

**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA**



**IMPLEMENTATION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV)
SCREENING AND ANTIRETROVIRAL THERAPY (ART) AMONG
TUBERCULOSIS (TB) CLIENTS IN TEMA METROPOLITAN DISTRICT,
GREATER ACCRA REGION OF GHANA**

BY

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DECLARATION

I, Ifeyinwa Ernestina Osagie, declare that except for the references to other people's research work which have been duly acknowledged, this dissertation is the result of my own original research, either in whole or part carried out in the School of Public Health, College of Health Sciences, University of Ghana, under the supervision of Dr. Amos Laar; and has not been presented elsewhere for another degree. I complied with ethical principles set out in relevant guidelines while conducting this study; and its findings will help make recommendations which could improve the implementation of the TB/HIV programme in Tema Metropolitan District.

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DEDICATION

This dissertation is dedicated to my mum for her incomparable love, sacrifice, support, prayers and encouragement throughout the duration of this course and all my life.

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My deepest gratitude goes to God Almighty for providing me with the privilege, will and strength to go through the course and carry out this research successfully without hitches.

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ABSTRACT

Background: Tuberculosis (TB) is a chronic infection which mainly affects the lungs. Due to the current Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) pandemic, TB has become a leading cause of mortality and morbidity, being the most common fatal opportunistic disease among PLHIV although curable. Five years after the revised policy on execution of joint TB/HIV activities was rolled out in Ghana with a yearly target of 100% HIV testing and Antiretroviral Therapy (ART) coverage for TB clients co-infected with HIV, 84% of TB clients were tested for HIV and less than half of these individuals are on ART.

Objective: This study explored the challenges in implementing HIV screening and ART among TB clients in Tema Metropolitan District in the Greater Accra Region of Ghana.

Methods: Using in-depth interviews (IDIs), the study provided data on the perspectives of policy-makers and service providers on the dual TB/HIV programme implementation, the TB clients' knowledge of HIV/AIDS, HIV screening and ART and their willingness to accept and adhere to treatment if co-infected which were analyzed thematically.

Results: Among the findings were barriers hampering TB/HIV collaboration which were insufficient funding, human resource shortages, loss to follow-up and discrimination. In addition, male clients were more knowledgeable about HIV/AIDS, screening and ART. Some expressed their unwillingness to accept ART, which was hinged on beliefs and drug quantity.

Conclusion: These barriers to screening and ART uptake reinforce the need for sustained gender equality in education, empowerment, health promotion activities and increased CSO/private sector involvement.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIDS – Acquired Immunodeficiency Syndrome

ART – Antiretroviral Therapy

CCM – Country Coordinating Mechanism

CDC – Centre for Disease Control and Prevention

CSO – Civil Society Organisation

DOTS – Directly Observed Therapy Short-course

ERC – Ethical Review Committee

GAC – Ghana AIDS Commission

GHS – Ghana Health Services

GSS – Ghana Statistical Services

HCW – Healthcare workers

HIV – Human Immunodeficiency Virus

IDI – In-depth Interviews

INSTI – Integrase Strand Transfer Inhibitor

IRB – Institutional review Board

LMICs – Low and Middle Income Countries

MOH – Ministry of Health

MSM – Men who have sex with men

NACP – National AIDS/STI Control Programme

NCP – National Control Programmes

NNRTI – Non-nucleoside Reverse Transcriptase Inhibitor

NRTI – Nucleoside Reverse Transcriptase Inhibitor

NTP – National TB Control Programme

PHC – Population and Housing Census

PI – Principal Investigator

PLHIV – People Living with HIV

RA – Research Assistant

SDG – Sustainable Development Goals

SP – Service Provider

TB – Tuberculosis

TDR – Tropical Disease Research

TMHD – Tema Metropolitan Health Directorate

UNAIDS – Joint United Nations Programme on HIV/AIDS

WHO – World Health Organisation

OPERATIONAL DEFINITION OF TERMS

Adherence	This is the extent to which an individual's conduct and usage of medications correlates with the agreed suggestions or instructions from a healthcare worker or service provider.
Antiretroviral Therapy	Use of a mixture of three or more ARV drugs for treating infection with HIV for life; also known as HAART.
Antiretrovirals or Antiretroviral drugs	Medications used for treating HIV infection.
Awareness	Being informed about an issue or concept.
Client	The user of TB/HIV healthcare products and/or services.
Challenge	An urgent or difficult task.
Collaboration	Individual contributions of health service providers and policy-makers geared towards the efficiency of the cooperative TB/HIV programme.
Integration	Act of unifying different or separate groups providing TB and HIV services into one.
Implementation	Execution of collaborative TB and HIV services from policy-making to service provision in addition to participation of the clients who are the end users of the service.
Knowledge	The total of what is comprehended or understood.

- Good knowledge is being able to correctly identify or provide an explanation about a concept or subject matter.
- Poor knowledge is inability to give an accurate explanation or answer.

Point-of-care testing

Conducting HIV tests near or at the site where provision of TB care is being carried out. The results are then quickly returned in order to provide for timely and cost-effective clinical decision-making.

Rapid Diagnostic Test

Refers to an in vitro immunologic test that detects HIV antibodies and/or HIV antigens in the blood sample of an individual.

Service

The act of serving, giving or supplying a need.

Policy-maker

Policy-makers of collaborative TB/HIV activities who have a vested interest in its development and implementation.

Uptake

The act of using or taking advantage of an available service.

Viral Suppression

Laboratory assays not detecting the viral load due to very low levels.

Willingness

The inclination or desire to follow a course of action or carry out an activity.

CHAPTER 1

INTRODUCTION

1.1 Background

Tuberculosis (TB) is a chronic infection which affects mainly the lungs with the propensity for spread to other parts of the human body. It is caused by the micro-organism *Mycobacterium tuberculosis*, a bacillus which is spread through air droplets. Inhalation of bacilli expelled into the air when infected individuals sneeze, cough or spit may cause infection in another individual without the disease. There is a 10% lifetime chance of becoming sick in those already infected with the bacteria, which is exponentially increased by the presence of other risk factors such as diabetes, tobacco inhalation or smoking, malnutrition and co-infection with Human Immuno-deficiency Virus (HIV) (World Health Organisation (WHO), 2015; 2016; 2017).

Due to the current Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) pandemic, TB has become a leading cause of mortality and morbidity, being the most common fatal opportunistic disease among persons living with HIV (PLHIV) (WHO, 2008). Although TB is a curable disease, about 630 people die from it every day. Human Immunodeficiency Virus worsens TB disease development in PLHIV; and they both synergistically worsen immune decline (Pawlowski, Jansson, Sköld, Rottenberg, & Källenius, 2012). Almost all HIV-positive individuals with TB and about 45% of HIV-negative individuals with TB will die if they do not receive adequate treatment (WHO, 2017).

The treatment for TB is the provision of an initial course of 4 antibiotics (Rifampicin, Isoniazid, Pyrazinamide and Ethambutol) for 2 months after which only Rifampicin and

Isoniazid are administered for the next 4 months under observation by a healthcare worker - called Directly Observed Therapy Short-course (DOTS) - alongside adequate information, support and supervision for the patients by trained volunteers or healthcare workers (WHO, 2017). This is to ensure adherence and limit the spread of the disease. It is well documented that when medicines are provided and taken properly, TB cases can be cured (CCM, 2013; Ghana Health Service (GHS), 2017; WHO, 2017). However, there is no known cure for HIV/AIDS, rather it is managed by a lifelong administration of antiretroviral (ARV) drugs which suppress the replication of the virus (WHO, 2016b; 2017). The ARV classes recommended for the control of HIV/AIDS are a non-nucleoside reverse-transcriptase inhibitor (NNRTI) or an integrase strand transfer inhibitor (INSTI) with two nucleoside reverse-transcriptase inhibitors (NRTIs); with the first line drugs being Tenofovir, Lamivudine (or Emtricitabine) and Efavirenz. These drugs are routinely provided free-of-charge to clients in designated healthcare facilities both on out-patient and in-patient basis across Ghana; in addition to counselling and monitoring by trained healthcare personnel and service providers (WHO, 2012; GHS, 2007; GAC, 2013).

In 2012, it was recommended by the WHO that there should be a structured integration of TB/HIV activities by National Control Programmes (NCPs) and other policy-makers (public and private sectors) in all countries where both diseases are endemic (WHO, 2012). This was revised from its 2004 and 2010 strategy to stop TB (WHO, 2010; 2011). Some of its specifications were that collaborative TB and HIV services delivery mechanisms should be established and strengthened in both public and private sectors, TB/HIV co-infection prevalence should be determined and HIV screening and counselling be initiated, with ARVs provided to TB clients within the first eight weeks of commencement of anti-tuberculous

drugs (if HIV-positive) in addition to emotional and economic support by service providers (WHO, 2006; 2008; 2012; 2016b). This is in consonance with the targets of ending the dual global AIDS and TB epidemics by 2030 and 2035; under the United Nations Sustainable Development Goal (SDG) 3 (SDG, 2015) and WHO strategy to eliminate TB (WHO, 2015).

To this effect, the Ghana health Service (GHS) (2006) drafted policies specific for TB/HIV collaborative activities in 2005, in which clients with TB were targeted for access to HIV prevention and care services in line with WHO recommendations. The National TB Control Programme (NTP) bears the responsibility of coordinating measures geared towards TB control, elimination and eradication with a strategy focused on finding and curing TB cases; while the National AIDS/STI Control Programme (NACP) plans programmes, provides anti-retroviral drugs, training, counselling and logistics support along with other HIV/AIDS-related activities (GHS, 2006; Ghana AIDS Commission (GAC), 2013; GHS, 2017). However, according to the GHS (2014), the coordination of TB and HIV/AIDS collaborative activities is carried out by the TB/HIV committee comprising selected members from both the NTP and NACP. Currently, at the different levels of Ghana's healthcare delivery system, there are three models of TB/HIV integration: TB and HIV clinics in separate facilities, TB and HIV clinics in separate units within the same facility and the TB/HIV "one-stop" (p. 14) clinic within one unit of the same facility (GHS, 2014).

In 2016 the world over, there were 9.6 million new cases of TB, of which 12% were PLHIV (The Global Fund, 2017). Over one-third of these were neither diagnosed nor treated, and 1.5 million people were killed by TB (The Global Fund, 2017). In addition, HIV-infected persons are predisposed to developing TB 26 times more than uninfected individuals (WHO, 2015). Results from the 2013 TB prevalence survey in Ghana revealed a TB disease burden four

times higher than previously thought, with a prevalence rate of 290 per 100,000 population, as against the WHO figure of 92 per 100,000 population; (GHS, 2016; NTP, 2017). The nation-wide sero-prevalence of HIV is 1.30% (GHS, 2014), while the current co-infection prevalence is 14.7% (Country Coordinating Mechanism (CCM), 2017).

1.2 Problem statement

According to the Global Fund (2017), although the integration of TB/HIV activities has made some progress, there is still a lot of ground to cover in the fight to eradicate TB all over the world. The various systems for the provision of healthcare are immensely burdened with TB/HIV co-infection, due to the therapeutic and diagnostic challenges associated with the syndemic; especially in African countries which have significant numbers of co-infected populations (Yirdaw et al., 2014; Pawlowski et al., 2012).

The Joint United Nations Programme on HIV/AIDS (UNAIDS) initiated a powerful force geared towards a new story on HIV treatment by the year 2020. It was ushered in among stakeholders on a global scale and called *Target 90-90-90* (90% diagnosis, 90% treatment, 90% suppression of HIV and no discrimination whatsoever). UNAIDS also emphasizes that clients with suspected or diagnosed TB should be screened for HIV, supported both emotionally and economically and provided with anti-retroviral therapy (ART) if co-infected. This was geared to reduce morbidity and mortality (UNAIDS, 2014; WHO, 2015). In 2015, this target was revised to “Target 95-95-95 (95% diagnosis, 95% treatment, 95% suppression of HIV without any form of discrimination)” with ten all-inclusive goals which provide for vulnerable and key populations in order to accelerate an end to AIDS by 2030.

In developing countries of the world, ninety-nine percent (99%) of AIDS-related deaths occur while 80% of the estimated TB/HIV cases are found within Africa (Yirdaw et al., 2014; Pawlowski et al., 2012). In Ghana, mortality rates among clients with TB/HIV co-infection is 20% (GHS, 2014; CCM, 2017). Five years on after the revised policy on implementation of dual TB/HIV activities was rolled out with a yearly target of 100% HIV testing for all TB clients and a 2020 target of 100% ART coverage for TB clients co-infected with HIV, 84% of TB clients were tested for HIV and only 43% of them have been enrolled on ART (Ministry of Health (MOH)/GHS, 2016).

According to GHS (2014), the allocation of resources for mutual TB/HIV activities is presently inadequate; TB/HIV activities are implemented at different levels across Ghana's districts and regions, while linkage of care for TB clients with HIV co-infection is weak. In addition, trained healthcare workers are not sufficient to cater for the needs of TB/HIV clients and the participation of Civil Society Organisations (CSOs) has dwindled drastically (GHS, 2014; 2017). If left unaddressed, these factors challenging HIV screening and ART uptake among TB clients will continue to affect Ghana's health system performance, worsen the plight of already burdened healthcare systems, increase morbidity and mortality rates with concurrent losses in vital human capital and scarce financial resources, in addition to undermining the efforts geared towards eliminating the scourge of TB and HIV worldwide.

A growing body of evidence has shown that the implementation of HIV testing and ART amongst TB clients is presently challenged the world over, especially in LMICs. Judicious use of available resources and appropriate scale-up should be applied in order to overcome some of these challenges currently faced by the LMICs in the delivery of collaborative TB/HIV activities.

1.3 Justification

Of the three pedestals in the WHO strategy to end TB, collaborative activities centred on TB/HIV is a component of the first (WHO, 2015). The present grant awarded for the next phase of Ghana's joint TB/HIV coordination efforts by the Global Fund will provide for the targeted complete roll-out of this vital intervention tool over the next three years (CCM, 2017). The benefits of HIV screening and early commencement of ART are entrenched from several studies from across the globe, hence its incorporation in the WHO's tactic to terminate TB by 2035 and its ART course of action (Blanc et al., 2011; WHO, 2015; 2016).

In order to roll out operation protocols in health-related issues, governments create plans and make arrangements running into millions of dollars. The estimated value for executing TB and HIV/AIDS programmes in Ghana as captured in the concept note for 2018-2020 is over seventy-eight million US dollars (MOH/GHS, 2016). As these policies are meant to control and eradicate existing public health problems of immense magnitudes and devastating effects, the solutions are meant to actually work. With such a high percentage of TB clients burdened with HIV in Ghana, the operation of HIV screening and ART should be adequately scaled up; in line with the laid-out international best practices and guidelines.

More work needs to be done to enhance TB/HIV collaborative activities in lieu of the country's set targets which reflect the global goal to eliminate TB and AIDS. This study's findings will serve as a reference point to guide the scale-up of TB/HIV collaborative activities in Accra and other regions of Ghana as it will help identify the core issues militating against or providing for achieving HIV testing targets for suspected/diagnosed TB clients and a higher ARV drugs uptake.

Below par performance of the strategy to end TB in Ghana will not only lead to loss of scarce financial resources, but also loss of trust in the health system and loss of human lives and capital. In order to prevent these untoward outcomes as much as is possible, this study will obtain the opinions of policy-makers and identify any present gaps that will require prompt attention. The information provided will then help inform policy-makers about areas that will require strengthening, while they will provide valuable experience, insights and consultations as to what can and should be done in order to make Ghana's operation plan work in the next phase of concerted TB/HIV activities.

