information

Please tick (✓) the option that apply to you

1. Gender Male  Female

2. What is your age?

Less than 25 years

25-35 years

36-45 years

45 ears and above

**Please turn to the next page**

3. What is your profession?  
 Nurse   
 Doctor   
 Pharmacist   
 Laboratory scientist   
 Laboratory technician   
 Medical record officer
4. What is your qualification?  
 Diploma/certificate in professional course   
 B.Sc   
 M.Sc   
 Ph. D
5. Where do you work?  
 Primary health facility   
 Secondary health facility   
 Tertiary health facility
6. Have you received any training on TB/HIV collaborative activities  
 Yes  No
7. Years of Experience; Less than 10 years  10-20 years  21 years and above

**Step 4**

**Start the digital recorder and ask the following questions with probes where necessary. Use the back of the form to record any key answers only.**

**Instrument for in-depth interview (IDI)**

**Participant No** \_\_\_\_\_

1. Are HIV positive people routinely screened for TB in your facility? Where? How often? What is the screening algorithm (sequence, procedure)?
2. Are the results of TB screening and administration of IPT recorded in the ART register?
3. Is IPT provided to HIV positive patients. How is it provided?
4. Are measures in place to control the spread of TB infection in this facility? Which ones are in place?
5. Do you have staff trained on the implementation of collaborative TB/HIV programme? How adequate are the staff?
6. Do you have the necessary supplies for the implementation of collaborative TB/HIV programme? –TB/HIV policy guidelines, laboratory equipments for TB diagnosis in PLHIV, respirators, ventilators, drugs and other consumables? How adequate are they?
7. Do you think you are able to implement collaborative TB/HIV activities as planned? If no what aspect did you not implement well?
8. What factors do you think influence the implementation of the programme positively?

Probe: Enablers; Facilitators

9. What factors do you think influence the implementation of the programme negatively?

Probe: Barriers; Challenges

10. What suggestions can you give to promote and improve the implementation of collaborative TB and HIV programme in your facility?