1.4 Conceptual framework

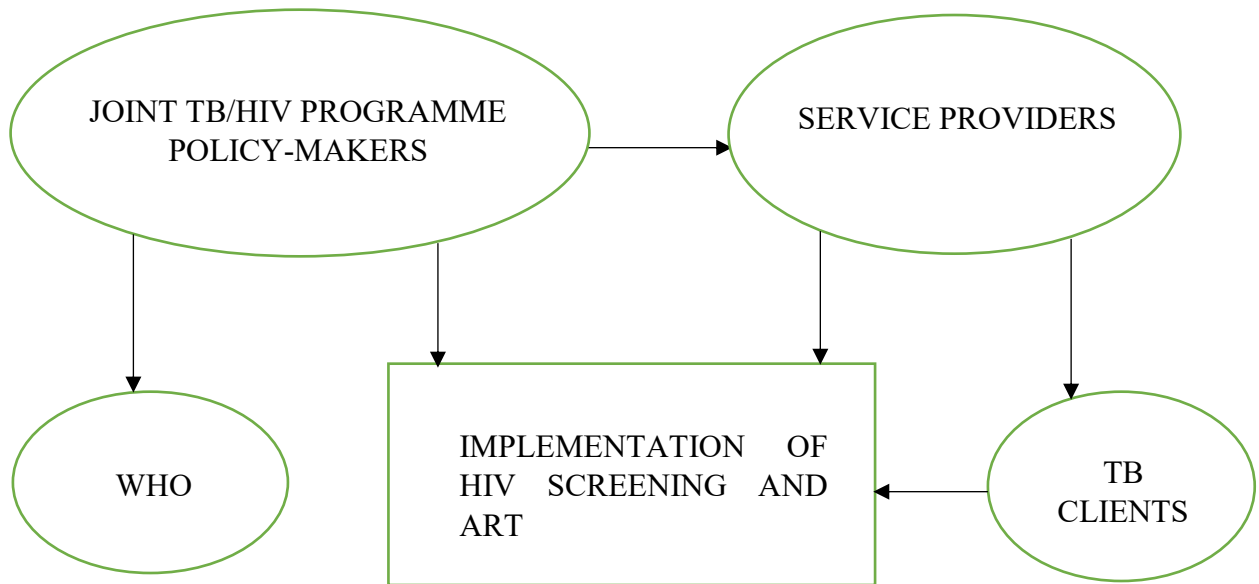


Figure 1: Conceptual framework to explore the challenges in the implementing HIV screening and ART among TB clients in Tema District (Author's own construct).

The WHO (2012; 2016) has outlined HIV screening and ART guidelines for TB clients which serve as an action plan for implementation scale-up by the healthcare policy-makers within all its member states. For implementation amongst TB clients, the joint TB/HIV department

of the GHS is saddled with the responsibility of coordinating concerted efforts geared towards meeting the set targets for TB/HIV in the light of the SDGs. It is their responsibility to disseminate information, provide adequate training and retraining while disbursing adequate funding for procurement of test kits and ARVs which the service providers (doctors, nurses, laboratory scientists, pharmacists and volunteers at the different TB/HIV service delivery centres) who will administer these in line with the existing algorithms. Clients with suspected or diagnosed TB require education, counselling, motivation and access to medications as at when due with proper monitoring and feedback in order to minimize follow-up losses. Their knowledge of HIV/AIDS, willingness to accept and comply with HIV screening and ARVs if co-infected need to be established. This will throw more light on the challenges that they grapple with and will help design and enact policies in order to tackle them, thereby strengthening mutual TB/HIV activities in Tema Metropolitan District.

1.5 Objectives

1.5.1 General objective:

The main objective of this study is to explore the challenges in implementing HIV screening and ART among TB clients in Tema Metropolitan District in the Greater Accra Region of Ghana.

1.5.2 Specific objectives:

In order to achieve the general objective of this study, these specific objectives will be achieved;

1. To explore policy-maker concerns about the implementation of TB/HIV collaborative activities in Ghana and the areas that require strengthening.

2. To identify service provider challenges in the provision of HIV screening and ART to TB clients in Tema Metropolitan District.
3. To assess TB clients' knowledge of HIV/AIDS, HIV screening and ART.
4. To establish the willingness of the TB clients to accept HIV screening and ART in the district.

1.6 Research questions

1. What are the concerns about TB/HIV activities in Ghana and how can they be improved?
2. Are healthcare workers/service providers challenged in the provision of HIV screening and ART services? What are these challenges?
3. Are TB clients in Tema Metropolitan District knowledgeable about HIV/AIDS, HIV screening and ART?
4. Are TB clients willing to be screened for HIV and placed on ART if co-infected with HIV in Tema Metropolitan District?

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In this chapter, literature relevant to the subject matter under study from journals, publications, books and articles are highlighted. Insights gotten from the reviewed literature were employed in bringing new information to the area of study. Findings on policy-maker concerns on the implementation of TB/HIV collaborative activities, service provider's challenges in the provision of HIV screening and ART services to TB clients, clients' knowledge of HIV/AIDS, HIV screening and ART and their willingness to accept HIV screening and ART were also included.

In addition to the conceptual framework that was used to restrict literature search to only those relevant to implementation of TB/HIV collaborative activities, only works in English language from peer-reviewed journals, books, publications and articles from different parts of the world were used. The literature search was restricted to ten years prior to conducting this study on databases such as PubMed Central, Google Scholar, Science Direct, Biomed Central and libraries such as Public Library of Science, Wiley Online Library and the WHO library. However, few older literature vital to the subject matter were also used. Over a hundred and twenty articles were identified using these keywords; implementation, uptake, tuberculosis, HIV/AIDS, HIV screening, ART, Ghana, WHO; but only eighty-six (86) articles which were relevant to the research objectives were reviewed for this dissertation.

2.1 Implementation of Collaborative TB/HIV activities

In its guiding principles for beginning and scaling-up of cooperative TB/HIV activities, the WHO (2012) recommended the following:

- Presence of both TB and HIV/AIDS control programmes with performing DOTS and essential HIV prevention and treatment services
- An environment conducive to and supportive of public and private sector mix of TB/HIV activities
- Partnership at state, regional, provincial and district levels between policy-makers of the national AIDS and TB control programmes
- Realistic and continuous support involving all service providers and facilitate buy-in of all important TB and HIV policy-makers in cooperative activities
- Free drugs and consumables supplied to service providers and clients in extension
- Generally accessible and affordable diagnostic tests
- Training, supervision, monitoring and evaluation in accordance with national best practices and policies
- Encouraging and optimizing existing coordinating mechanisms to sustain and prevent structural duplication
- Ensuring technical assistance both within and without.

In El Salvador, India, Ethiopia, Kenya, Nigeria and Ghana and several other endemic countries of the world, TB/HIV policies are hinged on these recommendations, but with varying levels of implementation and performance so far due to unique challenges. For instance, Ghana's performance is sub-optimal due to several policy, infrastructural and client

issues such as the current 15% coverage of ART services at DOTS sites, poor socio-economic backgrounds, a higher hospital bed occupancy with its attendant TB/HIV-related mortalities, insufficient healthcare workers and support staff, inadequate incorporation of education on the synergistic existing relationship between TB/HIV into all staff training events amongst others (GHS, 2014; MOH/GHS, 2016; CCM Ghana, 2017).

Ansa (2011), Ansa, Walley, Siddiqi, & Wei, (2012) identified these key challenges alongside stigma, missed opportunities and provider anxiety in her study to evaluate TB/HIV service incorporation in Ghana. These findings were also reiterated by Anku and his colleagues (2017) who declared that TB/HIV services were below par in most resource-constrained settings.

Church and colleagues (2017) studied service delivery gaps in five sub-Saharan countries in Africa, namely Kenya, Malawi, South Africa, Tanzania and Uganda, in which fragile policies of HIV testing and practice and frequent supply run-outs of HIV test kits and ARVs were discovered, albeit a high standard of performance was found among the health facilities in delivering a continuum of care. Anaman in 2015 reported an average level of implementation of combined TB/HIV services at Sekondi/Takoradi metropolis in the Western Region of Ghana, with a score of 61% which was within the national target range of 60 – 90%.

Table 2.1: Summary of selected literature on the implementation of Collaborative TB/HIV activities.

Location	Author(s)	Title	Methodology	Conclusion/Recommendation
Geneva, Switzerland	WHO (2012)	WHO policy on collaborative TB/HIV activities	Grading of recommendations assessment, development and evaluation by a guidelines review committee	There should be collaboration between TB, HIV and other control programmes to ensure access to integrated and quality assured services for all clients.
Ghana	GHS/MOH (2016)	Ghana Health Service Report	Quantitative data collated in an annual survey	Need for health systems' strengthening and fostering of collaboration across ministries,

			from all health facilities	agencies and private sector to surmount challenges and promote better health indices.
Ghana	Ansa (2011)	Integration of TB and HIV services in Ghana	Mixed methods using qualitative and quantitative interviews	Standardization and supervision provide for integration; health systems strengthening should be prioritized.
Ghana	Ansa, Walley, Sidiqqi and Wei (2012)	Assessing the impact of TB/HIV services integration on TB treatment outcomes and their relevance in TB/HIV monitoring in Ghana	Quantitative methods using patient data that was anonymized	Deaths from TB should be used as a yardstick for monitoring integration of TB/HIV services
Ghana	Anku et al (2017)	Integration of TB and HIV services: exploring the perspectives of co-infected patients in Ghana	Qualitative methods	There is an overwhelming need for full service integration of TB/HIV services
Kenya, Malawi, South Africa, Tanzania, Uganda	Church et al (2017)	Identifying gaps in HIV service delivery across the diagnosis-to-treatment cascade	Quantitative methods	Need to strengthen healthcare service delivery to PLHIV
Sekondi/Takoradi, Ghana	Anaman (2015)	Assessment of implementation of recommended TB and HIV collaborative activities in selected health facilities	Cross-sectional design	There should be emphasis on capacity strengthening of healthcare facilities, in addition to Isoniazid Prevention Therapy policy implementation.

The literature above reveals the fact that adequate attention is being given to service delivery of collaborative TB/HIV services in Ghana, Africa and beyond (WHO, 2012; GHS, 2014; MOH/GHS, 2016; CCM Ghana, 2017; Ansa, 2011; Ansa, Walley, Sidiqqi and Wei, 2012; Anku et al, 2017; Church et al, 2017; Anaman, 2015). However, there appears to be a paucity

of literature on on-going monitoring and evaluation of these collective efforts across board, in addition to client perspectives on integrated service delivery. This study will help provide client, service provider and policy-maker insight which will help readers understand collaborative TB/HIV services in Tema Metropolitan district and Ghana as whole.

2.2 Policy-maker perspectives on the implementation of TB/HIV Collaborative activities

In a descriptive qualitative study done to explore health system challenges and opportunities for possible integration of TB and diabetes services (Workneh, Bjune & Yimer, 2016) in South-eastern Amhara Region of Ethiopia, forty-four policy-makers were sampled purposefully and interviewed using in-depth and focus group discussions. Key concerns that were identified include a well-structured community-level involvement in the control of TB, health worker knowledge, ability of patients to procure drugs and highly-motivated service providers at different level of the health system were identified as good opportunities amongst others.

In Mbarara district of Uganda, Nansera, Bajunirwe, Kabakyenga, Asimwe & Mayanja-Kizza (2010), carried out a study to ascertain the opportunities and bottlenecks to providing combined TB/HIV care in lower cadre health service units offering care to TB clients. Using key informant interviews of healthcare workers (HCWs), they found out that inadequate staffing, lack of skilled and knowledgeable HCWs and lack of TB/HIV policy guidelines were inimical to provision of care. Both qualitative and quantitative interviews were conducted among 88 HCW using questionnaires and key informant interviews; in addition to observation of the activities of the health facilities.

Marangu and her colleagues (2017) in a qualitative study which was aimed at identifying and describing facilitators for optimizing TB services from experts using key informant interviews indicated that sustainable infrastructure hinged on continuous government funding, a well-trained and adequate work-force to deliver high quality TB/HIV services, and insurance schemes to avert mounting costs were vital to keep the programmes running. This study was carried out in Kenya using key informant interviews of TB experts from both governmental and non-governmental organizations during working hours of the health facilities.

Amo-Adjei (2013) in soliciting the views of key policy-makers in the sustainability of TB control in Ghana using in-depth interviews, discovered that challenges and areas of strengthening existed in the programme. The challenges enumerated centred around sponsorship being sourced from foreign organizations such as the Global Fund, thus hampering sustainability if hitherto withdrawn. However, the areas of strengthening highlighted were improving the socio-economic well-being of Ghanaians, use of funding generated internally at the health facilities as well as the integration of TB/HIV collaborative services at all levels of service delivery. Nineteen participants sampled purposively were interviewed in this study, who were enlisted from four of the ten regions in the country that had the highest number of new TB cases.

Table 2.2: Summary of selected literature on policy-maker perspectives on the implementation of TB/HIV collaborative activities.

Location	Author(s)	Title	Methodology	Conclusion/Recommendation
Amhara, Ethiopia	Workneh, Bjune, & Yimer (2016)	Assessment of health system challenges and opportunities for possible integration of diabetes and TB services	Qualitative design using in-depth interviews (IDIs), focus group discussions (FGDs)	Service integration of TB and Diabetes Mellitus care in order to facilitate quality service delivery is key; should be piloted and scaled up.

Mbarara, Uganda	Nansera, Bajunirwe, Kabakyenga, Asiimwe, & Mayanja-Kizza (2010)	Opportunities and barriers for implementation of integrated TB and HIV care in lower level health units: experiences from a rural western Ugandan district	Mixed methods	Knowledge gaps among healthcare workers, human resources, consumables, and laboratory facilities should be provided and strengthened.
Kenya	Marangu (2017)	Policy-maker perspectives for optimization of tuberculosis contact investigation in a high-burden setting.	Qualitative design using key informant interviews (KIIs)	Health insurance schemes, training of workforce and constant government funding are required to sustain health programmes.
Ghana	Amo-Adjei (2013)	Perspectives of policy-makers on the sustainability of Tuberculosis control programme	IDIs	Less dependence on foreign aid, better financial status of Ghanaians in tandem with full integration of TB/HIV services at all levels of healthcare.

From the analysis of literature shown above, there are emerging insights on perceived challenges or barriers to quality healthcare service provision for TB clients among policy-makers in countries across Africa (Workneh, BJune, & Yimer, 2016; Nansera, Bajunirwe, Kabakyenga, Asiimwe, & Mayanja-Kizza, 2010; Marangu, 2017; Amo-Adjei, 2013), and this is commendable. However, there exists a paucity of research efforts that explore the perspectives of policy-makers on policy implementation of TB/HIV programmes, as earlier mentioned. Conducting this study will throw more light and provide more information on policy-maker concerns in the selected Ghanaian district.

2.3 Service provider challenges in the provision of HIV Screening and ART services to TB Clients

The United States Government (2015) in its global TB strategy states that developing and managing human resources is crucial in making high-quality, patient-centered care available. For a country to be able to meet its health goals, it requires expertise, skills, incentives, commitment, and proper distribution of HCWs responsible for the organization and delivery of health services. Several countries, however, do not have sufficient manpower to provide the most essential of health interventions for reasons ranging from but not limited to inadequate education and training, movement of HCWs out of their countries, skills and needs mismatch at the healthcare facilities, and dissimilarities in socio-demographics. These findings were also reiterated by Howard and El-Sadr (2010).

The Public Health Watch (2008) citing the findings of several studies done in different nations of the world identified insufficient know-how of service providers in the interaction of TB and HIV in Thailand, below-par awareness of TB in Nigeria, and poor access to the WHO recommendations and guidelines regarding TB and HIV collaborative activities in Zambia.

In Uganda, Wynne and colleagues (2014) revealed that skills for managing on TB/HIV co-infection were lacking amongst HCWS. Referrals from one health unit to the other were also poor, in addition to lack of funding of the programme leading to abandonment.

Loveday and Zweigenthal (2011) opined that a combination of skill and infrastructure in the clinical and health systems and mobilization of commitment and experience will be required to undertake integration of TB and HIV management in novel ways across the various healthcare settings in areas burdened by the syndemic within South Africa and beyond.

In Lagos, Nigeria, Daniel, Adejumo, Abdur-Razzaq, Adejumo and Salako (2013), reviewing data retrospectively, emphasized the role that healthcare providers in private non-profit facilities play in the provision of TB/HIV continuum of care to clients, thereby declaring the need for collaboration scale-up in the private sector.

Using IDIs of healthcare workers involved in forefront of TB control in four most endemic regions of Ghana, Amo-Adjei (2013) sampled 24 participants purposively. Poor infrastructure, dwindling collaboration between the public and private sectors, insufficient joint TB and HIV control programmes, feeble monitoring and appraisal, other health programmes competing for funds amongst other challenges were enumerated. Bjerrum and her colleagues (2016) in a study of TB screening in patients with HIV using audit and feedback in ten HIV clinics in Ghana, identified flaws in screening practices of healthcare service providers that portrayed missed opportunities for adequate HIV care provision and detection of TB cases.

Table 2.3: Summary of selected literature on challenges of service providers in issuing HIV screening and ART services to TB clients.

Location	Author(s)	Title	Methodology	Conclusion/Recommendation
USA	US Government (2015)	United States Government Global Tuberculosis Strategy 2015 – 2019	Strategic framework analysis	Human resources management and development are key to making available high-quality, patient-centered care.
Sub-Saharan Africa	Howard, El Sadr (2010)	Integration of Tuberculosis and HIV services in sub-Saharan Africa: lessons learned	Systematic review	Strengthening of laboratory facilities, improvement of the capacity of healthcare workers in addition to TB/HIV collaboration will improve client outcomes.
Thailand, Nigeria, Zambia, Kenya, El Salvador,	Public Health Watch (2008)	Involving the Community in responding to TB/HIV: Outcomes of a	Systematic review	Community involvement is vital in mitigating challenges to successful cooperative TB/HIV activities.

Lithuania, Vietnam, India, Cameroon, Tanzania		community-led monitoring and advocacy		
Uganda	Wynne, Richter, Banura, & Kipp (2014)	Challenges in TB care in Western Uganda: Health care worker and patient perspectives	Mixed methods	Healthcare worker training, strengthening of the health system and provision of adequate referral services is important for successful TB/HIV programmes.
South Africa	Loveday, Zweigenthal (2011)	TB and HIV integration; obstacles and possible solutions to implementation in South Africa	Systematic review	Integration of TB/HIV services using strategies proven to be effective should be carried out.
Lagos, Nigeria	Daniel, Adejumo, Abdur- Razzaq, Adejumo and Salako (2013)	Public-private mix for TB and TB-HIV care in Lagos, Nigeria	Retrospective review of literature	Scaling up of private and public treatment centre collaboration for TB clients is essential.
Ghana	Amo-Adjei (2013)	Views of health service providers on obstacles to TB control in Ghana	In-depth interviews	Health system-based barriers should be taken cognizance of during TB control planning.
Ghana	Bjerrum et al (2016)	Tuberculosis screening in patients with HIV: use of audit and feedback to improve quality of care in Ghana	Prospective study involving pre- and post- evaluation	More focus should be placed on healthcare provider practices in order to ensure quality of care gaps are eliminated.

The literature analysed above reveals the existence of several barriers to the provision of health services for TB clients from within and outside Africa, in addition to a general consensus on the need for adequate funding, health system strengthening, service integration amongst others (United States Government, 2015; Howard and El-Sadr, 2010; Public Health

Watch, 2008; Wynne, Richter, Banura, and Kipp, 2014, Loveday and Zweigenthal, 2011; Daniel, Adejumo, Abdur-Razzaq, Adejumo and Salako, 2013; Amo-Adjei, 2013, Bjerrum et al, 2016). However, not much is said specifically about the challenges service providers face in the provision of HIV screening and ART services to TB clients. It is hoped that this study will highlight these barriers and elicit innovative recommendations on how they can be tackled.

2.4 Knowledge of HIV/AIDS, HIV Screening and ART among TB Clients

In Zambia, Kaona and colleagues (2004) in their study of TB clients elucidated the fact that poor level of knowledge was associated with non-adherence to medications; while Ayenew and colleagues (2010) discovered that TB clients in Ethiopia who had formal education [OR=2.35, (95% CI: 1.33, 4.13)], had a better awareness on how beneficial HIV counselling and testing is.

Jittimanee et al (2009) conducted a study among TB and HIV co-infected clients in Thailand. Among the 769 patients interviewed, 379 (49%) had low knowledge of HIV. Poor knowledge in clients was associated with a higher severity of disease, hospitalization on presentation and treatment at the national referral hospital. The likelihood of knowing another TB patient was also higher among clients with poor knowledge.

Denegetu and Dolamo (2014) in a similar study conducted among TB clients in Addis Ababa, Ethiopia, discovered that over four-fifths of them had been offered HIV screening by the service providers during their routine follow-up visits. Prior to that, only 79.9% were aware of their HIV status.

Asante (2013) declared that information and programmes related to HIV and health in general should provide accurate details as well as equipping Ghanaians in order to live healthy lives. According to the Ghana Demographic and Health Survey (GSS, 2014b), there is a widespread knowledge of HIV/AIDS among men and women aged 15 to 49 years. Most of them were aware of the epidemic. However, men were more likely than women to have detailed insight (30% of men versus 18% of women).

Table 2.4: Summary of selected literature on the knowledge of HIV/AIDS, HIV screening and ART amongst TB clients.

Location	Author(s)	Title	Methodology	Conclusion/Recommendation
Thailand	Jittimaneet et al (2009)	Social stigma and knowledge of TB and HIV among patient with both disease in Thailand	Quantitative methods using questionnaires	Among HIV-infected TB clients, stigma and poor knowledge exists. More research efforts should be geared towards exploring if low stigma and higher knowledge provides for better outcomes for clients.
Zambia	Kaona, Tuba, Siziya and Sikaona (2014)	An assessment of factors contributing to adherence and knowledge of TB transmission among patients on TB treatment	Quantitative household survey using structured questionnaires	Poor knowledge is a contributory factor to non-compliance or adherence to treatment.
Ethiopia	Ayenew, Leykun, Colebunders, & Deribew, (2010)	Predictors of HIV testing among patients with TB in North-West Ethiopia: a case-control study	Mixed methods	Major barriers for HIV screening are attitude and knowledge among TB clients and should be addressed using adequate and focused, service provider counselling.
Ethiopia	Denegetu & Dolamo (2014)	HIV screening among TB patients and Co-trimoxazole preventive therapy for TB/HIV patients in Addis-Ababa: facility-based descriptive study	Cross-sectional survey	Strengthening of routine HIV tests and improvement of counselling are key to increasing familiarity and acceptance among TB clients.

Accra, Ghana	Asante (2013)	HIV/AIDS knowledge and uptake of HIV counselling and testing among undergraduate university students in Accra, Ghana	Cross-sectional design using structured questionnaires	Factual information must be given by programmes providing health education and HIV intervention in order to facilitate regular HIV testing.
Ghana	GSS (2014)	Ghana Demographic and Health Survey, 2014	Quantitative household survey	Further enhancement of education on HIV prevention among the young, illiterate & poor.

The studies analysed above show the gaps that exist in the comprehensive knowledge of HIV/AIDS, testing/screening for HIV and ART among TB clients and the general population within the afore-mentioned study locations, and the effect on healthcare-seeking behavior and service provision (Jittimaneet et al, 2009; Kaona, Tuba, Siziya & Sikaona, 2014; Ayenew, Leykun, Colebunders, & Deribew, 2010; Denegetu & Dolamo, 2014; Asante ; GSS, 2014a). There appears, however, quite a few literature exploring the subject matter among TB clients in Ghana and without, which this study seeks to address in Tema Metropolitan District, Greater Accra Region of Ghana.

2.5 Willingness of TB Clients to accept HIV Screening and ART

Zhang et al (2017) posited that engaging the community might prove to be beneficial for promoting HIV testing among the Chinese and should be considered in the development of interventions geared at its control.

In South Africa, Kharsany, Karim and Karim (2010) discovered that after group information on HIV were offered to clients in the reception of an STI clinic, only 43.5% agreed to be tested. Some of the clients that declined testing claimed they had been tested before while

others cited fear and unpreparedness. The researchers also noted a high knowledge level of HIV among participants, with the conclusion that missed opportunities will be created by physicians failing to initiate counselling and testing. An implementation research study of 12,078 adult clients by Rie and her colleagues (2014) at a primary care clinic in Johannesburg, South Africa revealed that the percentage of adults aware of their HIV status grew from 43.7% to 84.6% at the end of the first visit, and to 90% at end of the study. Counselling and testing for HIV was sustained.

In Congo, Yotebieng and his colleagues (2016) in a study amongst TB clients emphasized on the role of service providers in facilitating HIV screening and ART acceptance through adequate counselling. Out of 43,145 clients who were presumed to have TB, 84.0% received counselling and 92.4% of those counselled were tested. Similarly, in another region, of the 6,687 patients with presumptive TB, four-fifth received counselling with 99.3% being tested for HIV.

In a case-control study done in Ethiopia (Ayenew et al., 2010), TB clients' uptake of HIV testing was found to be 70.6%, and predictors of acceptance included a formal education, high level of knowledge and minimal feelings of stigmatization. In another study carried out by Denegetu and Dolamo in Addis Ababa three years ago among 834 TB clients, the percentage of respondents who healthcare workers had offered test for HIV during any of their DOTS follow-up visits were 87.1%. Out of these, 79.8% were tested. In general, 69.4% of interviewed TB patients came to be aware of their HIV status during DOTS follow-up.

Sensitization of the community in Kenya, training of service providers, integration and improved access of TB clients to HIV care were discovered by Odhiambo and his colleagues (2008) as direct contributors to a high screening and ART acceptance.

In Ghana, findings from the demographic and health survey (GSS, 2014b) revealed that over half of women and almost four-fifths of men 15 to 49 years old have never been tested for HIV. Anku (2017) posited that as regards treatment and care, negative experiences among TB/HIV co-infected patients are rife. This is worsened by the fact that patients had to access care from separate facilities. These partially integrated TB and HIV treatment models thus impose some physical and economic hardship on clients that are co-infected, which will in turn, impact on treatment adherence and TB and HIV control. Co-infected patients unanimously support full integration of services. Fully integrated TB/HIV collaborative activities can lead to timely diagnosis, improve treatment compliance and the comprehensive management of both contagions.

Table 2.5: Summary of selected literature on willingness of TB clients to accept HIV screening and ART.

Location	Author(s)	Title	Methodology	Conclusion/Recommendation
China	Zhang et al (2017)	Community engagement in sexual health and uptake of HIV testing and syphilis testing among MSM in China	Online cross-sectional survey	To promote HIV testing and other interventions, community engagement if carried out, may be useful tool.
South Africa	Kharsany, Karim & Karim (2010)	Uptake of provider-initiated HIV testing and counselling among women attending an urban STD clinic in South Africa	Cross-sectional study	To improve HIV screening, early diagnosis and treatment, service providers initiating testing and counselling is a significant intervention.

South Africa	Rie et al (2014)	High uptake of systematic HIV counselling and testing and TB symptom screening at a primary care clinic in South Africa	Quantitative design using routine patient records	Complete combination of HIV counselling and testing with symptom screening for TB as routine in healthcare facilities all contribute to the success of TB/HIV programme.
Congo	Yotebieng et al (2016)	Provider-initiated HIV testing and counselling among patients with presumptive TB in Democratic Republic of Congo	Quantitative design using patient records	Conducting provider-initiated testing and counselling promotes high acceptance of HIV screening among patients.
Ethiopia	Ayenew, Leykun, Colebunders, & Deribew (2010)	Predictors of HIV testing among patients with TB in North-West Ethiopia: a case control study	Mixed methods	Less stigma, high literacy level and acquaintance with the benefits of HIV testing are predictors of acceptance among TB clients.
Ethiopia	Denegetu and Dolamo (2014)	HIV screening among TB patients and Co-trimoxazole preventive therapy for TB/HIV patients in Addis Ababa	Descriptive, facility-based study	Strengthening of routine HIV testing and service provider training provides for better quality of care; which in turn will facilitate higher levels of acceptance among TB clients.
Kenya	Odhiambo et al (2008)	Provider-initiated HIV testing and counselling (PITC) for TB patients and suspects in Nairobi, Kenya	Quantitative methods	PITC is necessary for TB clients' acceptance of HIV testing and ART.
Ghana	GSS (2014)	Ghana Demographic and Health Survey 2014	Quantitative survey	Further enhancement of education on HIV prevention among the young, illiterate and poor is pertinent.
Ghana	Anku, Amo-Adjei, Doku & Kumi-Kyereme (2017)	Integration of TB and HIV services: Exploring the perspectives of co-infected patients in Ghana	Qualitative design using semi-structured interview guides	Partial integration of TB/HIV services results in socio-economic burdens on patients which in turn influences their adherence to treatment and TB and HIV control in Ghana.

Analyses of relevant literature, which is shown above, reveals the willingness of TB clients to accept HIV screening/testing and adhere to ART in several resource-constrained settings within Africa and Asia; in addition to highlighting factors that predict their attitude to care (Zhang et al, 2017; Kharsany, Karim & Karim, 2010; Rie et al, 2014; Yotebieng et al, 2016; Ayenew, Leykun, Colebunders, & Deribew, 2010; Denegetu and Dolamo, 2014; Odhiambo et al, 2008; and Anku, Amo-Adjei, Doku & Kumi-Kyereme, 2017). However, this subject matter has not been exhaustively explored within Ghana, as evidenced by the existence of few literature in this regard. Conducting this study explore the willingness of TB clients to accept and adhere to HIV screening and ART within the study location.

2.6 Chapter summary

In this section, relevant literature on the implementation of collaborative TB/HIV activities, policy-maker concerns about the implementation, service providers' challenges in the provision of HIV screening and ART services to TB clients, knowledge of HIV/AIDS, HIV screening and ART among TB clients, and their willingness to accept HIV screening and ART were presented and reviewed. This has revealed to some extent how healthcare service implementation and provision influences knowledge, attitudes of TB clients to screening, treatment, and treatment adherence on the long term, in view of the fact that ARVs are to be taken for life. Conducting such a study as this will provide useful insight on how adherence to ART and cooperative TB/HIV activities can be improved in Ghana, due to the fact that the perspectives of policy-makers, service providers and TB clients were explored. In the succeeding chapter, the methods for primary data collection and analysis are outlined in detail.

CHAPTER 3

METHODOLOGY

3.0 Introduction

There are seventeen sections in this chapter which give a detailed description of the approaches and processes that were employed in collecting and analyzing data for this research endeavour. In sections one to four, the study design, area, population and sample size are described respectively, while sections five to ten presented the sampling approach, inclusion and exclusion criteria, data collection method, technique and tools in that order. In addition, data processing, analysis, quality control, ethical clearance, data security and usage are outlined in sections eleven to fifteen. Furthermore, section sixteen presented the research funding information while the contact person's information summarized in section seventeen marked the end of this chapter.

3.1 Study design

This study is cross-sectional in nature and the phenomenological approach was employed in conducting it. Creswell (2007; 2009; 2013) defined phenomenology as the way individuals interpret an occurrence which they have encountered. Cohen et al. (2011) precisely states it as “a theoretical viewpoint that favours an inquiry of direct involvement taken at face value” (p.22). According to Christensen, Johnson and Turner (2015), the fundamental query that qualitative research design addresses by employing the grounded theory is: “what is the meaning, structure and essence of the lived experience of this phenomenon for the individual(s)?” (p.370).

This study sought to explore the challenges in implementing HIV screening and ART among TB clients in Tema Metropolitan District in the Greater Accra Region of Ghana; and it was carried out amongst members of the TB/HIV collaborative activities committee (policy-makers), service providers (healthcare workers) directly involved in providing healthcare services to TB clients and TB clients themselves in said location. Phenomenological approach thus facilitated the formation and emergence of explanations of what the challenges were, why they exist, how they are particularly unique to the study participants and the readiness of clients to accept and adapt to new treatment algorithms for TB and HIV/AIDS that have been proven to work, prolong life and reduce morbidity and mortality. Qualitative techniques and tools were applied in exploring these challenges by way of in-depth interviews (IDIs) which described the HIV screening and ART services offered to TB clients as outlined in the WHO recommendations. It was carried out from September 2017 through July, 2018.

3.2 Study area

Tema Metropolis, a coastal, savannah and urban district in the eastern part of Greater Accra Region, with its capital at Tema, is where the study was conducted. Located thirty kilometres east of the capital of Ghana, Accra, it is bounded on the north, north-east, north-west, south and south-west by Akuspim South District, Dagme West District, Adentan Municipal, Gulf of Guinea and Ledzokuku Krowor District respectively with an area of 87.8 square kilometres. There are 25 communities and three sub-districts in Tema Municipal, namely; Tema West, Tema East and Tema Central (GSS, 2014; PSM Ghana, 2015).

During the months of April through July, the major rainy season is experienced with high temperatures all year round which average 33⁰C. It has a flat topography which is about 35 metres above the level of the sea with seasonal streams during the rainy season.

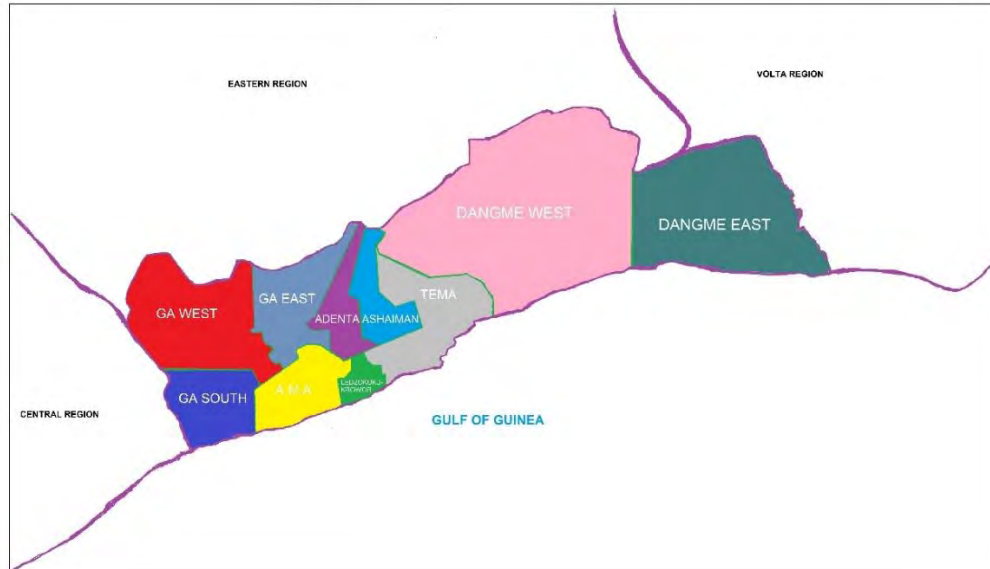


Figure 2: Map showing the districts in Greater Accra Region of Ghana.

Tema Metropolitan District is predominantly Akan and urban with almost three quarters of its inhabitants aged 15 years and above engaged in economic activities. Of this figure, 90.4% are employed with the largest employer in the metropolis is the private informal sector. According to the 2010 Population and Housing Census (GSS, 2014), there are 292,773 people living in the district; a higher proportion being females (52.2%) thus constituting 7.3% of the total Greater Accra region.

The literacy level of the inhabitants of Tema district is 91.1% with the proportion higher in males (94.8%) than in females (87.8%). Of the population aged 12 years and older, 37.8% are married; there is a diverse religious composition due to the varied backgrounds of its inhabitants. Solid waste is collected by waste management service providers contracted by the Tema Metropolitan Assembly (TMA) and sewage disposal is carried out via its central sewage systems. Transportation is mainly by road which are sometimes congested. A lot of shipping industries operate within the area due to presence of a harbor.

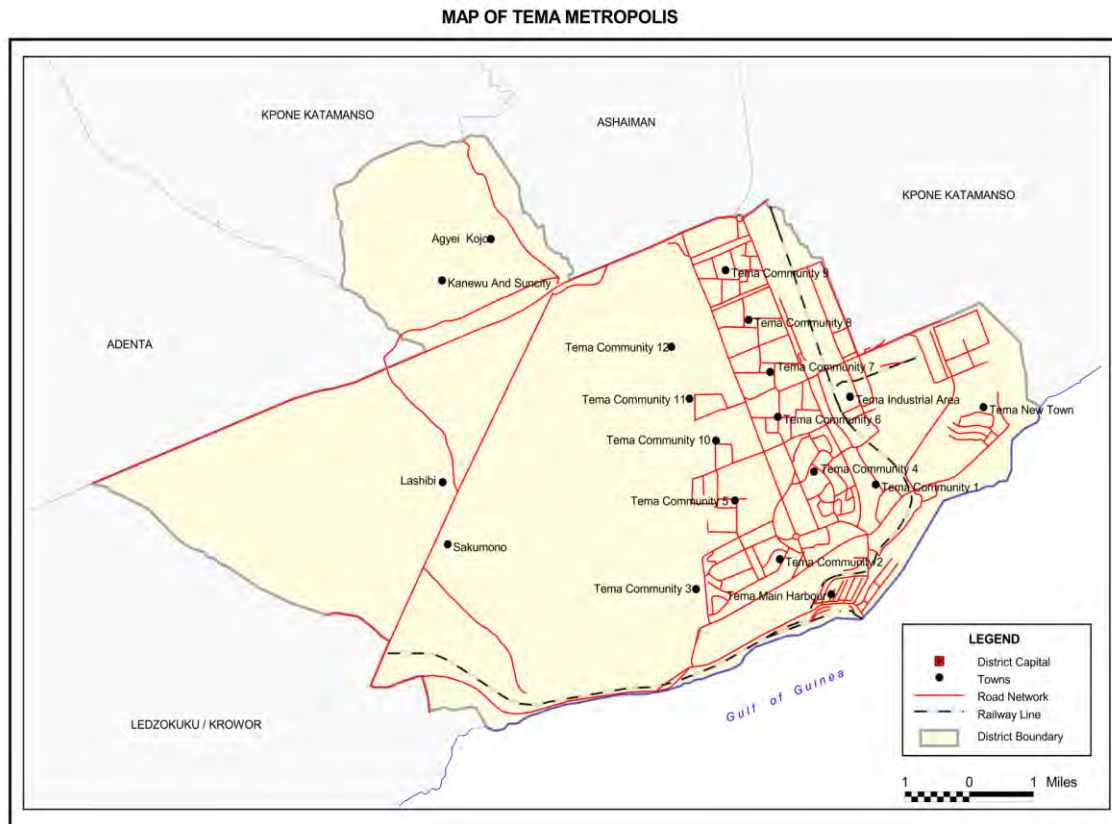


Figure 3: Figure 3: Map of Tema District (Source: GSS, 2014).

In Tema metropolis, single rooms make up the highest proportion (53.8%) of the sleeping rooms occupied by households. Most of the houses have cement blocks with concrete as the major construction material; over one-tenth of households with ten or more members stay in a single room apartment (GSS, 2014). There are 46 facilities where healthcare services are provided; among which are Tema General Hospital, Tema Polyclinic, Manhean Polyclinic, Port health clinic, Stadium clinic, health centres and private hospitals. Such a wide coverage with an attendant Mutual Health Insurance Scheme is thought to reduce challenges of accessibility.

This study will be conducted at the offices of the members of the joint TB/HIV coordination committee at the Ghana Health Service Korle Bu, the district TB/HIV coordinators at Tema Metropolitan Health Directorate, and the TB/HIV departments of Tema General Hospital, Tema Polyclinic and Manhean Polyclinic; all of which provide one-stop services to TB/HIV clients.

3.3 Study population

The policy-makers of TB/HIV collaborative activities (members of the Joint TB/HIV collaboration committee in the Disease Control Department, the regional and district TB/HIV coordinators) in the Ghana Health Service, TB service providers (healthcare workers – doctors, nurses, volunteers, laboratory scientists, pharmacists) and TB clients on Directly Observed Therapy Short-course (DOTS) made up the study population.

3.4 Sample size

As Creswell opined (2007; 2009), in a qualitative study, several participants “who have participated in the process or action about a central phenomenon the researcher is studying” (p. 122) should be sampled. He also emphasized that interviews about a shared experience should bring about richness in description and detail. However, Tracy (2013) suggests 5 to 12 interviews based on the fact that quality, not quantity is the main goal of qualitative research; “not enough interviews will result in shallow and stale contributions, too many in a paralyzing amount of data, which discourage transcription and penetrating interviews” (p. 138).

Due to the study objectives, budget and time allotted to the collection and analysis of data, forty-three (43) study participants were sampled.

3.5 Sampling approach

Qualitative research builds on purposeful sampling; a concept defined by Creswell (2007) as an investigator selecting specific study locations and individuals due to their ability to purposefully provide insight about the problem being researched upon in the study. The participants were purposively selected and included; policy-makers who were members of the Joint TB/HIV collaboration committee at the national and district levels, doctors, nurses and pharmacists at the health facilities, and TB clients visiting the clinics daily for DOTS. Interviews lasting twenty hours per week were conducted for 3 weeks. As expected, that saturation of themes was achieved at this point with thirty-five study participants and the IDIs were stopped after forty-three participants had been interviewed.

3.6 Inclusion and Exclusion criteria

3.6.1 Inclusion criteria

- National, regional and district TB/HIV policy-makers willing to participate in this study.
- Healthcare workers providing services to TB clients who were willing to participate in this study.
- Male and female TB clients in Tema Metropolis who were aged 18 years and willing to participate in the study.
- TB clients who have been receiving DOTS for at least two weeks.

3.6.2 Exclusion criteria

- Service providers not directly involved in providing care to TB clients.
- Pregnant TB clients

- Critically ill clients.

3.7 Data collection method

Data collection took place in June 2018. The PI and research assistants established rapport with the study participants, after which they conducted in-depth interviews (IDIs) using interview guides at the offices of the policy-makers and service providers and in consulting rooms of TB clients situated within the health facilities. Audio recorders, pens and field notebooks were employed in the data collection process. Questions were semi-structured and open-ended.

Creswell (2007) encouraged data collection in qualitative research at locations where the problems are experienced by the study participants. Individuals that consented to the study were interviewed; with each interview lasting for an average of 30 minutes. Airtime was provided to the service providers while the TB clients were given lunch after each interview as incentives since the IDIs were conducted at the health facilities during clinic working hours.

The focus of this study was classified under four factors; namely

- TB/HIV programme factors: policy-makers' concerns about TB/HIV activities and its progress so far in Ghana with respect to the WHO recommendations,
- Service factors: challenges healthcare workers are faced with in providing collaborative TB/HIV care to TB clients (availability of HIV screening and ART units, human resource, equipment, disposables, etc.)
- Client factors such as socio-demographic characteristics of TB clients: age, sex, employment status, occupation, marital status, level of education, type of housing facility.

- Other client factors: knowledge of HIV and TB co-infection, HIV screening and ART among TB clients and willingness to know their HIV status and accept/adhere to prescribed antiretroviral drugs if co-infected.

These factors are what the study sought to explore in order to elicit and develop theories and themes that will emerge accordingly.

Table 3.7: Matrix showing factor, indicator, data collection technique and data source.

Factor	Indicator	Data collection technique	Data collection tool	Data source
Client factors (socio-demographic attributes)	Age, sex, marital status, occupation, level of education, treatment phase, diagnosis, awareness of HIV status.	Interviews	IDI	Policy-makers, service providers, TB clients
Implementation of TB/HIV collaborative activities	Progress made so far in implementing collaborative TB/HIV services across the district, implementation concerns, successes and areas requiring strengthening.	Interviews	IDI	Policy-makers, service providers.
TB/HIV service provision	Challenges faced by service providers in carrying out the collaborative TB/HIV programme.	Interviews	IDI	Service providers.
Knowledge of HIV	Awareness of what HIV/AIDS is and its relationship with TB, HIV screening and ART	Interviews	IDI	TB clients
Acceptance of treatment	Willingness to accept HIV screening and adhere to course of ARVs if co-infected	Interviews	IDI	Policy-makers, SP, TB clients

3.8 Data collection technique

This included observation of the behavior of service providers while undertaking clinic activities such as DOTS administration, counselling and testing of TB clients and IDIs. In addition, desk reviews of data on TB/HIV activities collated at the health facilities and health directorate of Tema Metropolitan District, WHO and GHS policy documents on TB/HIV and

literature relevant to the research topic from peer-reviewed journals, books and websites were used as techniques in obtaining the data for this study.

3.9 Data collection tools

In-depth interviews provided data on policy-maker concerns about the implementation of TB/HIV collaborative activities in the district and Ghana in general. In addition, information on the socio-demographic characteristics of the service providers and the TB clients, quality of TB/HIV collaborative services, knowledge of HIV and ART and willingness to accept HIV screening and adhere to HIV treatment if co-infected were also elicited from the in-depth interviews using interview guides.

Furthermore, the Principal Investigator (PI) due to her previous experience as a healthcare provider also served as a key data collector by coordinating the information-gathering activities.

3.10 Data processing

The interviews were listened to two times over and transcribed verbatim into word format from the audio recorders. Folders were created and named where each interview recording and transcript were saved and assigned numbers accordingly. In addition, transcripts of the interviews were sent to study participants who completed their interviews in order to confirm accuracy of information and prevent misrepresentation and misinterpretation prior to analysis using QSR Nvivo 11 software package.

3.11 Data analysis

Inductive, thematic analysis was employed in this study. After respondents confirmed the correctness of transcribed data, emerging patterns, themes and sub-themes, were identified

and coded. Data with same theme were classified under the code representing that particular theme. After managing all the transcribed interviews as outlined in the procedure above, each of the themes with their unique qualitative data was read and categorized together and responses which were typical to each theme were also presented in the results and discussion sections of the final dissertation. The results were presented in tables and verbal quotations.

Data analysis and entry occurred simultaneously with collection, as opined by Tracy (2013).

3.12 Quality control

The research assistants in this study were recruited from the region and trained in a one-day workshop on the 4th of June, 2018, where sessions on the background of the study, its objectives, ethical issues with informed consent and role-playing activities were conducted. In addition, the interview guides and participants' information were translated to Akan, Ga, Twi and Ewe local languages and back to English language so as to ensure that the right context was communicated to the study participants and the correct responses were obtained. The interview guide was pretested in Legon Hospital on 8th of March, 2018 and revised based on responses and where ambiguous questions were identified.

Interviews were carried out with research assistants and a translator who sat with the PI in the event of language barrier, which was a common occurrence. The day-to-day activities of the health facilities were also observed. At the end of each day, data transcription was carried out by the PI and two of the RAs, and only the PI and RAs had access to the interview recordings. The codebook was created from the transcripts using QSR Nvivo software 11 and shared with two other colleagues experienced in qualitative research to provide their expert opinions as a form of quality control.

The research assistants had easy access to the PI who was fully involved in the fieldwork throughout the study duration. The audio recordings and consent forms were then stored in a locked file cabinet and will be destroyed after five years by shredding.

3.13 Ethical clearance

The Ghana Health Service Ethical Review Committee (GHS-ERC) provided ethical clearance for this study, with review number GHS-ERC: 033/12/17. Approval was also gotten from the Greater Accra Regional Health Directorate, Tema Metropolitan Health Directorate and the central administration of the health facilities prior to data collection.

At the TB and ART clinics of each sampled healthcare facility, rapport was established with the service providers after introductions are made prior to the onset of interviews. Following this, the TB clients who met the study inclusion criteria were identified and recruited with the help of the TB coordinators. This was carried out to prevent a breach of trust and confidentiality between the service providers and the TB clients. A detailed description was given to those who agreed on the study objectives, timing and other relevant information and everyone who agreed was interviewed on the scheduled day. Clients were greeted and the PI with research assistants and translator were introduced to each client. Informed consent forms showing details of the PI's background, contact information, goal of the study, privacy and confidentiality, risks and benefits of participating in the study and the contact details of the Ethical Review Committee Administrator which were already developed, were administered to the participants in the language that they understood. As an indication of voluntary participation, the forms were signed by the study participants. They were thanked for their time and willingness to participate in the interviews, reminded of the agreement and the probing nature of the questions depending on the information they give, assured of the

confidentiality of the information they will provide, and that there were no consequences for voluntary withdrawal at any point during the interviews; after which their permission to record the interview was sought.

There was no conflict of interest to the researcher. In addition, minimal risk (discomfort due to the stigma associated with TB/HIV, some probing questions and the timing of the in-depth interviews) was involved in participating in this study. No form of coercion was employed in recruiting the study participants, and they were not aware of the compensation for participation, until at the end of each interview. There were few cases where the interview days tallied with the clinic appointment days; only those willing to participate were given consent forms and required to sign or thumb-print where applicable.

As a token of appreciation, service providers were given 30 Ghana cedis (GHC) worth of airtime. Clients with TB who participated in this study were also provided with lunch worth 20 GHC. There were no amendments made to the research protocol after ethical approval as the data collection was successfully conducted.

3.14 Data storage/security and usage

The data collected for this study was for academic and publication purposes and was kept confidential. Passwords were utilised in encrypting the transcribed Word files and other electronic data. Field notes taken during the interviews were stored under lock and key in file cabinets to which only the PI had access. After 5 years, all the data will be destroyed.

3.15 Research funding information

This research was funded by WHO Tropical Disease Research (TDR).

3.16 Contact person(s)

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3.17 Chapter summary

This chapter outlined the strategies involved in conducting this study, ranging from the selection process, the study location and participants, the data collection techniques and instruments, to the procedure of primary data collection and how it was analysed, as well as the ethical conduct of the research were detailed. The next chapter presents the results obtained from the study.

CHAPTER 4

RESULTS

4.0 Introduction

In relation to the research questions and study objectives, data that was gotten from the field in June, 2018 and analysed according to the strategy outlined in the first and third chapters, is presented in this chapter. There are six sections in all. In sections one to three, the sociodemographic characteristics of the study participants, responses garnered from the study participants on what their concerns were about the implementation of the joint TB/HIV programme in Ghana and the challenges faced by service providers in furnishing HIV screening and ART services to TB clients in Tema Metropolitan District are highlighted in detail. In sections four to six, TB clients' knowledge of HIV/AIDS, HIV screening and ART, willingness to screen for HIV and adhere to lifelong ART and how they cope with their conditions are explored with responses from all the three health facilities that were sampled during data collection. In the seventh section, the chapter and its findings are summarized.

4.1 Socio-demographic Characteristics of Study Participants

The characteristics of the respondents (clients, service providers and policy-makers) which were interviewed at various establishments and within the clinics in the three selected healthcare facilities in Tema Metropolitan District are presented in Table 4.1 below.

Table 4.1: Participants' socio-demographic attributes.

Attributes	Number of participants	
	Clients (N = 30)	Healthcare personnel (N = 13)
Institution		
Tema General Hospital	15	4*
Manhean Polyclinic	6	2*
Tema Polyclinic	9	3*
Tema Metropolitan Health Directorate	NA	1*
Ghana Health Service (NTP)**	NA	1
University of Ghana School of Public Health**	NA	1
Ghana Health Service (NACP)**	NA	1
Age of respondents (years)		
Range	54 (18 – 72)	26 (28 – 54)
Sex		
Female	16	9
Male	14	4
Level of Education		
No formal education/Primary	7	NA
High School	18	NA
Tertiary	5	13
Marital Status		
Single	11	3
Married	4	10
Separated/Divorced	9	NA
Widow/widower	4	NA
Occupation		
Managers/Professional	2	13
Service/sales workers	7	NA
Drivers/Elementary occupations/Students	14	NA
Current employment status		
Employed	11	13
Unemployed	16	NA
Retired	1	NA
Phase of TB treatment		
Intensive Phase	4	NA
Continuous phase	25	NA
Diagnosis		
Primary TB only	17	NA
Multi-drug resistant TB	1	NA
TB and HIV co-infection	12	NA

Note: * refers to service providers.

** refers to policy-makers.

Source: Author's primary data findings, June 2018.

Table 4.1 shows the characteristics of participants that were relevant to this research endeavour. Thirty TB clients, ten service providers and three policy-makers were interviewed, making a total of forty-three study participants. The clients who participated in the study varied from young to elderly (18 to 72 years), while the ages of healthcare staff ranged from 28 to 54 years. There were twenty-five female participants in all.

All the healthcare personnel (service providers and policy-makers) had tertiary level of education; however, most of the clients had a high school education and five of them had been to tertiary institutions. Comparing sex with education, five female respondents had no formal/primary level of education, eleven had high school education while one had tertiary level of education. Among the male respondents, two had no formal/primary education, seven had high school education while four had tertiary level of education. All the policy-makers, seven of the service providers and four clients were married, eleven of the clients were single, nine were separated/divorced and four of them were widowed. However, two clients declined to mention their marital status.

In addition, with respect to occupations, all the policy-makers, service providers and one of the clients (armed forces) were engaged in managerial and professional positions while most of the clients were occupied with elementary duties and driving. This classification was obtained from the International Standard Classification of Occupations (ISCO) designed by the International Labour Organisation (Statistics, 2010). Furthermore, sixteen clients were currently unemployed and one was retired, twelve clients reported being diagnosed with TB and HIV co-infection while four of them were in the intensive phase of DOTS.

4.2 Policy-maker perspectives on the implementation of TB/HIV Collaborative Activities in Ghana

In this section, the discoveries made regarding the perspectives of policy-makers about TB/HIV collaborative services implementation in Ghana and selected health facilities in Tema Metropolitan District are presented.

4.2.1 Joint TB/HIV programme in Ghana

This theme highlights some of the history surrounding the collaborative TB/HIV programme in Ghana, the circumstances that led to the policy enactment, in addition to how it is being funded in the past and present. When asked about the inception of the programme in Ghana, two policy-makers mentioned 2003 into 2004:

“It started way back when full HIV services and Antiretroviral Therapy began in 2003, but Korle Bu started in December 2003. We joined my other colleagues in April 2004” (Policy-maker 1).

“The first talk of TB and HIV collaboration started somewhere in 2003 - 2004 thereabout...” (Policy-maker 2).

As to the circumstances necessitating the collaboration between TB and HIV, during the IDIs with policy-makers, the fact that TB was the most common cause of mortality among persons living with HIV was reiterated as the major justification for the call for collaboration. A policy-maker provides the narrative:

“At the time, it was a new concept that was being championed globally by WHO to address the challenge of PLHIVs dying from TB because that was when it was really recognized that the bulk of PLHIVs were dying from TB even though they were getting ART. And so, that was what led to Mandela being appointed as a champion for TB and I think it was in the Thailand HIV conference he talked about if two micro-organisms can work together, why can't we as human beings work together? That was when the initial concept came into being”. (Policy-maker 2)

4.2.2 Funding and implementation

For every healthcare programme, how it is funded and delivered are the most vital contributory factors to its success and scale-up, or its outright failure. On the source of funding for the joint TB/HIV programme in Ghana, the policy-makers named government, Global Fund and USAID as sponsors;

“The support from government is in the form of salaries and some waivers that are provided... The other form of support that government gives is that of procurement of consumables... But largely, the drugs are bought outside the country and they get the money from global fund - they support with the chunk of the money” (Policy-maker 1).

“The major funder for TB/HIV services in Ghana is government... The recurrent costs are funded by largely Global Fund; USAID supports with some ART care; and some screening and case-finding activities are minimally supported by USAID. Currently Government of Ghana, Global Fund, USAID are funding HIV activities and the Government of Ghana and Global Fund are funding TB activities” (Policy-maker 2).

The entire package of healthcare services delivered to TB clients in Ghana at the various health facilities are highlighted; which range from counselling, screening and treatment support. This is further explained by the policy-makers' comments below:

“...the package includes screening them for HIV/TB, then they brought in screening TB clients for Diabetes because it is a predisposing factor that makes their immune system weaker, in addition, we do their full blood count, then those who have TB, you do the sputum test just to be sure if they have sero-converted or not. In addition to doing all that for them, you make sure that the lungs are examined through an Xray. Those who have damage to the lungs can have challenge to the lung itself. After treatment, you let them do the lung function test to see the functionality of the lung in these individuals...” (Policy-maker 1).

“...it also depends on the facility. In Tema new town, Manhean polyclinic, we are doing the TB/HIV in the same clinic; the same nurses who give TB drugs also give the HIV drugs. But with Tema General Hospital and Tema polyclinic, they have the ART and the TB unit separately, so they collaborate...” (Policy-maker 3).

On the specific HIV/ART services given to clients, a respondent went further in mentioning screening for HIV and TB including treatment with antiretrovirals as highlighted below:

“Our clients are served depending on where they are coming from, in the intake point; if it’s the ART clinic, you are routinely as part of your initial assessment, screened for TB signs and symptoms; and if you are found to have any of those signs and symptoms, a TB test is recommended for you, you are tested with GeneXpert, you get a chest Xray to help rule out any early formation of TB and if you are diagnosed with TB, you are put on treatment. If you are not diagnosed with TB, you are expected to be put on TB prophylaxis...” (Policy-maker 2).

Service delivery areas that have recorded significant successes and those requiring strengthening were explored, taking into consideration reports and observations that came from the policy-makers, service providers and TB clients. Progress made since the kick-off of the joint TB/HIV programme - in terms of service integration/collaboration, delivery and uptake by clients, medical supplies and other consumables - was described in detail. Several views from study respondents were obtained.

Regarding the collaboration of TB and HIV programmes in addition to the uptake of TB/HIV services in Ghana, the responses revealed good progress over the past fourteen years:

“When you look at the service package in totality, there is collaboration which has improved, (in) working together as service providers there has been improvements. To a large extent, now we start them on treatment early, so loss to follow up has reduced, those who die after initiation usually the first 1 month of initiation therapy, that has reduced because people are now being put on medications far earlier than before so that makes them to survive and live healthier lives. The other one that has improved is the screening...” (Policy-maker 1).

“...Ghana was one of the first countries in Africa to take the idea, run it and develop national guidelines to come out with the HIV care... There has also been major progress in the two programmes planning and implementing a lot of activities together. It is exciting to know that a lot of staff who work in TB are also coming to work with HIV and vice versa; and so (at) most of the service points, you see the same people delivering TB and HIV services. I’d say that is a major success for us... It is reassuring to know that once people gets diagnosed and they get into care, a lot of them are retained in care and the treatment outcomes are very good.” (Policy-maker 2).

Participants were queried on the availability of medications, nutritional support and other consumables required in service provision. The medications were said to be always available;

evidenced by the stockpiles of medication seen by the principal investigator at the health facilities. This was a statement made concerning other forms of support for TB clients beyond DOTS;

“In Ghana, they have the food support which they call the enabling package or the enablers. The enablers is a form of either food that you provide for them early in the morning...” (Policy-maker 1).

4.2.3 Challenges with programme implementation

In this section, the current bottlenecks faced in the implementation of the joint TB/HIV programme were outlined by policy-makers as bordering on the skill and attitude of service providers, diagnostic capabilities in addition to the attitude of clients as evidenced by late reporting amongst others. They put these concerns in the following quotes:

“If you are not going to hard-to reach areas, how will you get them? If you have TB and you are in the community, you will cough and you can transmit to at least 15 people. If we catch that person at the tail end of the year, he might have given it to 14 people. Those other 14 will also spread to 15 each – multiply that – and it is only when the person is very sick he will come to the facility... If you (have HIV and you) are not diagnosed with TB, you are expected to be put on TB prophylaxis. Unfortunately, a lot of healthcare providers don't follow through because of the way the national policy is structured... The lab to work on the sample does not work on the sample and it is left overnight, bacilli are destroyed, you cannot get anything...so these are things that are not being done and that is why we would always have that huge shortfall” (Policy-maker 1).

“Late reporting is a big issue, especially among PLHIVs reporting to our facilities for antiretroviral care... It applies to TB as well, people will stay in it and not come in early to start or initiate care. And so, that is what ART prevalence has not been able to cover as many people as possible... So it's more about finding the cases and enrolling them into care” (Policy-maker 2).

“...there are some people no matter what you do, they won't want to screen for HIV. But some people who prove difficult from the beginning they give in when they get to understand you, they give in... They complete their TB treatment but the HIV they say it is not true, spiritual father says this, this person says that...” (Policy-maker 3).

4.3 Service provider challenges in the provision of HIV Screening and ART services to TB Clients

In this section, themes that emerged during the analysis of the IDIs regarding the problems encountered during provision of TB/HIV services to clients, notably HIV screening and ART at the selected health facilities are highlighted in detail. Respondents' opinions were sought on what unique problems they faced with clients and the healthcare system itself. There were several challenges highlighted; which comprised client attitudes, low socio-economic and educational status, stigmatisation, human resource shortages, funding and logistics.

On service delivery, attitudes and status of clients, respondent service providers across the selected health facilities opined thus;

"...I have had a few defaulting clients. Some also somehow, misunderstand what you said...because we have a few illiterates...it makes communication difficult sometimes" (SP 2, Facility 1).

"...no matter how much you talk – even when the person has showed up for you to educate them, and the person gets home, informs a relative...goes on about it being a lie and the disease is a spiritual illness..." (SP 4, Facility 2).

"We have stubborn patients who give us a lot of problems...the MDRs are increasing because they are not taking the drugs as they are supposed to..." (SP 6, Facility 3).

"...some people too will never accept they have HIV no matter what you tell them. Even if the test says positive, they won't accept it..." (SP 10, TMHD).

Policy-makers earlier on, expressed their concerns on the inadequate funding and logistic support available for the TB/HIV programme in Ghana. These were also reiterated by the service providers in their opinions that are outlined below:

"...in the aspect of money - no - and even now, we are short of folders and we are using sheets of paper as folders for the clients" (SP 1, Facility 1).

"I don't remember the last time that they funded us... To call somebody, it's all in our pocket. The hospital gives us 10 cedis for phone calls in a month; even that 10 cedis can finish that day..." (SP 3, Facility 2).

“At times, we find it difficult getting logistics. Certain things are spoilt here, we have to follow up with the administration before they give it to you. So these are some of the challenges” (SP 7, Facility 3).

Loss to follow up was another issue that were expressed strongly across all the selected facilities. Though decreasing, it has resulted in some of the observed coverage gaps. These complaints were exemplified by these comments:

“Some people can even call you that I won’t take the medicine again... he will even deny that he’s not even having TB! You can go to somebody’s house and he will be telling you that he is not there, meanwhile, he is there...” (SP 3, Facility 2).

“...we are not able to follow up. If I want to follow up somebody, I have to use my own money or call credit. Home visits, formerly we used to do, but they don’t give their correct house numbers. Even if you call them, some of them don’t want you to come to their houses...they are difficult to follow up...” (SP 7, Facility 3).

Healthcare workers went further to make these statements about being stigmatised during service provision; an opinion also shared by policy-makers;

“I spoke with one of my nurses. She said, ah, she had experiences where in the market place, people were pointing at her... I had one client recently, the relative was interested in finding out what was wrong with her. Of course, for confidentiality purposes, it is not supposed to be exposed so I had to find ways around it because she will have to be the one to disclose it if she wants to” (SP 2, Facility 1).

“...(Right) now, one person is assigned here... That is one of the difficulties; if the doctor who is assigned to attend to them is not around, most of them (doctors) are not willing to attend to them.” (SP 7, Facility 3).

In one of the health facilities where the in-depth interviews were carried out, a service provider spoke about inadequate human resources;

“Staff strength is almost always our main challenge – we are not enough...for this unit, we are basically two - myself and then my assistant. We are the main technical people here, the rest are not really technical...nurses even help us in the dispensing of the medications...” (SP 2, Facility 1).

4.4 Knowledge of HIV/AIDS, HIV Screening and ART among TB Clients

In this section, the respondents were assessed on how knowledgeable they were about HIV/AIDS, screening for HIV and antiretroviral therapy.

4.4.1 Knowledge of HIV/AIDS

When respondents were asked if they had heard of HIV/AIDS before, they all responded in the affirmative, which showed a very good level of awareness on the disease condition. With regards to the description of what it was, only 20 (12 male and 8 female) responses were quite correct. Ten clients (2 males, 8 females) didn't quite have accurate knowledge of what was responsible for the condition and how it can be transmitted.

Good knowledge of HIV/AIDS was evaluated by a client being able to explain the aetiology of HIV/AIDS, how it is transmitted in addition to the fact that it is life-threatening if left untreated. This was exhibited by most of the respondents across the three selected healthcare facilities, and in one of the replies they gave, it was described thus:

"...it is a virus contracted through sexual intercourse. I don't know about kissing. You can get infected from sharp objects..." (Client 1, Facility 1).

Other significant statements on severity and transmission routes include the following;

"...you have to be very careful...don't have oral sex with someone you don't know. If you have a partner, stick to your partner. Otherwise you will get the HIV from somewhere...if anything, use a condom." (Client 7, Facility 2).

"It is a disease that is very terrible for one who contracts it. You can get it through many ways...sex...is the most common one...we should refrain from using razors of others. It is not airborne like TB..." (Client 30, Facility 3).

A client exhibited in-depth knowledge of how HIV/AIDS is transmitted;

"...it is a transmitted disease from an infected person to an uninfected person...I know that it is through sexual intercourse and the sharing of sharp objects... let's take it that, the sharing of toothbrush is also another way because when an infected person uses it and has sores in the mouth from which blood oozes from, and shares which an uninfected person, the person gets infected because it deals with blood so that contact they had with the blood, makes easy transmission of HIV." (Client 29, Facility 3).

However, some respondents made vague comments about HIV/AIDS which did not capture the aetiology or the ways through which it can be transmitted. Here are some of them:

“When you get this disease, they have to isolate you. It’s a very serious disease that you don’t joke with...” (Client 3, Facility 1).

“I do not really know how to describe it but, from the beginning, I did not know I had the virus but it was when I took ill and came to the hospital that I was diagnosed...” (Client 5, Facility 1).

“It is a virus isn’t it? It comes along if you don’t take care of yourself; i.e. eat well, going to the toilet at the right places...” (Client 10, Facility 2).

Several sources of information on HIV/AIDS were given by the study participants, which included the media (radio and television), friends, within the community and from counselling sessions at the health facilities. These are the sources indicated:

“I heard of HIV on radio, television and from society...the nurses too...” (Client 12, Facility 2).

“I came to hear of it right here at this hospital when I became very sick and I was diagnosed of having been infected with HIV and TB” (Client 21, Facility 2).

4.4.2 Knowledge of HIV screening

When asked what they understood by HIV screening, most of the clients responded accurately on it being a test to know if they had HIV or not. These are some of their statements:

“It is a way that our doctors will have a way of knowing whether or not you have the virus within you and know how to treat you or prevent it...” (Client 3, Facility 1).

“That is when you get tested to know your status...” (Client 27, Facility 3).

When asked if they were aware of their HIV status, twenty-nine of them from all three facilities responded that they knew their status and only one client was yet to carry out the screening test. The comments of clients on knowing their HIV status and the perceived benefits are highlighted below:

“I am negative. I am here because I have TB...” (Client 14, Facility 2).

“...I have even gone to the clinic to do the test where I was negative...” (Client 22, Facility 3).

Amongst the participants who were currently or previously in marital unions before they developed TB and /or HIV, some information emerged pertaining to their partners being aware of their health status during the IDIs. Two significant responses in this regard were:

“I haven’t told my husband about it, because we have separated. He was also tested positive, but he didn’t believe it and he has left the country...” (Client 6, Facility 1).

“...when I was sick in the beginning, they made me go to a polyclinic to check my status...at that time I was sick and it was my wife who settled my hospital bills...I felt proud when I tested negative.” (Client 18, Facility 2).

The clients also expressed their perceptions on how beneficial it was to have been screened for HIV and be aware of one’s HIV status; some of which are seeking help and taking treatment to heart, while protecting themselves and others from transmission:

“...it helps you to maintain the care you have been giving to yourself...it helps relax you and let you know that you can continue doing the things that have caused you not to get the disease...” (Client 1, Facility 1).

“Oh there have been (benefits). At first I did not have energy but now that I know I have HIV, I know to take my drugs seriously in order to help me become stronger.” (Client 3, Facility 1).

4.4.3 Relationship between TB and HIV

This sub-section highlights clients’ responses to awareness of the relationship between TB and HIV, in addition to the description of this relationship based on the knowledge they gathered from the media, public education campaigns during community outreaches and counselling by service providers in the various facilities where they were receiving care. These were some of their responses that backed up their knowledge of the existence of such an association:

“Yes, HIV and TB are related. I heard this information on radio and TV...” (Client 2, Facility 1).

“... I read something like that here. It says ‘find treatment before it kills you’. Nelson Mandela also says TB is curable. I also read something about sex and HIV...” (Client 7, Facility 2).

“Yes, I grew lean and that is what caused them to test for HIV and then after they did the TB test as well. They have similar symptoms” (Client 26, Facility 3).

Those who were aware exhibited good understanding of the relationship as exemplified by the following statements:

“...the nurses said TB can be acquired through HIV... they told me the symptoms are similar” (Client 12, Facility 2).

“...when I came here they told me it is very likely to get HIV once you have TB” (Client 28, Facility 3).

4.4.4 Knowledge of ART

In this sub-section of the research findings, the knowledge of ART was evaluated among TB clients, including the types and dosage. Some clients that participated in this research endeavor were able to give a reasonable description of antiretroviral therapy:

“I have only heard about it...what I can tell you is that it is for people with infections such as HIV...” (Client 1, Facility 1).

It is a drug for the HIV people so that they can live and their situation doesn't deteriorate...” (Client 7, Facility 2).

None of the respondents identified the different types of ARVs available at the health facilities, but co-infected clients were knowledgeable on the dosage and treatment period, which is for life. Here are their statements:

“...I know of the yellow and white one. The drugs make me drowsy. I have been taking the drugs every day for nine (9) years now...” (Client 5, Facility 1).

“There is some which is light pink and white...I take the drugs everyday but I come for them from the hospital on Tuesdays and Thursdays...” (Client 21, Facility 2).

Most of the TB clients demonstrated awareness and made mention of the units providing ART services in their respective health facilities as shown in their assertions below:

“Yes, there is a unit in this facility where such services are rendered” (Client 5, Facility 1).

“Yes, at the ART unit.” (Client 27, Facility 3).

4.5 Willingness of TB Clients to accept HIV Screening and lifelong ART

In this section, policy-makers and service providers were queried on TB clients' preparedness to be screened for HIV and placed on ART. Clients were also asked about HIV screening offer, their responses and readiness to accept treatment for both TB and HIV. In addition, TB clients were asked if on completion of DOTS, they would be willing to take ARVs for the rest of their lives or until a cure is found for HIV/AIDS.

4.5.1 Policy-maker and service provider perspectives on receptiveness to HIV screening and ART

To the question of receptiveness of TB clients to screening and antiretroviral therapy, it was stated that most of the clients were receptive, and their attitudes were usually based on how well they are counselled by service personnel. Policy-makers had these to say;

“It all borders on how you approach the issue... It is the approach as a service provider, but most times, once you are able to explain to them and they know that it leads to their benefit, they are more than willing to do it...” (Policy-maker 1).

“...it is accepting their status which is the issue now. So, for such people, for example, the man (TB client), I had to sit him down, tell him in plain language what the consequences are if he stops taking the medication... I can't force him to take it, and then I'd have to report him to my superiors too.” (Policy-maker 3).

Service providers lent further credence and reiterated the point of view of policy-makers in the statements highlighted below:

“...it's not easy to take care of clients especially TB people. At times when the person comes, most of them think it is spiritual sickness or disease...” (SP 3, Facility 2).

“...based on the type of counselling that you give, they accept it; (but) there is one or two persons that say they will go home and think about it.” (SP 8, Facility 3).

4.5.2 Client perspectives on receptiveness to HIV screening and ART

TB clients were asked if they had been offered HIV screening at the health facilities and what their responses were to those offers. They all responded in the affirmative, stating that it occurred in the initial phase of contact with the service providers:

“Yes, right here in the facility.” (Client 4, Facility 1).

“Yes. I did it and was given a date to do it after 3 months also...” (Client 12, Facility 2).

All the respondents were willing to know their status as at the time of carrying out the screening test.

“My response was in the affirmative. No problem at all. I will do that” (Client 1, Facility 1).

“I went to the hospital and they told me to do it and I obliged...” (Client 14, Facility 2).

However, some expressed anxiety while conducting the laboratory investigation, as is expected with a condition that is yet to have a cure. These were their comments:

“The first time they told me to take the test, I was asking myself that; ah, what has TB got to do with HIV? So I was scared...” (Client 27, Facility 3).

“...when I got to the ART unit and a nurse asked me...have I done it before? I said no...when she told me it was an HIV test, I got frightened a little bit and said wow...” (Client 28, Facility 3).

4.5.3 Willingness to accept concurrent TB and HIV treatment and adhere to lifelong ART

Most of the respondents expressed their willingness to treat both TB and HIV/AIDS concurrently if co-infected, in addition to adherence to lifelong treatment. Some expressed a desire for the cure to be found to HIV/AIDS as soon as possible, in the light of the fact that TB is curable:

“Yes, I want a healthy life. If I don’t take it, I will suffer...when I see those who HIV has affected...I am sad for them...when you get the disease...you can’t be in the midst of people anymore.” (Client 7, Facility 2).

“Why not? HIV is just like any other sickness...when you go to the hospital and you are being diagnosed of diabetes, diabetes too stays for a long time so why is HIV treated as though it is something else?” (Client 28, Facility 3).

Some clients expressed their opinions on adhering to treatment as dependent on service providers offering it. This was not surprising; due to the fact that prior to coming to the hospital, some of them might have engaged in unorthodox remedies that did not yield the desired outcome:

“Yes, so far as the nurses and health workers sign off on it. Like I said, they (service providers)...have the interest of my health at heart so I would not have a problem doing that.” (Client 2, Facility 1).

“...depends on the doctor, he is the one to decide. I am sick and I brought my problem. I don't know anything about it. So he is going to tell me to take this one before you can survive...” (Client 15, Facility 2).

However, a few respondents exhibited reluctance in accepting concurrent and lifelong treatment. Their reasons were hinged on the amount of medications that have to be taken by them at a go;

“I don't know, but it will take the grace of God to combine both treatments...” (Client 12, Facility 2).

“...I was told about the drug, but I felt it was too much for me to take because of the size and amount...” (Client 13, Facility 2).

4.6 Chapter summary

The results of the in-depth interviews on the implementation of HIV screening and ART conducted amongst TB clients in Tema Metropolitan District were outlined in the sections and subsections above. It comprised of selected attributes of study participants, themes that emanated from the analysed data on policy-maker perspectives on the implementation of collaborative TB and HIV activities in Ghana, service provider challenges in the provision of HIV screening and ART services, knowledge of HIV/AIDS, HIV screening and ART, and

lastly, the willingness of TB clients to accept screening for HIV and ART. A discussion of these findings is executed in the succeeding chapter.

CHAPTER 5

DISCUSSION OF RESEARCH FINDINGS

5.0 Introduction

This research aimed to explore the challenges in implementing HIV screening and ART services among TB clients in Tema Metropolitan District in the Greater Accra Region of Ghana. Nine of the twelve collaborative TB/HIV activities (goals 1 and 3 of the policy) were examined (GHS, 2006). In this chapter, the study findings are examined; against the backdrop of relevant literature which border on the perspectives of policy-makers on the implementation of collaborative TB and HIV services in Ghana. It also outlines the themes on bottlenecks encountered by service providers in the provision of HIV screening and ART to TB clients, in addition to exploring what the clients know about HIV/AIDS, HIV screening and ART, and their willingness to accept screening and adhere to treatment if co-infected. These research objectives are presented in sections in which the themes that emerged from the inductively analysed data are highlighted in detail. The overarching goal of the TB/HIV programme in Ghana is to achieve an end to AIDS by 2030 (UNAIDS, 2017), followed by an end to TB by 2035 (WHO, 2013).

5.1 Implementation of Collaborative TB and HIV activities in Ghana

Significant findings made on the TB/HIV programme implementation arising from the interviews and observations at the facilities are discussed in this section. Juxtaposing the WHO recommendations (WHO, 2012), Ghana's policy guidelines for the collaboration (GHS, 2006) and the study's interview reports, the health system doing well in the goals of the policy. However, there are several areas requiring strengthening. For example, there is in existence

of operational research gaps under the policy goal of health system empowerment for TB/HIV response, in addition to lack of proper infrastructure observed in one of the health facilities, where the one stop TB/HIV centre had an open waiting area for co-infected clients which was also being used by clients who came to seek care for other ailments, including antenatal services.

These revelations tally with the reports of GHS and CCM for TB, HIV/AIDS and Malaria (GHS, 2014; MOH/GHS, 2016; CCM Ghana, 2017) which stated that several policy, infrastructural and client issues are responsible for the programme's sub-optimal performance in these problem areas. Ansa (2011) and colleagues (2012), reiterated these challenges with stigma and missed opportunities as other mitigating factors to adequate programming for TB/HIV in Ghana. Anaman (2015), Church et al (2017) and Anku (2017) also highlighted these key facts in their works on this subject matter.

Other lapses with respect to HIV burden reduction are in the areas of care and support for co-infected clients beyond completion of DOTS. Currently, psychosocial and nutrition enablers to address loss to follow up and treatment default are almost non-existent across the three facilities for adult clients; in addition to tokens to aid their transportation to the facilities for those who live far away. Several service provider and client respondents mentioned this challenge. Tuberculosis, being a disease of poverty often interferes with the client's source of livelihood in addition to perpetuating already existing impoverishment (Griffiths and Zhou, 2012). Funding for TB/HIV collaborative activities as mentioned by the policy-makers is supplied by the Government of Ghana, the Global Fund and USAID. There exists a paucity of partnership-building with NGOs, private sector, faith-based, and community-based organisations and philanthropic individuals within Ghana who can provide local funding

support as part of their corporate social responsibility. These findings are in consonance with those of GHS (2016) report, which emphasized the need to foster collaboration across agencies and the private sector in order to surmount these barriers. Marangu et al (2017) declared the need for sustainable funding and Amo-Adjei (2013; 2014) in his inquiries highlighted that an improved socio-economic wellbeing for Ghanaians as well as partnerships with the private sector were vital to TB control success. Nansera, Bajunirwe, Kabakyenga, Asiimwe and Mayanja-Kizza (2010) also identified these challenges in Uganda's integrated TB/HIV care within rural facilities, while Uwimana, Jackson, Hausler and Zarowsky (2012) outlined unequal funding as hampering speedy scale-up of TB/HIV collaboration.

These challenges have several implications for TB/HIV programming and the clients; which include poor information backdrop and evidence base for evaluating service delivery, uptake, further policy update and development, persisting stigma due to exposure to other health facility users with its resultant loss to follow up, treatment failure, higher disease burdens and wastage of scarce financial resources, deaths from TB/HIV, and to a larger extent, inability to meet the laid down goals and targets for eradicating TB and HIV/AIDS.

5.2 Bottlenecks faced by healthcare workers in the delivery of HIV screening and ART services to TB Clients

This section of the discourse deals with service provider challenges in delivering screening for HIV and treatment if clients are found to have the virus or disease. The predominant themes on bottlenecks that emanated from the data comprise of clients' attributes and health system challenges.

Clients' characteristics, namely low literacy levels, socio-economic features and negative behavior to treatment (due to religious beliefs and stigma) have largely hampered successful

service provision for TB/HIV in addition to downplaying the merits of the programme in Ghana. Several authorities in literature attest to this fact. According to the US global TB strategy (2015), these socio-demographic factors contribute to large disease burdens and mortality being experienced by endemic countries. Howard and El-Sadr (2010) also highlighted them in addition to male sex and low income status. Katz et al (2015) in a study to explore low ART uptake in South Africa, identified perceived loss of well-being, stigma and faith-based beliefs amongst others as factors contributing to low ART coverage.

Health system challenges such as human resource shortages, inadequate funding and logistic support for TB/HIV activities in addition to being discriminated against by other healthcare personnel and members of their communities (as also TB/HIV-infected due to the manner in which they attend to and relate with clients). These discoveries largely correspond with those of Howard and El-Sadr (2010) and Loveday and Zweigenthal (2011) in South Africa, where poor funding and infrastructure were highlighted. Wynne, Richter, Banura, and Kipp (2014) and US Global Tuberculosis Strategy (2015) also mentioned the inadequacy of TB/HIV workforce for the organization and delivery of health services in LMICs. It is interesting to note that the issue of service provider discrimination corresponds with the findings of being stigmatized by virtue of fraternization, exemplified in a study done by Aniteye, O'Brien, and Mayhew (2016) among abortion care providers in eight health facilities in Accra, Ghana. However, there was sufficient know-how on the association between HIV and TB and knowledge of the policy on collaborative TB and HIV activities among the healthcare personnel, quite unlike the case made by the Public Health Watch (2008) in Thailand and other endemic countries of Asia and Africa.

The existence of these bottlenecks imply deleterious outcomes for the clients, such as increase in attrition (evidenced by 3 MDR-TB cases in 1 of the facilities) and further propagation of both diseases within communities, treatment failure, drug resistance and in turn, additional burdening of the health system. Furthermore, healthcare worker motivation and continuous optimal care provision will be compromised, in addition to other health promotion activities being hampered such as community mobilisation through outreaches, case-finding, home verifications and others needed for effective TB control.

5.3 Clients' Knowledge of HIV/AIDS, HIV Screening and ART

The comprehension of HIV/AIDS, HIV screening and ART sought from TB clients at the various facilities where they were getting care showed most of them had good knowledge of HIV and screening, but only co-infected clients understood what ART meant, namely its use, dosage and duration. However, none of them knew the exact names of the antiretroviral drugs they had been on.

5.3.1 Knowledge of HIV/AIDS and ART

The exhibition of good knowledge by most of the interviewed respondents attests to the fact that they were receiving good counselling services from their centres of care, in addition to the increased awareness and public health education campaigns currently going on through the media channels, as they rightly mentioned. This is quite a commendable feat. Furthermore, most of the clients interviewed had high school education. High literacy level and community enlightenment impact positively on health outcomes and this has been testified to by several authors, such as Jittimaneet et al. (2009). Emphasis on formal education and its potential for good knowledge and attitudes was also made by Ayenew, Leykun, Colebunders and Deribew

(2010). Furthermore, Asante (2013) went on to reveal that a literate individual is more likely to know about HIV, test for it and repeat it in future.

However, this good level of knowledge was exhibited by more male respondents (four-fifths) compared to females (half). This agrees with the discoveries of Mensah (2015) who concluded that high enrolment for females in basic education should be fostered; in addition to the revelations made by GDHS (2014), in which it was outlined that men were more likely to have detailed insight of the disease. This calls for more concerted efforts geared towards female education and empowerment, as proscribed by the targets of the UN SDGs 4 and 5 (2015) which are, to guarantee fair educational attainments and fostering of learning opportunities for all, in addition to attainment of equality for all genders with female enablement by the year 2030.

Only co-infected clients were able to provide an explanation on what antiretroviral therapy was. As to the type of ARVs available, none were identified. However, they all expressed their views that the treatment was for life. In addition, most of the respondents knew where care for HIV was being rendered within the facilities. Batamwita, Moore, King, Mills, and Stangl (2011) reported a high level of ART knowledge among PLHIV in Uganda which enabled them serve as community opinion leaders and HIV support personnel. However, Boateng, Kwapong, and Agyei-Baffour (2013) concluded that female clients with HIV in Ashanti Region of Ghana had poor knowledge of ART, hence the need for educational mediations for all women.

5.3.2 Knowledge of HIV Screening

With respect to screening and awareness of retroviral status, a similar pattern was observed as with the knowledge of HIV/AIDS. All the clients were aware of screening, and this attests to

the usefulness of HIV Testing and Counselling (HTC) policy for TB clients in Ghana (GAC, 2013; Yawson, Dako-Gyeke, Addo, Dornoo and Addo, 2014). All but one knew their retroviral status and it was also mentioned to the investigators during the interviews. The only client unaware of the retroviral status was due to the fact that it had not yet been conducted. In addition, their perceptions on personal and spousal awareness of retroviral status and the gains of being tested for HIV give credence to the laudable counselling efforts and support furnished by their service providers, for which they expressed gratitude. These findings concur with those of Asante (2013) in Ghana and Denegetu and Dolamo (2014) in Ethiopia who discovered optimal screening offers by healthcare workers.

5.3.3 Awareness of TB/HIV relationship

There was a high level of awareness, in addition to a good comprehension of the association that TB has with HIV. This was exhibited by mostly the literate, male and co-infected respondents. It further attests to the service provision being in accordance with the policy guidelines (WHO, 2012; GHS, 2014) policy recommendations on TB/HIV collaboration. Healthcare workers mentioned that they received quarterly on-the-job trainings in TB/HIV care from Ghana Health Service, an accomplishment that should be encouraged and sustained. This resonates with the assertions of Howard and El-Sadr (2010) who noted that improvement of human resource capacity and strengthening of infrastructure should be pursued. Wynne and colleagues (2014) called for increased service provider trainings on TB/HIV in Uganda.

Good knowledge will result in treatment-seeking and medication compliance for TB, while it portends adherence and viral suppression for HIV (UNAIDS, 2016; 2017). On a larger scale, it also facilitates the cessation to TB and AIDS. Furthermore, it simplifies the duties of service providers while furnishing clients with counselling and prescription advice amongst other

provider-client interactions. It also increases their sense of job gratification and affiliation to the programme (Lambrou, Kontodimopoulos and Niakas, 2010).

5.4 Preparedness to accept Screening and treatment support for life

In this section, two categories of responses were taken into cognizance – those of healthcare personnel (stakeholder and service providers) and TB clients in developing the themes that were identified on client willingness to accept screening, initiate and adhere to lifelong ART. It was discovered that while most of the clients exhibited their agreement with HIV/AIDS management, some expressed their reservations despite receiving counselling.

5.4.1 Healthcare personnel perspectives

All the health service personnel reported successful uptake of screening, but sub-optimal ART acceptance and adherence among TB clients. Beliefs, quantity and adverse effects of both medications including outright client denial of HIV status were reported as the key reasons given by clients; quite in tandem with the revelations of Kumwenda, Chan, Tom, and Sodhi (2011) in addition to frequent stock outs of ARVs in Malawi. Drugs were reported as always available at the facilities and these were confirmed by co-infected clients in addition to visits to the pharmacy departments in the selected facilities. Ayenew and colleagues (2010) made reference to a focus on stigma (during counselling) as a means of increasing HIV screening among clients with TB. Religious conventions were also mentioned as one of the rationale behind refusing to initiate or adhere to ART by Katz et al. (2015).

5.4.2 Client perspectives

Client respondents unanimously testified that they had been offered screening at their respective facilities of TB/HIV care which they agreed to on the basis that the service providers offered it, in addition to informing them of the reasons why it should be done. As

recommended by WHO (2008), when HIV testing is initiated by service providers while giving relevant grounds, it increases the likelihood that clients will conduct it (Odhiambo et al., 2008; Ayenew, Leykun, Colebunders, and Deribew, 2010; Yotebieng et al., 2016). This has also been proclaimed by several authors in HIV/AIDS literature, such as Kharsany, Karim, and Karim (2010) and Denegetu and Dolamo (2014) who opined on the merits of providers initiating testing and counselling for HIV. Rie et al (2014) concurred that offering screening and counselling at health facilities in South Africa was more cost-effective and tenable. It was however different from those of Zhang et al (2017) who recommended community engagement to increase HIV testing and other healthcare interventions.

The anxiety expressed by clients when asked to get screened for HIV is not surprising. Knowing that HIV is not curable but treatable unlike TB is, can make clients and members of the public who do not have in-depth knowledge of the disease and the impact of ART develop cold feet. According to Blas, Alva, Cabello, Carcamo, and Kurth (2011), some individuals would rather live in oblivion than entertain the thoughts of having to undergo testing and eventually manage the condition for life or until a cure for HIV/AIDS is developed if diagnosed. This also conforms to the discoveries of Shacham, Morgan, Önen, Taniguchi, and Overton (2012) who examined HIV screening anxiety among African Americans in Washington University Clinic, USA.

Although, most of the clients expressed their willingness to adhere to lifelong ART citing reasons such as the need to stay healthy and alive and the service providers endorsing it for them, there were a few who exhibited a reluctance and outright refusal to do so during the interviews, on the grounds of the quantity of medication and faith-based beliefs. Ayenew, Lekun, Colebunders, and Deribew (2010) made similar declarations in their inquiry into the

predictors of screening among TB clients in Ethiopia, in addition to Katz et al (2015) in Soweto, South Africa, who added that perceptions of higher monetary burdens, alternative medicine, stigma and loss of good looks and wellbeing were significant factors for refusing ART.

The outcome of these findings include the below-par uptake of ART in Ghana (MOH/GHS, 2016; CCM Ghana, 2017), with persisting HIV/AIDS morbidities for families, communities and healthcare, higher viral loads, new infections and increase in mortality (UNAIDS, 2016).

5.5 Study limitations

The overall discoveries made from this study are not generalizable to the whole of Ghana due to the application of qualitative methods in its design. As Tracy (2013) rightly declared, there is usually a higher emphasis on essence, rather than numbers in qualitative inquiry. To be able to make sweeping assumptions for Greater Accra region and the whole of Ghana, quantitative methods should be undertaken in studying HIV screening uptake and ART acceptance. The knowledge of HIV/AIDS, screening and ART among the clients would have been better assessed using quantitative methods; this was not feasible due to the short time allocated to conducting this study.

There is also a possibility that more dire circumstances exist in rural areas due to the fact that infrastructure and human resources are mostly concentrated in urban centres (Alhassan and Nketiah-Amponsah, 2016), although this study could not evaluate facilities within rural communities. As a result, the level of knowledge of HIV, screening and ART may be different in rural populations. Furthermore, adherence to treatment could not be ascertained as they professed, because home visits and medication monitoring, which would have provided

further credence to their claims were not conducted. Affirming adherence to medications is a challenge due to the fact that it is entirely dependent on the client (Brown and Bussell, 2011) to provide permission for such an exercise. Difficulties with verifying home addresses were also mentioned by service providers as a major barrier in follow up of TB/HIV clients.

5.6 Chapter summary

A discussion of research findings from the in-depth interview of clients, service providers and stakeholders on the implementation of HIV screening and ART amongst TB clients in Tema Metropolitan District was executed in this chapter. Significant themes arising from the interviews with accompanying literature related to the study objectives were highlighted. In the next chapter, conclusions and appropriate recommendations drawn from the garnered information are presented.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Joint TB/HIV programme implementation in Ghana

Ghana's efforts at ending TB and AIDS are commendable but certain areas are still lacking; such as operational and evaluation research, adequate infrastructure and partnership with civil society organisations and the private sector. In addition, unavailability of social and nutritional enablers for adult TB clients currently hamper service provision, case detection, contact tracing, follow up and medication completion.

Perceived threats to HIV screening and ART provision

This inquiry deduced that client attributes such as low literacy levels, poverty and negative attitudes to orthodox treatment (due to religious beliefs and stigma) in addition to problems with the healthcare system (funding, human resources) are downplaying the merits of screening and ART in the TB/HIV collaborative programme in Ghana especially among healthcare workers who serve in the front lines.

Comprehension of HIV/AIDS

It is concluded that male clients had better insight and understanding of HIV/AIDS, its treatment and the relationship between the immunodeficiency state and TB compared to their female counterparts. They all attested to receiving regular counselling at their facilities of care in addition to mass media health promotion advertisements.

Readiness to be screened for HIV and adhere to concurrent, lifelong ART

It was also noted that screening for HIV among TB clients was up to par in all the facilities, but enrolment and adherence to antiretroviral medication was below expected performance. Apprehension associated with retroviral screening also existed among TB clients, in addition to preparedness to get enrolled on and maintain lifelong HIV treatment while on DOTS. Beliefs play a huge role on treatment uptake among individuals in this society.

6.2 Contribution of research to knowledge

This is one of the foremost inquiries that have explored HIV screening and ART among TB clients in Tema Metropolitan district, taking into cognizance the history of collaborative TB and HIV agenda and its progress so far since inception in Ghana. Therefore, it increased the existing and broadening information on threats to the successful implementation of the programme, and to a larger extent, the global health goals to eliminate AIDS and TB from Ghana and beyond.

In terms of government plans of action and HIV/ART healthcare delivery for TB clients in Ghana, undertaking this research has contributed to client insights and perceptions of care, including opportunities for tackling mitigating factors to treatment and adherence, in addition to ameliorating the existing health system challenges. Using a qualitative approach assisted in the formation and emergence of explanations of what the challenges were, why they exist, how they are particularly unique to the study participants, in addition to ways by which they can be mitigated.

6.3 Recommendations

The revelations from this research shape the basis for the following recommendations which should be considered by the legislature, the health system, policy-makers, clients and individuals:

1. In the light of limited resources for service delivery, the TB/HIV programme needs to adopt new cost-effective strategies such as “targeted testing” and “micro-planning” within communities, especially in hard-to-reach geographical areas.
2. There is a huge need for inter-ministerial, private sector and civil society engagement and support, including philanthropists, artistes and other well-meaning individuals who can advocate for TB/HIV control at all levels, in addition to providing some of the much-needed financial and logistic support for the programme.
3. Counselling, cooperation, zero stigmatization and follow up being conducted by TB/HIV service providers need to be sustained, in addition to inclusion of healthcare workers from other departments in training activities to increase their awareness and improve their attitudes to clients having the conditions. In addition, inquiries should be carried out regarding reasons why clients refuse ART and methods for encouraging and monitoring medication use should be explored.
4. The role of female education and enablement is also worthy of mention; therefore academic institutions should be strengthened with scholarship opportunities that favour young girls and women in their academic pursuits, in addition to the inauguration of a special taskforce saddled with the responsibility of ensuring that school-age children in Ghana stay in school, rather than engaging in child labour and other economic activities that can truncate their scholarly prospects.

5. The psychosocial and nutritional support indicated in the policy should be scaled up to adult TB/HIV clients with low socio-economic backgrounds. This has proven overtime to ameliorate the challenges they face, in addition to facilitating their adherence to medications. The knowledge and attitudes of PLHIV towards IPT and DOTS should also be evaluated in order to strengthen the knowledge base and arrive at worthwhile measures to improve the programme implementation and service uptake.
6. There is a need for government health facility administrators to provide consistent logistic support in order to improve follow-up and outreach activities within the communities they serve. In addition, the role of private healthcare workers with respect to screening TB clients for HIV and ART provision should be looked into. Their perspectives on HIV screening and ART uptake among TB clients should be evaluated using mixed methods approach to remedy the bias in this research.
7. More areas of implementation of TB/HIV services in Ghana need to be examined using quantitative methods. For instance, a more fitting way of evaluating knowledge as a concept is by the use of a scoring system in order to group responses into more quantitative categories and ascertain where efforts need to be geared into while counselling service provision is on-going.

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APPENDICES

APPENDIX A: PARTICIPANTS' INFORMATION SHEET FOR TB CLIENTS

Title of Study: IMPLEMENTATION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) SCREENING AND ANTIRETROVIRAL THERAPY (ART) AMONG TUBERCULOSIS (TB) CLIENTS IN TEMA METROPOLITAN DISTRICT, GREATER ACCRA REGION OF GHANA.

My name is Osagie Ernestina Ifeyinwa, I am a post-graduate student of the School of Public Health, College of Health sciences, University of Ghana, Legon, Accra. I am conducting a study on the implementation of HIV screening and antiretroviral therapy among people diagnosed with Tuberculosis in your district, and I am requesting that you take part in it. I am interested in finding out the challenges in carrying out the screening test, providing antiretroviral drugs and supportive care to TB clients and your personal opinions will provide information that will help me come up with recommendations which could improve the TB/HIV services in your district.

Duration/what is involved: I will be carrying out in-depth interviews in which our conversations will be audio-recorded. This will take about an hour or less of your time. Your age and other personal information will be required and a code will be used for easy identification and sorting. This study will be done at your pace and is not aimed at taking your attention away from your daily routine/work.

Potential Risks: The questions may cause you some amount of psychological discomfort but the purpose is not to upset you in any way.

Benefits: There are no immediate and direct benefits to you as a person for your participation in the study. However, the information you provide will help me come up with suggestions that will help improve the TB/HIV services in your district and other parts of Ghana.

Costs: There will be no costs incurred to you throughout the study duration.

Compensation: As a sign of appreciation for your time, you will receive a small token of lunch at the end of the interview.

Confidentiality: Any information given will remain confidential and will be used for only the purpose of this study as earlier mentioned. Your name would not be mentioned in the final research report. The information you provide would be grouped with others and stored on a password-protected device. Access to the data would be only limited to the principal investigator and the assistants, and will be destroyed after five years.

Voluntary participation/withdrawal: Please note that you are free to decide whether to take part in this study or not. If at any time you decide to opt out during the interview, your request will be granted but your responses could still be used. Feel free to ask any questions before or after the interview.

Who to Contact for Clarification: If you have any question or need clarification, please contact me on phone: 0205427969, or via email: ieosagie@st.ug.edu.gh at the School of Public Health, University of Ghana. You may also contact the Ethical Review Committee Administrator Ms. Hannah Frimpong on 0243235225.

Voluntary Agreement:

I have read and understood the foregoing information. I have had the opportunity to ask questions about it and any question I have asked have been answered to my satisfaction. I

consent voluntarily to participate as a respondent in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care. I am also willing and agree to be audio-taped during the interview.

Signature/thumbprint of respondent:

Date:

Principal Investigator or RA: I declare that the respondent has been given enough time to read and understand what the study is all about and clarifications made where required.

Signature:

Date:

**APPENDIX B: PARTICIPANTS' INFORMATION SHEET FOR POLICY-MAKERS
AND SERVICE PROVIDERS**

Title of Study: IMPLEMENTATION OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) SCREENING AND ANTIRETROVIRAL THERAPY (ART) AMONG TUBERCULOSIS (TB) CLIENTS IN TEMA METROPOLITAN DISTRICT, GREATER ACCRA REGION OF GHANA.

My name is Osagie Ernestina Ifeyinwa, a post-graduate student of the School of Public Health, College of Health sciences, University of Ghana, Legon, Accra. I am conducting a study on the implementation of HIV screening and antiretroviral therapy among people diagnosed with Tuberculosis in your district, and I am requesting that you take part in it. I am interested in finding out your concerns about the TB/HIV programme in Ghana and the challenges in carrying out the screening test and providing antiretroviral drugs and supportive care to TB clients. Your professional opinions will provide information that will help me come up with recommendations which could improve the TB/HIV services in your district.

Duration/what is involved: I will be carrying out in-depth interviews in which our conversations will be audio-recorded. This will take about an hour or less of your time. Your name and other personal information will be required; however, a code will be used for easy identification and sorting. This study will be done at your pace and is not aimed at taking your attention away from your daily work.

Potential Risks: The questions may cause you some discomfort but the purpose is not to upset you in any way.

Benefits: There are no immediate and direct benefits to you as a person for your participation in the study. However, the information you provide will help me come up with suggestions that will help improve the TB/HIV services in Ghana.

Costs: There will be no costs incurred to you throughout the study duration.

Compensation: As a sign of appreciation for your time, you will receive a small token of airtime at the end of the interview.

Confidentiality: Any information given will remain confidential and will be used for only the purpose of this study as earlier mentioned. Your name would not be mentioned in the final research report. The information you provide would be grouped with others and stored on a password-protected device. Access to the data would be only limited to the principal investigator and the assistants, and will be destroyed after five years.

Voluntary participation/withdrawal: Please note that you are free to decide whether to take part in this study or not. If at any time you decide to opt out during the interview, your request will be granted but your responses could still be used. Feel free to ask any questions before or after the interview.

Outcome and Feedback: The audio-recording will be transcribed verbatim and sent to you to confirm its correctness; after which it will be analyzed.

Funding information: This study is being sponsored by the WHO Tropical Disease Research (TDR).

Conflict of Interest: The information that will be generated from the study will be the property of the School of Public Health, University of Ghana and WHO TDR.

Who to Contact for Clarification: If you have any question or need clarification, please contact me on phone: 0205427969, or via email: ieosagie@st.ug.edu.gh at the School of Public Health, University of Ghana. You may also contact the Ethical Review Committee Administrator Ms. Hannah Frimpong on 0243235225.

Voluntary Agreement:

Respondent: I have read the foregoing information. I have had the opportunity to ask questions about it and any question I have asked has been answered to my satisfaction. I consent voluntarily to participate as a respondent in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my job. I am also willing and agree to be audio-taped during the interview.

Signature of Respondent:

Date:

Principal Investigator or RA: I declare that the respondent has been given enough time to read and understand what the study is all about and clarifications made where required.

Signature:

Date:

APPENDIX C: IN-DEPTH INTERVIEW GUIDE FOR POLICY-MAKERS

General Questions

1. May I know your name and age please?
2. What is your level of education and occupation?
3. Work description and position held?
4. Years of working experience?
5. What TB/HIV training have you received so far?

Concerns about the implementation of Joint TB/HIV programme in Ghana

1. When was the joint TB/HIV programme kicked off?
2. What circumstances necessitated it?
3. How much progress has been made so far?
4. Government and CSO participation/funding?
5. What services are included in the TB/HIV programme?
 - a) Probe about HIV screening and ART coverage for TB clients
6. In what aspects have successes been recorded?
7. What challenges have been encountered so far?
 - b) Probe about funding, manpower and concept plan
 - c) Probe about stigma
8. What additional measures need to be implemented in order to mitigate these challenges?

Acceptance of HIV screening and ART

1. How receptive have TB clients been to HIV screening and ART?

2. What are the reasons for the observed coverage gaps in screening and ART provision?
3. Can you suggest ways through which these gaps be surmounted?
4. What measures are being put in place to increase acceptance and adherence?
5. Any comments?

APPENDIX D: IN-DEPTH INTERVIEW GUIDE FOR SERVICE PROVIDERS

General Questions

1. What is your name? Age and marital status?
2. What is your level of education and occupation?
3. Work description and position held?
4. Years of working experience?
5. What TB/HIV training have you received so far?

Concerns about implementation of Joint TB/HIV programme in Ghana

1. When was the joint TB/HIV programme kicked off at your facility?
2. Government and CSO participation/funding?
3. How much progress has been made since the programme kicked off?
 - a. Probe on number of clients being treated, staff strength adequacy, availability of infrastructure and working materials.
4. What TB/HIV services do you provide at this facility?
 - a) Probe on type of services such as TB diagnosis and treatment
 - b) Probe about HIV screening and ART coverage for TB clients
5. In what areas have you achieved success?
 - a) Number of clients cured, number of clients compliant with DOTS
6. What challenges have been encountered so far?
 - a) Probe about funding, staffing concerns
7. What additional measures need to be implemented in order to mitigate these challenges?

Quality of TB/HIV services

1. What are the clinic open hours?
2. What days of the week?
3. Do you do counselling for TB patients on HIV and ART?
4. What are their responses?
5. Are HIV screening kits and ARVs readily available?
 - a. Probe about shortages (if present) hampering service delivery.
6. Are TB clients supported financially?
7. Do you carry out follow up done on TB clients to prevent drug resistance?
8. When are co-infected TB clients on DOTS placed on ART?
9. What kind of feedback do you receive from clients concerning the care they receive at this facility?

Acceptance of HIV screening and ART

1. How receptive have TB clients been to HIV screening and ART?
2. What gaps exist in HIV screening and ART provision?
3. Can you suggest ways through which these gaps be overcome?
4. What policies do you suggest should put in place to increase screening acceptance and ART adherence among TB clients in this facility?
5. Any comments?

APPENDIX E: IN-DEPTH INTERVIEW GUIDE FOR TB CLIENTS

General Questions

1. What is your name? How old are you?
2. What is your marital status?
3. What is your level of education and occupation?
4. What kind of accommodation do you live in?
 - a) Probe on number of occupants in the sleeping room.

Quality of TB/HIV Services

1. What are the clinic open hours?
2. What days of the week?
3. Are you supported financially?
4. Have you been followed up at any time?
5. How do you feel about the care you receive at this facility?

Knowledge of HIV, Screening and ART

1. Have you heard of HIV? If yes, can you describe it in your own words?
 - b) Probe on source of information
2. Have you been counselled on HIV?
 - c) If yes, probe on timing of counselling.
3. What do you understand by HIV screening?
 - d) Probe on respondent's willingness to know status
4. What do you think are the benefits of knowing your status?
5. What do you understand by antiretroviral drugs?

6. What types do you know?
7. How often are they taken?
8. Do you know that HIV has a relationship with TB?
 - e) If affirmative, probe about the client's knowledge of association with each other.
9. Do you know if there is a unit in this facility where HIV services are rendered?

Acceptance of HIV Screening and ART

1. Have you ever been offered HIV screening?
2. What was your response?
3. Did you carry out the test?
 - f) If yes, probe on location of screening and feeling of stigma (if present).
 - g) If no, probe on willingness to carry out screening test.
4. Do you feel you were forced to carry out this test?
5. Assuming you discovered you were co-infected with HIV, are you willing to take the treatment for this condition apart from the TB medications?
 - h) Probe about willingness to accept life-long treatment
6. Any comments?

APPENDIX F: CODEBOOK EXTRACT ILLUSTRATING THEMES THAT EMERGED

Theme	Sub-theme	Respondents' statements
Joint TB/HIV programme	Duration of collaborative TB/HIV programme Circumstances necessitating collaboration	“Korle Bu started in December 2003. We joined my other colleagues in April 2004.” “At the time, it was a new concept that was being championed globally by WHO to address the challenge of PLHIVs dying from TB.”
	Source of funding	“The major funder for TB/HIV services in Ghana is government.” “The recurrent costs are funded by largely Global Fund; USAID supports with some ART care.”
Specific healthcare services given to TB and HIV clients in Ghana	Services for persons living with HIV	“...routinely as part of initial assessment, screened for TB signs and symptoms...”
	Services for suspected or confirmed TB cases	“From the TB intake point, all persons who are diagnosed with TB are tested for HIV and if they are found to have HIV, they are offered Antiretroviral therapy. It’s always priority to start your TB treatment before you start ART.”
Areas where success has been achieved since programme inception	Milestones attained in screening for TB, HIV and ART provision	“We made a lot of progress in counselling and screening TB patients for their HIV status, very successful – we’ve seen significant progress; the same for PLHIVs in care who are also screened for TB, moderate success...”
	Service integration and collaboration between TB and HIV since programme inception	“There has also been major progress in the two programmes planning and implementing a lot of activities together. It is exciting to know that a lot of staff who work in TB are also coming to work with HIV and vice versa and so most of the service points, you see the same people delivering TB and HIV services.”
Challenges encountered in programme implementation	Loss to follow up	“...you see I am calling them now. They normally give us their address and phone numbers. You call whilst they are with you, it goes but later on when you call, it won’t go, especially the ART clients, to get them it’s very, very difficult.”
	Funding and logistics	“Sometimes, they don’t have the resources to go, so basically they make a phone call once or twice to the clients and that ends it.”

	Human resource shortage	“Staff strength is almost always our main challenge – we are not enough, but we do the best we can.”
	Stigma	“...stigmatization among the staff, it doesn’t help out with the situation. Some think being with HIV clients all the time, you are also one of them. Really, especially among the clients too, but we don’t take it that way.”
Knowledge of HIV with screening and ART	Good knowledge	“It is a virus contracted through sexual intercourse. You can get infected from sharp objects.”
	Poor knowledge	“When you get this disease, they have to quarantine you.”
	Client received counselling	“Yes, I receive counselling here at the facility especially when I come for my drugs.”
	Perceived benefits of knowing HIV status	“It helps relax you and let you know that you can continue doing the things that have caused you not to get the disease.”
	Knowledge of ART	“It is a drug for the HIV people so that they can live and their situation doesn’t deteriorate.”
Awareness of TB and HIV association	Awareness of HIV/ART service unit in facility	“Yes here and Ashaiman too.”
	Description of the relationship	“Yes, I grew lean and that is what caused them to test for HIV and then after they did the TB test as well. They have similar symptoms.”
Acceptance of HIV screening and ART	HIV screening being offered to TB clients	“I was asked to do the test.”
	Response to offer	“Yes I was willing to know because actually if one is there without knowing what is wrong and then the person gets ill very frequently, no one would really understand why.”
	Feeling anxious or embarrassed during test	“...when she (service provider) told me it was an HIV test, I got frightened a little bit and said wow.” “I have even taken that test five times and in all I didn’t feel any stigma.”
	Readiness to treat both TB and HIV if co-infected	“So far as the nurses and health workers sign off on it. I know that they have the interest of my health at heart so I would not have a problem doing that.” “I don’t know, but it will take the grace of God to combine both treatment.”
	Willingness to adhere to lifelong ART	“I want to get better so I will.”

APPENDIX G: ETHICAL CLEARANCE FROM GHANA HEALTH SERVICE

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.



Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: ghserc@gmail.com
17th January, 2018

MyRef. GHS/RDD/ERC/Admin/App /899
Your Ref. No.

Ifeyinwa Ernestina Osagie
University of Ghana
School of Public Health
Legon, Accra

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	GHS-ERC: 033/12/17
Project Title	Implementation of Human Immunodeficiency Virus (HIV) Screening and Antiretroviral Therapy (ART) among Tuberculosis (TB) Clients in Tema Metropolitan District, Greater Accra Region of Ghana
Approval Date	17 th January, 2018
Expiry Date	16 th January, 2019
GHS-ERC Decision	Approved

This approval requires the following from the Principal Investigator

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report **after completion** of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
DR. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra