



Barriers and Facilitators to Contact Tracing and Investigation of Tuberculosis in Anlemo District, Hadiya Zone, Southern Ethiopia: Qualitative Approach

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Jimma, Ethiopia

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ABSTRACT

Background: Tuberculosis causes ill health among millions of people each year which is the second leading cause of death from an infectious disease in the world wide. Intensifying TB screening and contact investigation strategy is recommended to ensure early diagnosis approaches in high-risk groups and house hold contacts of TB patients.

Objectives: exploring barriers to and facilitators for contact tracing and investigation of TB in Anlemo district, Hadiya zone, Southern Ethiopia.

Methods: A descriptive qualitative study was employed from March 12-April 9, 2019. Purposive sampling technique were used to recruit study participants. A total of 16 participants were involved in the study including the health extension workers, index TB patient, house hold contacts of TB patients and district TB coordinator. Data were collected through in depth interviews using semi-structured interview guide. Data were transcribed verbatim, translated and thematic analysis was employed. ATLAS.ti7 computer software was used to manage data. The findings were presented on major themes, categories and quotations.

Result: This study explored different barriers and facilitators for contact tracing and contact investigation of TB under the following themes: 1) health system related theme with categories like monitoring and supervision, training of health workers, logistics and infrastructure, waiting time and institutional readiness, referral, feedback and linkage, human resource, charge for some laboratory, and transportation and budget; 2) health worker related theme with categories like Knowledge and awareness, Commitment and motivation, and Work load; 3) Index case and house hold contact related were Knowledge and awareness, workload, commitment and motivation and 4) Socio -economic and cultural related were distance, social support, economic constrain , and stigma and discrimination.

Conclusion and Recommendation: Findings suggest that health system related, health worker related, index case and house hold contacts related, and socio-economic and cultural barriers and facilitators work together to hinder and promote contact tracing and investigation of TB. Continuous monitoring and strengthening supportive supervision should be done to improve contact tracing and investigation of TB.

Key terms: Contact tracing TB, Investigation of TB, Household contacts, Tuberculosis, District qualitative study, Ethiopia

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ACRONYM AND ABBREVIATIONS

AFB	Acid fast Bacilli
DOTs	Direct Observation of treatment
EPTB	Extra-Pulmonary Tuberculosis
FMOH	Federal Ministry of Health
HBS	Health, Behavior and Society
HCW	Health Care Workers
HEW	Health Extension Workers
HIV	Human Immune Virus
HMIS	Health Management Information System
IDI	In-Depth Interview
INH	Isoniazid
IPT	Isoniazid preventive therapy
LTB	Latent Tuberculosis
MDR	Multidrug-resistant
PTB	Pulmonary Tuberculosis
SNNPR	Southern Nation Nationalities Peoples Region
TB	Tuberculosis
WHO	World Health Organization
XDR-TB	Extensively drug resistant TB

CHAPTER 1: INTRODUCTION

1.1. Background

Tuberculosis (TB) is chronic, infectious disease caused by bacteria generally referred to as Mycobacterium tuberculosis complex. There are two types of TB which are pulmonary and Extra-pulmonary TB. Pulmonary TB divided into pulmonary positive and pulmonary TB negative. PTB accounts 80% from all forms of TB from which 75-80% covered by PTB positive(1–3).

Tuberculosis is one of public health issue which causes ill health among millions of people each year, and ranks as the second leading cause of death from an infectious disease worldwide, after the human immunodeficiency virus. The most important source of infection is an untreated pulmonary TB (PTB) patient, which releases thousands of tiny droplet nuclei when patients coughs, spits, or sneezes (1,4,5)

The incidence and prevalence of TB is high especially in low and middle income countries including Ethiopia. This is because contact investigation of the families of index case to identify active TB cases or latent TB infection among these house hold contacts of TB patients in these countries is low which contributed for rampant transmission in the community(5,6).

Currently, End TB strategy is on implementation targeting to reduce 90% incidence and 95% deaths from TB diseases 2035 through setting different activities. One of the initiative is contact investigation to meet End TB strategy 95% Latent TB infection (LTBI) treatment and 90% Contact investigation coverage at the end 2035 for preventing new TB infections and progression to TB disease(5,6).

Tuberculosis (TB) contacts are people who have contact with patients with infectious TB, and contact investigations is investigated TB contacts systematically and actively for TB infection and disease. Contact investigation is a systematic evaluation to identify active disease or latent TB infection (LTBI) among house hold contacts of known TB patients(1,4).

In middle and high TB-burden settings, where Ethiopia is also part of it, active case finding and contact investigation of TB is recommended for household and close contacts of infectious TB cases (4,5,7,8). In order to achieve this, Ethiopian government set approaches to identify TB cases at community level by HEWs, and Health facility level by TB clinics(1). Health facilities must routinely conduct TB screening services for house hold contacts of infectious TB patients registered to receive TB treatment (1). Identification of contacts with index case should be done

as soon as possible to identify contacts of infectious pulmonary TB, presumptive or confirmed drug-resistant TB, under 5 child, and PLHI(1,5). TB focal initiates contact tracing of contacts, interview index case to assess need, educate patient, communicate with HEW and arrange for evaluation of contact of TB patients. The HEW identifies and refers the contacts, and conduct initial screening 'symptom' based TB screening. All identified and prioritized house hold contacts of the index case should be instructed to come to the health facility for evaluation(1,9). Nonetheless, even if the above activities or approaches are used as strategies for contact tracing there was a gap in contact tracing investigation of TB. For better implementation of contact tracing and investigation exploring its barriers and facilitators paramount important. Therefore, this study was focused on qualitative identification of potential barriers to and facilitators for TB contact investigation in Anlemo district, Hadiya Zone.

1.2. Statement of Problem

Tuberculosis (TB) remains a major global health problem. There were estimated 10 million incident cases of TB , and TB caused an estimated 1.3 million deaths globally from which 82% death happened in Africa 2017(6). But around 3.6 (36%) million new and relapse cases were not detected from estimated TB case in the same year (6).

Ethiopia is among the 30 High TB, HIV and MDR-TB burden countries in the world. The prevalence of pulmonary smear positive TB among adult and all age group was 108 and 63/100,000 respectively and TB among HIV patient was 9.1%. An estimated MDR/RR-TB cases 2700 among notified pulmonary TB cases with the prevalence rate of 2.7% and 4 confirmed cases XDR-TB was reported in 2017 (6,10,11).

The revised strategic plan of Ethiopia (2013/14 – 2020) set goal in line with end TB strategy to detect 87% of TB cases and cure rate 87% of cases, and to reduce TB prevalence rate by 35%, incidence rate by 30% and mortality rate by 45% from the 2013 level by 2020(12). Health and health related indicator report shows that detection rate of all forms TB was 67.3%, and SNNPR case detection rate was 75.3% in 2015(13). The contributing factors were expansion of DOTs centers, implementation of the health extension program with inclusion of TB prevention and control in packages(1,12).

The recommended strategies to screen TB are screening of self-presented, screening all clients entering a health facility, integrating screening at service points, intensifying TB screening and contacts of TB patients(contact tracing and investigation) and systematic TB screening for

individuals living in congregated settings(1,12). Active case finding programs being cost-effective more efficient diagnosis and treatment algorithms targeting household and neighborhood contacts(14).

Contact tracing and investigation increase case detection rates of both pulmonary and non-pulmonary TB which resulted in reduction in the incidence of TB and morbidity cases in different settings by initiation of prompt treatment; early detection of TB cases; and in ensuring exhaustion of the reservoir of future cases by preventing reactivation(8,15,16).

There were high burden of TB among contacts of TB patient in resource-limited settings 3.1% (2.2 to 4.4%), and high-income countries 1.4% of contacts had TB(17).

The prevalence of TB among contacts in low- and middle-income settings were 1.2% microbiologically proven TB, 51.5% of LTB and 3.4% of MDR or XDR TB, and high-income settings were 28.1% LTB (18), and South East Asia 3.3%-5.5% and in India Kolhapur 1.15 % (19,20).

TB prevalence rate among household contacts of household members is high especially among people exposed to case with high-grade sputum smears positive had a family history of contact with TB patients was 13 times more than those without family contact history in Ethiopia (21), and undiscovered TB among household members household contacts of index patients was 1.2% and 4% of MDR-TB (22), and one index TB case has contact with 4.4 persons within the household (23).

The index case adherence to household contact screening and contact tracing for TB was 33.7 % which was low, but the yield of TB of the contact screening was 6.5%, i.e. 65 TB patients/1000 even if only 18.6% household contacts screened for TB in Amhara region, Ethiopia (24) and Up to 66% index case did not bring their children for contact screening even who get information from health workers in Addis Abeba (25).

Initiating contact tracing, interview the index, assess the need for contact tracing, educating the patient on need contact tracing and prioritized for contact screening is responsibility of health workers. However, health workers advise only 23.6% index case to bring their child for TB screening in Addis Abeba (1,25).

Ethiopia government working to reduce burden of TB by systematic screening and contact investigation but still there high burden of TB and low detection rate regard with household close and close contacts(1). According to HMIS report of Anlemo district, 88 (55.6%) all form of

cases were detected from estimated 158 cases, and from detected cases 41 cases were pulmonary positive TB in 2010 Ethiopian fiscal year (unpublished source, District HMIS report).

Thus, little is known about barriers to and facilitator for contact tracing and investigation of TB in specific area and study setting specifically. To achieve End TB strategy and TB strategic plan of Ethiopia targets, identifying barrier to and facilitators for contact tracing and investigation is important. Therefore, this study was conducted to identify barriers and facilitators to contact tracing and contact investigation of TB.

1.3. Significance of Study

This study expected to provide information for policy makers, governmental and nongovernmental organizations about contact tracing and investigation of TB to prevent TB infection, to diagnosis early, to tackle transmission channel of disease and to prevent early death. It will benefit FMOH to take appropriate action based on findings of this study.

The study will enable health workers to understand barriers and facilitators and to take action to improve contact investigation and tracing of contacts.

The study will benefits to HEWs to understand barriers and facilitators to practice contact investigation and tracing at their kebele.

The study will benefit to TB patients to identify challenges to practice contact investigation and tracing their contacts.

This study will be also useful resource for further researcher since limited researches were conducted concerning to contact tracing in study setting.

CHAPTER 2: LITERATURE REVIEW

In Sudan study done on central state shows that majority of contacts who got TB were the sons and sisters of index case, and duration of contacts less than 4 months increased risk of developing LTB. But education reduced the risk of LTB among households(26).

In South Africa, study revealed that households contact with a smear positive index households have at least one other case of TB than households with a smear negative index(27).

Study done on Jordan Syria found LTBI (24.1%) were diagnosed among contacts tested with TST. Prevalence was found among contacts of smear-positive (37.5%) than in contacts of smear negative 9.3%(28).

In Haiti, study revealed that contacts diagnosed with TB (42/44; 95%) were family members of the index TB cases. Eight case from 44 contacts diagnosed with active TB were the parent of the index case and seven (16%) were the sibling of the index case. Of the 44 contacts diagnosed, 34(77%) were sleeping in the same room as the index TB case(29).

Study indicated that Tuberculosis contact investigation in an intermediate burden setting like Taiwan found that among all TB contacts, major risk factors associated with active TB development was age i.e. age less than 5, aged ≥ 65 , and aged between 55 and 65, LTB and AIDS(30).

The index patients of cases were more than patients of controls to believe that specific risk groups, namely pregnant women and people with immune impairment were more likely to develop TB(31).

Household contacts in rural localities were less likely to be screened for TB study conducted in Krishna District of Andhra Pradesh State. Reasons for not screening 56 contacts included no home visits made by health staff (31 cases), and home visits done but no information for screening the contacts were provided to the family members by the visited health workers (25 cases) (32).

Study conducted in USA on Tuberculosis Contact Investigation Policies, Practices, and Challenges in 11 communities found barriers that affecting implementation of contact tracing was communication barrier and cultural barriers(33).

The perceptions of stigma, and benefits of screening, were similar in index patients of cases and contacts in Vietnam(31).

Socio-cultural barriers like unemployment, socio cultural belief, patronage of traditional healers overcrowding, community isolation, language and the social stigma associated with TB affects contact tracing (34–36).

Study shows house hold contact screening adherence among tuberculosis patients was affected with religion, relationship with contact, and health education by HCW and knowledge on tuberculosis in northern Ethiopia (24).

Study done one to evaluating routine contact investigation in Addis Ababa found that index case have poor knowledge regarding child screening since they thought that child was healthy, health workers said screening was not necessary, have no time and money (25).

Study participants in USA knew that a person could have TB germs in his/her body and not feel sick, that TB germs could be spread through the air, and that most cases of TB could be cured by taking medicines. But they incorrectly thought people with LTBI were contagious and that sharing dishes, bottles, or a toothbrush with someone who has TB increases a person's risk of getting TB. White race agreed that doctor diagnosis TB, medicine cause health problem and having TB will affect live, but black agree that they would stop taking medication if they feel sick and know better when to stop medication. Both white and black race did not feel strongly stigmatized by TB, feel only “a little uncomfortable” to tell people they had TB(37).

In Portugal, study identified that barriers to contact screen were low educational level, fear of stigma, lack of counseling and lack of motivation of contacts to visit a center for screening (38).

Factors attributed to poor contact tracing implementation found that patients' movement, lack of appreciation of TB as a serious disease, patients' confidentiality and privacy, homelessness of patients and refusal or denial to produce sputum in Francistown, Botswana (39).

Study conducted in North London hospital showed attended for screening because they worried about having TB, which they considered a serious disease. Most non-attenders knew TB could spread among people from spending time together or close contact. The majority of attenders knew common symptoms of TB, with links made to bad hygiene, overcrowding, and poor living conditions. Attendant and non-attended of contact screening TB was kept a secret and people with TB were avoided, because people felt afraid of the risk of death(40).

Acceptance of TB contact investigation in case and control study, case and control believe that the program to be beneficial and the increased risk of TB among contacts, recognized that TB can severely affect their health, perception of discrimination against TB in the community,

understand that TB was caused by an infectious organism, perceive that sharing a bedroom increased the risk of transmission, believed that smoking tobacco was associated with an increased risk of developing TB, infection to sharing of utensils clothing or towels, and believed that traditional medicines alone could cure TB (31).

In India at Chhattisgarh site evaluation of TB case finding through systematic contact investigation, 4.2% not complete evaluations even after a minimum of 2 visits and telephonic reminder (41).

Study conducted in South Africa about house hold non-attendance adult contacts correctly described TB aetiology, but other thought that it was hereditary, and believed that it could be cured by herbal medicine. Contacts believed that TB patients were subjected to discrimination (42).

Study found that factor affecting contact tracing and contact investigation was patients related barriers like malnutrition and co-infection, non-adherence to treatment and medical advice, personal habits in Oyo State South West Nigeria studied (34).

Study conducted Southwest Nigeria knowledge about etiologic agent, route of transmission and risk of tuberculosis disease half of the respondents correctly identified bacteria (germ) as the cause and airborne as the main transmission route but they belief evil spirit, food poisoning and water borne infections as causes of tuberculosis(43).

Factors play a role in low TB contact tracing rates in a high TB-HIV prevalent health district of Botswana was patient related factors included unknown residential addresses and high rates of migration and mobility(44).

Some public health nurses did not believe prioritizing contacts daily practice, as routine tasks. There were ambiguity of the recommendations and a tendency to act from an individual health-care position rather than a population health perspective. The adherence to the contact investigation was restraining the effectiveness, efficiency and uniformity of tuberculosis control in Dutch (45).

In Tanzania, none health workers felt equipped to identify cases of childhood tuberculosis and they experienced lack of knowledge, applicable tools and guidelines about child hood tuberculosis as the main challenges(46).

Study done in Addis Ababa shows health workers not requested index case to bring children, poor reporting and documenting of screened case and referring to higher health institution.

HCWs believed families would bring their child contact for screening if requested. health workers were main source information about contact screening and contact tracing (25).

A rapid assessment of prevailing policies on tuberculosis contact investigation study found Countries that included contact investigation in their national TB policy it was carried out as a routine procedure. Only less than half countries said community workers were involved in contact investigations, whereas the staff asked index cases to bring contacts (47).

Study found that different factor affecting tuberculosis contact screening attendance among adults was hospital factors and leadership factors. Hospital factors unaware of the appointment that they missed, do not receive screening invitations, wrong contact patient information on their file and unable to arrange time off work and car parking costs at the hospital. Leadership the issues were barrier to the provision of user-oriented services. They did not have time, or did not feel mandated to advocate for contact tracing of TB which revealed study done in North London hospital(40).

Study on Thailand and Myanmar, there was challenges in limited corroboration and coordination among stakeholders. Unstructured information sharing and lack of communication hindered the stakeholders from engaging in TB control. The respondents stressed that referral mechanisms across the border need to be strengthened and, limited staff capacities within organizations (35).

There are inherent challenges to conducting effective contact investigation in some settings Human power and resource shortages also represent an important challenge in Aboriginal(36).

In Botswana, Commonly identified barriers like insufficient time and space in clinics for counseling, mistrust of health center staff among index patients and contacts, and high travel costs for lay health workers and contacts(48).

Study shows administrative factors contributing low TB contact tracing (CT) rates in a high TB-HIV prevalent health district of Botswana(44).

In Vietnam, barriers to attending screening 41% of cases identified the distance between the clinic and their house as a barrier to participation. 43% of cases found difficulties taking time off work or study to attend the appointment (31).

CHAPTER 3: OBJECTIVES

3.1. Research Question

What are barriers and facilitators TB contacts tracing and investigation?

3.2. General objective

- ✚ To explore barriers and facilitators to contact tracing and investigation of TB in Anlemo district, Hadiya Zone, Southern Ethiopia, 2019.

3.3. Specific objective

- To explore barriers to contact tracing and investigation of TB in Anlemo District, Hadiya Zone, Southern Ethiopia.
- To explore facilitators for contact tracing and investigation of TB in Anlemo District, Hadiya Zone, Southern Ethiopia.

CHAPTER 4: METHODS AND MATERIALS

4.1. Study Setting and Period

The study was conducted in Anlemo District from March 12-April 9, 2019. Anlemo District is one of rural the districts in Hadiya Zone, Southern Nation and Nationally People Regional State (SNNPR). According to report obtained from the district, Anlemo is district bordered by Lemo district on the South, Lemo district and Silte Zone on the West, Silte Zone on the North and Shashogo on the East. The district 182km far from the region town, Awassa ; 214 km far from Addis Ababa, capital city of Ethiopia and 18km far from Zone town, Hossaina , to the North. The total population of district is 91464 from which 44817(49%) male and 46647(51%) female. At the distinct, there are Protestant, Orthodox and Muslim religion followers. There are different ethnic groups live at the district with majority of Hadiya ethnic group. In district, Hadiyisa is spoken as a first language. Based on Anlemo district health office report, there are one Urban and 27 rural kebele under the district. The district has 5 Health centers, 27 rural health posts, and one urban health post. All health provide TB service DOTs service and diagnostics service and health post give community based TB DOTs service. In addition to government organization there are non-governmental organization like 8 primary clinics, 2 medium clinic and three drug stores(49).

4.2. Study Design (Approach)

A descriptive qualitative study was employed. Descriptive qualitative study is well suited to the study of phenomena at setting of the participant under study to generate concepts which is complete on the area of study to describe findings.

4.3. Parent population (Source population) and Study Participants

The parent population (source population) were Health workers from health center, health post, and district health office, and index case TB patients and house hold contacts were registered at registration books.

The study participants were HEWs, Health center TB clinic focal, district TB coordinator, index cases, and Household contact of TB patients.

4.4. Participant recruitment and sample size

Purposive sampling technique (criteria and judgmental) was used to recruit study participants based on their in delivering rich information about TB contact tracing and investigation of TB.

Criteria sampling was used to recruit participants. HEWs were recruited based on their performance of referring household contacts to health center and distance from health center. Index case recruited from intensive phase (from first two month) and continuous phase (after two month on treatment), retreatment and distance from health center and household screened verses not-screened, and not transfer out. Household contacts were recruited based on distance from health center and households from under five children TB patient based on screened verses not screened. TB focal and district TB coordinator were recruited judgmental since they were responsible for TB program issue, and work experience more than six month at the district and TB program. A total of 16 participants were involved in the study including the HEWs, index TB patient, house hold contacts of TB patients, district TB coordinator and TB focal. In-depth interviews were done with two TB focal persons, one district TB coordinator, six HEWs, three index TB patients and four house hold contacts of TB patients. Before participant recruitment, first the researcher discussed with district health office, district TB coordinator, health center, HEWs and TB focal of health center to recruit potential participants. The sampling was continued until redundancy of information. Participants recruited from Fonko cluster were one TB focal and two contacts from Yerim HP and Layignaw Fonko HP, and one HEW from Entolaftolenka HP. Participants recruited from Achamo cluster were two HEWs from Mento Akebela HP and Bilagela HP, and one TB patient from Dulancho HP. Participants recruited from Anagero cluster were one TB focal, one TB patient from Semen Darisha HP and one contact from Mirab Anlemo. Participants recruited from Mirab Homa cluster were two HEWs from Misrak Kebecho HP and Mirab Homa HP, one TB patient Layignaw kebecho and one contacts Wogila Abera HP. Participants recruited from Bendelicho cluster were one HEWs from Bendelicho Fate HP, and one district TB coordinator from district health office.

The researcher explained the procedure in short to the potential participants. Before enrolled in to the study the participant had to fully understand what the study was and how their privacy was through consent process and the voluntary nature of the participants in the research study was emphasized. If the participants wish to take part, the investigator was set the time and date to collect data.

4.5. Data Collection Instruments and methods

Data was collected by In-depth interview (IDI) using semi-structured interview guide which had probing questions. The IDI guide was developed based on study objectives by reviewing

different literatures(18,20,39). The IDI guide was prepared in English and then translated to local language. Document review guide was used to collect presence guidelines, supervision checklists, reporting format, registration tools, and some report of contact tracing and investigation of TB from HMIS and registration book. Pretest was done with two participants (one HEW and one index TB patient) at Lemo district which is neighbor district of study context. The pretest data was not part of the study.

Before proceeding to collecting data, comfortable place was selected and rapport was created with participants. Different natural settings, minimum disturbance or comfortable place were used to conduct interviews. TB focal were interviewed at their office of health center. HEWs were interviewed at health post. Two index TB patients were interviewed at health center. One index TB patient and four household contacts were interviewed at their home, and also District TB coordinator interviewed at his office. Each session was last about 40-64minutes for the in-depth interviews. Data was collected by researcher by using IDI guide and listen attentively during data collection, and probe based on response to explore rich, and notes were taken by research assistant. The assistance has MPH degree and a research experience, received training on TB and experience on TB program and skills required for the respective responsibilities. After obtaining consent from participants, own words were recorded by using audio recorder, and notes were taken at each interview. Each audio recorded data was copied and saved with specific code personal computer. After turn to home ,before conducting next data collection listening audio records and reading field notes to identify emerged important ideas which were added to interview guide. Study participants were asked by summarizing main points from field notes before closure of interview. Sampling was completed when data saturation reached. Data collection was continued until redundancy of idea.

4.6. Operational definition and Definition of Terms

Contact: Any person who has been exposed to an index case(1).

Index case: - a person who diagnosed with TB, smear-positive TB, presumptive or confirmed drug-resistant TB, a child under 5 years of age, PLHIV , first from household but he/she may or may not be source of infection. The initially identified case of new or recurrent TB in a person of any age in a specific household(1).

Contact investigation and tracing: A systematic process intended to identify previously undiagnosed cases of TB among the contacts of an index case which consists identification and prioritization, and clinical evaluation(8).

Household contact: A person who shared the same enclosed living space as the index case for one or more nights or for frequent or extended daytime periods during the 3 months before the start of the current treatment episode(1)

TB focal are health professional who is facilitator of TB unit of health center.

4.7. Data Processing and Analysis Procedures

Thematic analysis was employed to analysis data which started from new codes after reading data. Data collection and data analysis was performed simultaneously. Analysis of data was started during data collection until the category emerged as a main considered. Categories and their properties was continued until redundancy of data. The researcher and one note taker were concurrently gathering, and managing. The interpreting data left for researcher.

Verbatim transcription was done by listening audio record material by the researcher in support of research assistant. Then, the transcribed data was translated to English by translator. The translated data was checked for similarity and consistence of meaning with transcribed data. Read and immerse into data to familiarize self with data. Immersing and reading was helped to understand meanings and concepts, and also to identify codes, categories and themes. Then open coding was conducted on ATLAS.ti7 to manage data. Coding was started by rich data which was selected after reading of all translated data. The code consistency was checked throughout coding process by reading and re-reading, and re-doing codes. Inductive analysis was employed. Similar codes were clustered into categories. Categories were developed by reading quotes from which code formed and consistence was checked. Themes formed by connecting similar categories which created by reading quotes that was created categories with consistence of concepts and ideas.

Report was written after checking consistence coding data by taking important quotes under categories or themes which describe context in detail.

4.8. Ensuring Trustworthiness of study

Qualitative researchers speak of trustworthiness, which simply poses the question. To assure the trustworthiness of the research findings, researchers considered the different set of

trustworthiness criteria focusing on the credibility, dependability, transferability and Confirmability of the study.

Credibility

Credibility of findings was ensured by different strategies. First, diversified study participants were recruited from different settings. Second, research assistant was employed with MPH as a criteria used during data collection, transcription, and first coding. Also class mates and colleagues were used to debrief the data. Third, member checking was done during data collection by asking study participant to summarize major thematic areas raised during the interview. This helps to get confirmation that their words match what they actually intended about idea rise from participant. Research advisor from department of Health, Behavior and Society reviewed document and comment on it.

Dependability

Detail information about data collection process, categories deriving process, and decisions making process throughout the inquiry were described. The chronological order of the research report was checked by class mates and colleagues.

Transferability

Detail description about study setting, study participants (demography) and the study findings. The readers of the research report make their own judgments about the relevance of the findings to their situation and setting.

Confirmability

The data was recorded carefully at each of step and recorded all interviews and keep interactions with participants. Data was kept and stored in an organized, secure manner. Confirmability of this study was ensured through audit trial by colleagues.

Researcher Role (Reflectivity and bracketing): The researcher's educational background is BSc nurse, worked as TB and ART focal, and health worker at different health centers for four years. The responsibilities were following TB patients, tracing contact and investigate TB contacts, educate TB patients, report, register TB patients and communicate with HEWs and prescribe drug. During that time he faced challenges like logistic shortage, unable to conduct contact tracing and contact that researcher have been memorized. Researcher took basic training on TB and MDR TB. Investigator gave ten days training to HEWs on integrated refreshment training which includes one module about TB. Researcher had not trained on contact tracing but

supervised by different supervisors. This enabled about contact tracing procedures of TB. Researcher was part of study setting since researcher born and living here and staff of study setting. These preconception knowledge and skill benefited the researcher to focus on important points while conducting this researcher; not direct the researcher to conduct huge bias on the study findings. To minimize interpretation bias researcher focused on idea of participants, recruited different participants from different kebeles of study settings, documents reviewed by peers and research advisors and focused on the context idea of participants.

4.9. Ethical Considerations

Ethical approval for the study was obtained from Ethical Review Committee of the Public Health faculty, Health Institute, Jimma University. Permission was obtained from District Health Office and Health center. Verbal consent was obtained from each participant. The interviewer wouldn't make pressure of any kind on the study participants to participate in the study. Investigator also clearly informed about their right to refuse to be involved in the study or withdraw at any time during the interview session. Consent forms requesting permission to conduct the interviews as well as permission to audiotape the interviews was handed out at the same time. The interviewers were informed about the place of the interview, which was selected to ensure confidentiality and comfort, and was offered other optional places to avoid any inconvenience. Generally, every effort made to follow all WHO ethical and safety recommendations for research.

Dissemination Plan

After the result interpreted the report was prepared. The first thesis will be submitted to department of Health, Behavior and Society, Jimma University. The other will be distributed to the institutions from which data collected and for stakeholders. The findings will be disseminated through workshop that will be organized by the evaluator in collaboration with the stakeholders. Presentation and publication to scientific forum and journals will also be considered.

CHAPTER 5: RESULT

A total of 16 in-depth interviews were conducted with three index case TB clients, four house hold contacts of TB, six health extension workers, one health officers, one public diploma nurse and one MPH specialist(see table 1)

TABLE 1:CHARACTERISTICS OF INDEX PATIENT, HOUSE HOLD CONTACTS, HEALTHCARE PROVIDERS INVOLVED IN IN-DEPTH INTERVIEW FROM ANLEMO DISTRICT, HADIYA ZONE, SOUTHERN ETHIOPIA, MARCH 12-APRIL 9, 2019 (N=16)

Interviewee Type					
Characteristics		Index case of TB	House hold Contact of TB	Health workers	
Age	20-30	2		6	8
	31-50	1	4	3	8
Sex	M	3	1	2	6
	F		3	6	10
Educational status	Unable to read and write		2		2
	Grade1-8	1	2		3
	Grade 9-12	2			2
	10+2			6	6
	Diploma (Public diploma nurse)			1	1
	Degree (Health Officer)			1	1
	Masters (MPH specialist)			1	1
Occupation/position	Farmer	1	2		3
	Student	1			1
	Merchant	1			1
	House wife		2		2
	HEW			6	6
	TB Focal			2	2
	District TB Coordinator			1	1
Religious	Muslim	1	3	1	5
	Orthodox		1		1
	Protestant	2		8	10
Category of TB	New treatment	2	4		6
	Re-treatment	1			1
Residence	Urban	1			1
	Rural	2	4		6
House hold contacts relation with index case	Mother		2		2
	Father		1		1
	Wife		1		1

This study try to identify perceives barriers and facilitators for contact tracing and investigation of TB. Similar categories were developed by merging similar codes. Themes were formed by merging categories. The theme were health system related, health workers related, Index case

and household related, socio-economic and cultural related. Each category under themes were presented in detail with descriptions and quotes cited in the text to support the categories. To elaborate current status contact tracing and investigation researcher tried to add ‘contact tracing and investigation of TB’ as introductory part of result.

5.1. Contact tracing and investigation of TB

At district level, all health posts and health centers were functional. During data collection from five health centers, it was observed that five health centers have registration book for contact registration, but there were no registration books for health posts. Contact tracing and investigation performance at this study setting was explored from document review and in-depth interview. From document review and report findings, household contacts screening were done for nine index cases’ household contacts in the last three quarterly July 2018-April 2019 from registered thirty four index cases. There were a total of thirty seven household contacts were registered under nine index case from which six of them were under five children. A total of sixteen household contacts case were screened for TB from which four of them were under five children. Total of eight household were symptom negative and eight of them were symptom positive. All of symptom positive case were checked for laboratory, and negative result were registered. Two under five children were linked to latent TB treatments with INH. Contact tracing and investigation was on track as set by world health organization and ministry of health to increase detection of TB and performance of latent TB treatment. The contribution of contact tracing and investigation for detection of TB was low at the study setting due to the program was not full own, and attention was not given to as other health program as it importance on TB prevention, treatment and control

“The guideline says that every individual who have contact with infected person should be screened for TB. But there is still a gap to register and screen all individuals those who have contact. For example if there are ten individuals who have contact, only two or three of them were requested to bring their to the health facility for screening.” (29 years, M, TB Coordinator)

5.2. Health system related barriers and facilitators.

The barriers and facilitators conditions of health system that have an influence on contact tracing and investigation of TB were: monitoring and supervision, logistics, waiting time, human

resources, training, referral, feedback and linkage of health facilities, symptom positive and AFB negative case charge for some Laboratory, and transportation and budget

5.2.1. Monitoring and supervision.

Monitoring and supervision related problems were mentioned by different health workers participated in this study. They explained that attention was not given for periodic monitoring and supervision due to low commitment even if there were monitoring indicators on quarterly reporting formats, and weekly bases meeting for monitoring of activities, command post, at facility level. However, contact tracing and investigation activities was not monitored as other health program which resulted from poor commitment from responsible body in identifying obstacles and gaps, and finding solution together, follow up, motivating health workers, and comparing achievement based on plan to take action on time based on findings. From document review, HMIS reporting formats and registration book containing indicators like total number of household, total contacts screened for TB, total contacts diagnosed with TB, children screened, etc. were reviewed.

“Contact screening and investigation of TB were not monitored regularly.....”

(25years-old, F, TB Focal)

The supportive supervision was not given to health center and health post on regular and periodically. Health posts were not regularly supported by Health center and district health office, and Health centers were not monitored by district health office. The reasons were shortage of transportation and poor commitment of responsible body.

“We are not supervised by health center and district health office....” (29 years-old, HEW)

“....there is also gap in supportive supervision from district to health facilities” (29 years-old, M, TB coordinator)

The supervision checklist of TB contains some points about contact tracing and investigation of TB, but not details. Checklist more focused on detection of TB case based on screening of suspected case, but not on house hold contact tracing. From document review, there supervision checklist of TB for health post contains four points about contact tracing and investigation like “regularly conduct contact tracing and screening; about recording contacts traced and screened, number contacts screened and number contacts diagnosed TB”. The supervision checklist for

health center contains about contact tracing and investigation of TB like “all forms of TB index cases got their family members/contacts screened for TB.”

“It (checklist) is prepared by integrating with all other health programs. Two or three TB related questions are included in that checklist and we use it for supervision when there is supervision at district level.” (29 years-old, M, TB Coordinator)

5.2.2. Training of health workers

Training was given for health workers by integrating with other TB program training. The training was given for HEWs during training of “integrated refreshment training /IRT/”, as one part of IRT training, and TB focal trained by integrating with basic program of training “clinical and Programmatic management of TB, TB/HIV and leprosy”. The reasons for low performance of contact tracing and investigation was negligence, low commitment of health worker, shortage of health worker, burden of health extension package relative to number and population size, and monitoring and supervision gaps since program were not monitored and supervised, and health professional were not own the program.

“Three years ago district health offices gave ‘integrated refresher training (IRT)’ for HEWs on all health extension packages topics including TB.....” (29 years-old, F, HEW)

TB focal of health centers were trained on contact tracing and investigation of TB by integrating with other TB training.

“I trained about contact tracing and investigation during training of TB, Leprosy and HIV. There is a session about contact tracing and investigation of TB.....” (25 years-old, F, TB Focal)

5.2.3. Logistics and infrastructure.

Logistics and infrastructures related barriers were electricity interruption, shortage of reagent, non- functional microscopy, absence of TB class and absence of mask at health post level. There were shortage of reagent at health center for laboratory. The reason for shortage of reagent was district health of did not supplement on time when health center requested, and health facility didn’t request on time even if there were Integrated pharmaceutical Logistic system (IPLS). The other gaps identified were not getting solution together and filling of health facilities on time through strengthen monitoring and supervision of health facilities. TB class also was not comfortable for counseling and educating index case and contacts and not well ventilated, and

there was absence mask at health post level which used to prevent TB transmission from TB patient to health worker which stress health workers. Due this health workers were not advising and educating TB patient and house hold contacts of adequately. Absence of comfortable and well ventilated TB class affect motivation and commitment of health workers.

“There are no basic materials to use during screening of TB. There is no TB class and masks in our heath post. Sometimes household contacts have been screened by opening windows or out of class.” (27 years-old, F, HEW)

“We are facing great challenge from shortage of electricity power. Most of the health centers didn't have TB rooms and even the available ones' are also not well ventilated. The rooms are not comfortable for both health care provider and patient. There is shortage of reagents..... In addition to this, some microscopes does not make objects [bacilli] visible correctly.” (29 years-old, M, TB Coordinator)

Health workers mentioned and described as logistics like contact screening and referral format, registration book for contact screening and INH are available. Contact screening and referral format contains demographic data and symptoms of TB with ‘yes or no’ option. It helped HEWs to focus on important points, not to miss important points, during screening of contacts and it save time. A registration book of contact screening contains demographic and other important data like type of contact household contact or close contact. It helped to monitor and follows up of INH attendant, and quarterly follows up of contacts for checkup. There was also availability of INH which dispensed for symptom negative under five children and HIV positives household contact to treat latent TB. During document review, registration books, screening formats, quarterly and monthly reporting format, and INH were observed as these all are available at health centers, but there were no registration books at health post. Presence of logistic was good for contact tracing and investigation of TB. But, there were shortage of referral formats. District health office did not supplement on time and health facilities did not request on time using.

“We have contact screening registration book, ‘TB Contact screening and LTBI treatment follow up register’, and there were availability referral and screening format for HEWs...” (29 years-old, M, TB Focal)

“Referral format and screening form of contact investigation is clearly and helps no miss important points during tracing and investigation. The format contains like age, sex, kebele and main symptoms of TB like cough, weight loss and loss of appetite by ‘yes or

no' form. It saves time of preparing format by hand. But sometimes there is shortage of referral and screening formats of TB.” (27 years-old, F, HEW)

5.2.4. Waiting time and Institutional readiness.

Index case and household contacts, and health workers participated on the study were mentioned that problems like long waiting time and institutional readiness at health facilities. There were repeated appointing of contacts, service is not given on time, house hold contacts waiting morning to night and health worker were not punctual, patient's card send to other service unit due to this patient wait additional time and service unit didn't open on time. The reason were individual demography like age not document appropriately on patient's card, poor documentation and storage of document, health workers commitment, electricity interruption to search computerized documents at card room and absence electricity to computerized at rural health center, and shortage of reagent.

“..... But there is long waiting time at hospital due high clients. The past document not found in card room on time. Sometime card send to other service unit even if I wait in other room, but my card send to other room. Some health worker doesn't come on time or out to other class. I wait some hours until they open door of service unit.” (30 years-old, M, index TB patient)

“The health facility repeatedly appoints the referred cases without giving service because of interruption of light, absences of health worker or absence of reagent. For example, they wait up to after noon to get service.” (27 years-old, F, HEW)

5.2.5. Referral, feedback and linkage of health facility.

Study participants were reported that referral, feedback and linkage between health facilities as barriers for contact tracing and contact investigation of TB. There were gaps of communication between health center and health post on contact tracing and investigation of TB. TB focal did not regularly request and inform HEWs to screen and refer house hold contacts from their kebele. Health extension workers didn't receive feedback from health center. The reasons TB focal working on shift and different unit, low monitoring and supervision from district ,appointing of only one TB focal at TB unit and low commitment and motivation of health worker.

“Health center TB focal did not tell and request me to screen, and refer contacts of TB.”(32, F, HEW)

“.....But there was a gap on giving information of index case and feedback to health extension worker due to this they did not screen and refer household contacts to health center regularly.”(25 years-old, F, TB Focal)

5.2.6. Human resource

One of resource for contact tracing and contact investigation was human resource at health and health post level. Participants involved in this study described that TB Focal was working at different unit of health center. TB Focal conduct his activity on shift. Due to absence of TB focal at day time TB serviced covered by untrained health worker on TB program including contact tracing and investigation. There was also shortage laboratory professional at health center which resulted symptom positive house hold contacts in order not to get service on time, and referred to other site for AFB checkup. Household contacts don't go to other site for checkup due to economic constraints for transportation when referred to other sites.

“.....but I am not full time worker, and ...not there at a day time when I have duty at night so I cannot get some index case. Even at day time shift, I have been working on outpatient or delivery case time since there is shortage of professionals.” (25 years-old, F, Focal TB)

“Increasing attitude and awareness community need effort of health extension workers. There have been only two health extension workers on kebele. I cannot cover all kebele gots (village) and households from one side to other side to get individuals.” (27 years-old, F, HEW)

5.2.7. Symptom positive and AFB negative case Charge for some Laboratory

Index case and house hold contacts involved in this study expressed that house hold contacts of TB paid for some laboratory examination and X-ray when they were symptom positive and AFB negative case. Health facilities give free of service for AFB test, Gene expert and symptomatic screening of TB. Participants were involved in this study expressed that house hold contacts of TB paid for some laboratory examination and X-ray when they were symptom positive and AFB negative case. House hold contacts who paid inform about payment for community. Those house hold contacts who hear about payment did not come for contact screening of TB. Some index case who pay for this service did not bring their house hold contacts even if screening and

contact investigation was free. This was related with shortage of money (economic constrains), and low awareness of household contact tracing and investigation service.

“I know that screening service and examination of TB was given free charge. I saw it during my son. But, I paid 70 birr for x-ray (Araj) and 40 birr blood examination”. (43 years-old, F, contact of TB patient)

One health extension faced challenges at here health post that one old women left to go hospital due to payment and economic constrains.

“Government giving service free of charge for investigation of TB at health center, but there is cost for x-ray and for other laboratory investigation other than sputum at hospital. For example, one old woman referred from health center to hospital, but she did not go hospital because of absences of birr to covered expected cost for some.” (27years-old, F, HEW).

5.2.8. Transportation and budget

One barriers for contact tracing and investigation was shortage of transportation and budget. Transportation was problem for periodic supervision of health facility since some health facilities are far from district office and health center which needs motorbike and car. Budget was problem for periodic supervision and monitoring of health facility, for refreshment, for building of TB class, to maintain and purchase microscopy

“.....Challenge...like lack of transportation to provide supportive super vision to all kebeles.” (29 years-old, TB coordinator)

5.3. Health Worker related

Identified categories under health worker related issues were knowledge, awareness commitment and work load of health care workers.

5.3.1. Knowledge and awareness of health workers on contact tracing and investigation of TB.

Health workers participated in this study have awareness as contacts of smear positive index cases should have to be screened. Household contacts were traced and investigated contact from their kebele and clusters by Health worker. HEWs involved in this study do not know and aware about screening of contacts of under five children, HIV patient, and multidrug resistance TB case. The reasons were poor adherence with guide lines, longtime stay after the training was given, and absence of refreshment and absence of periodic supervision. The other reason was reporting format capture only pulmonary positive contacts this was finding from document

checklist of HMIS TB reporting format and absence registration book at health post. TB focal and HEWs were aware and know about symptomatic screening contacts, how to request and refer house hold contacts for screening, prescribing of INH for symptom negative under and HIV positive patients and knew benefit of screening of contacts, about educating and counseling TB patient and contacts.

‘The contact tracing and investigation has been performed for house hold contacts of positive TB case. But I don’t know about other forms of TB category. I were screening and tracing house hold contacts of pulmonary positive TB case only and then refer them to health center their house hold contacts for investigation at health center.’ (32 years-old, F, HEW)

TB focal involved in this study was explained that contact tracing and investigation done for all under five children, HIV patient, and multidrug resistance PTB case.

‘As I think screening is better for all form of TB contacts. It is infectious disease which transmits from person to person so that Contact screening should be done for anybody who live with TB patients. But even it cannot done for all it is better to screen especially house hold contacts of pulmonary positive TB, drug resistance TB, under five child TB patients and HIV patients. Contact screening of all forms house hold contacts of TB is necessary but I belief that at least screening should be done especially for above listed case.’ (25 years-old, F, TB Focal)

5.3.2. Commitment and motivation health workers

The health workers commitment and motivation was one of issue for contacting tracing and investigation as study participants reported. Commitment and motivation of health workers define requesting of household contacts, follow up of household contacts, giving feed backs, creating awareness and changing of attitude of contacts and index case, educating and counseling of index case and contacts and household, and monitoring and supervisor of health facilities on time. Some of reason for lack of motivation and commitments were absence of risk payment for TB unit workers, working place was not comfortable i.e. absence well ventilated class or absence of TB class, absence periodic and continuous monitoring and supervision, and workload. Health workers perceived that they were working at risk area since TB transmitted from client to health workers. They saw that former TB focal were developed and treated for TB.

“I haven’t seen any one who is working that much, moving and struggling, to refer and screen on time. There is also negligence of health workers, and not committed professional including me.” (25 years-old, F, TB Focal)

5.3.3. Work load of health worker

Health workers involved in this study reported that being busy was one of barrier for contact tracing and contact investigation. TB focal working at different case team in addition to TB unit like outpatient department and under five due to this they were not regularly requesting index case to bring their household contacts, informing to HEW about house contacts in order to refer, providing feedback to HEWs, and educating and counselling contacts and index case by give adequate time. The reasons were shortage of health workers who took training on TB, only one health worker trained on TB per health center. HEWs have many health packages like immunization program, home to home visit, educating and counseling mothers, doing of many reports and updating of family folder. They have different meeting including political meeting since one HEW was member of kebele cabinet. Due to this they were not tracing and investigating to refer household contacts on time to health center.

“All house hold contacts of TB were not investigated tracing by heath extension workers. We have different activities at health post level like meeting, immunizing children, home to home visit, providing family planning, doing so many reports and updating family folders and so on.” (33 years-old, F, HEW)

“TB focal has been working at other case team of health center like Outpatient department, under five or emergency department in addition of TB unit.” (35 years-old, F, HEW)

5.4. Index case and Household contact related.

Index case and contact related barriers and facilitators were the reasons for adherence to contact tracing and investigation. In this study knowledge and awareness, commitment and work load of index case and house hold contacts were identified as barriers and facilitators. Index case and household contacts were expected to bring and come for contact screening at health facility when they were requested.

5.4.1. Knowledge and awareness

Index case and house hold contact participants in this study understand that it is enough if index case is treated. They know that treating of index patient prevent transmission of TB. Index case

and household contacts had awareness on cause, treatment, transmission and prevention of TB. Some household contacts and index case had not awareness and knowledge on transmission of TB through contacts of TB patients. They consider that treating index case, opening window and door, separating utilize from index patient was sufficient. They had awareness on symptoms of TB especially cough. They considered themselves as healthy and felt as healthy unless there was no symptom like cough, and wait until severely ill. Besides they gave priority for different tasks rather than coming to health facility and not willing to come for contact tracing and investigation.

“...I am also well including all my families. I have no cough and fever as my older boy...” (41 years-old, F, household of TB patient)

“We have not cough, and do not become ill. So for what screening we go. hahaha....if an individual don't have cough ,do he/she go for screening and investigation of TB?”
(45yearsold-old, F, Household contact of TB)

5.4.2. Workload of household contacts.

The study participants reported that house hold contacts and index case being busy was one barrier to adhere on contact tracing and investigation of TB. Contacts apparently health and they felt as healthy so that they give priority for work. There were also long waiting time at health facility to return on time for their work.

“We did not go for contact screening of TB due to we were busy at work. We have burden of work.....”(45 years-old, F, contact of TB patient)

“They (index case and contacts) were busy if they were not severely ill. Due to this they did not come at appointment date.” (35 years-old, F, HEW)

5.4.3. Index case and household contacts commitment and motivation.

This study found that commitment and motivation of index and house hold contacts was barrier and facilitator for contact investigation and tracing of TB. Index patients were expected to bring their contacts especially under five children, informing to HEWs and informing to household to go health facilities for screening of TB and taking preventive measure at their home. The reason for commitment and motivation were not understanding of importance of contact screening and investigation, awareness and knowledge about TB and contact screening, and caring for others and family and interest. Health facility service quality like opening hour of health facilities, not getting service on time also matter for commitment and motivation of index case and household,

and also their education status, economic status, being busy, relying on symptom especially on cough.

“I did not see any one who brings their house hold contacts for screening by own self for contact screening. Some index cases repeatedly say “I will bring” but they did not to bring their household contacts. They say always “I am busy, I for forgot it or no body have cough.” (25 years-old, F, TB Focal)

5.5. Socio -economic and cultural

Socio-economic and cultural related barrier and facilitators that were identified from participants: distance, social support, economic constraints, and stigma and discrimination

5.5.1. Distance

Index case and house hold contacts were obligated to travel long distance to reach health center. Some of study participants, house hold contacts of TB and index suggested that distance was barrier and facilitator to adhere on contact tracing and investigation of TB. The reasons were house hold contact has work load due this they give priority for work, and also there was long waiting time at health facility to return back for their work. Patient related issue like lack of awareness or willingness for contact tracing and investigation were also barriers mentioned by participants. Distance was obstacle for health worker to trace house hold contacts far from health center HEWs were not regular visit villages and screening house hold contacts far away from health post. The reason were work load and not getting information.

“...there is distance to go health center which takes around 2:30-3:00 hour on foot.” (50years-old, M, Contact of TB patients)

“.... If the index case found near to the health center, we are not challenged. But the problem is when index case is far from health center.” (29years-old, M, TB coordinator)

“Some time I did not know index TB case those who are far from health post.” (32, F, HEW)

5.5.2. Social support

Findings from this study showed that index TB patients and house hold contacts have got family and neighbors support. Families support index case and house hold contacts by providing food, transportation money, and visit health facility together and gave for them. Community member support index case and house hold contacts by encouraging , giving food, money, pray for

sickness, and also community didn't allow to do hard work for TB patients. This social support depend on knowledge and awareness and economic status of family.

“My husband covers all my expense to go health facilities. Our neighbor looked after my house until I returned from facility. Our neighborhood encouraged me and my families.”

(43 years-old, F, contact of TB patient)

“Community encourage, ask improvement daily, even some give food money and all thing covered by family. Community encourages going to health facility. They also pray for my sickness. They did not allow to do hard work for social issues like during wedding, idir.”

(30years-old, M, Index TB patient)

5.4.3. Economic constrain

Shortage of money was obstacle to go health facilities for contact investigation of TB need of money for transportation, registration at health facilities and for food during refer and for some laboratory charge at health facility. The reasons they didn't have information about symptom screening payment, and they heard from contacts and index who paid when they were symptom positive and AFB negative individual. Symptomatically negative contacts did not pay for screening expect card. Symptomatic negative under five and PLHIV patient were linked to INH at health center level which was provided free of charge.

“There is burden of expense money for poor individual and for individual who have no money. There is a transport expense to go health center and hospital when they referred to hospital. During referral they may go together with other family members. The referred individual will waste addition cost for transport, food and other issue.” (35 years-old, F, HEW)

“The obstacles to go for investigation of TB were, for example, shortage of money for transportation and food. Due shortage of money individual (contacts) did not go health facility.” (30 years-old, M, Index TB patient)

5.5.4. Stigma and Discrimination.

Study participants reported that TB patients were not secretive about their disease and screening contacts. During the interviews, index cases and contacts, and health workers mentioned that index case and house hold contacts were disclosed their status and not fear community, and also they care for other individuals and families. Index cases involved in this study disclose status for

their families, neighbor and other relative. Community do not discriminate and stigmatized as study participants expressed.

“Why I was ashamed to tell about my illness, TB? I don’t be ashamed to tell. I heard about my illness from health facilities which will transmitted from one to the others. They don’t know my illness if I don’t tell them and they cannot prevent and protect themselves. I think for other person’s health since my illness, TB, will harm them. If they know my illness until I cure, nothing will be happened at me from any one.” (20years-old, M, Index TB patient)

“Since the community have awareness about TB and its treatment there is no problem related to this (stigma) in our woreda.” (29years-old, M, TB coordinator)

CHAPTER 6: DISCUSSION

This study identified barriers and facilitators that influence contact tracing and contact investigation of TB in Anlemo District, Hadiya zone, Southern Ethiopia. The study identified that barriers and facilitators which were diverse in nature, with a wide spectrum of factors related to health system related, health workers related, Index case and household contact related, and socio-economic and cultural related.

Index case and house hold contacts reported that there is long waiting time and low institution readiness, due to repeated appointment at health facility, card room not open on time, absenteeism of health worker, or health workers working on other unit. Long waiting time and low institution readiness hinders contact investigation and tracing of house hold contacts in attending of screening. Finding is supported with study done on Uganda supports that barrier to contact tracing and investigation was long waiting times which is related to health worker tardiness and absenteeism (48). To reduce long waiting time and to improve institution readiness health facilities should improve opening time of TB unit, improve card room documentation by computerizing, motivating health worker by recognized good performer and district health office train additional health workers on TB program and appoint full time worker for TB unit.

Obstacle for contact tracing and investigation were shortage of logistics and infrastructure like unavailability of Mask, shortage of reagents, none functional microscopy, absence of well ventilated TB class, and interruption of electricity. Interruption of electricity leads appointed for next time and waiting of long time which affect trust to health facility. Logistics and infrastructure constraints affect effective contact tracing and contact investigation of TB. A lack of designated, well-ventilated space for TB-related activities also hindered the ability to provide education and counseling for TB patients and contacts. Finding is supported by studies done on Botswana and Oyo State South West Nigeria found that barriers to contact tracing and investigation service in resource-constrained setting were barriers like poor or inadequate facilities, poor medical infrastructure, shortage laboratory diagnostics(34,44). A designated, well-ventilated space important for Health workers expressed concerns about discussing sensitive personal health information around other patients, and health-center staff sought to minimize the time spent with TB patients to reduce the risk of TB transmission (44,48).

This study found that human resource shortage at health facilities was barrier to contact tracing and investigation. Shortage of health worker affects implementation of contact tracing and

investigation of TB. Finding of this study is similarly with those studies done in Canada (36) and Thailand and Myanmar(35) as there was often no permanent or full-time nurse or shortage of human resource available in a given community to implement TB programming. Due to shortage of trained person there is incomplete and inadequate contact investigation which leads to missed opportunities to identify secondary active cases and ensure the identification and treatment of infected contacts(7).

Monitoring and supervision found as barriers to contact tracing and investigation of TB in this study. Monitoring and supervision were not performed regular and no attention given for it. This study is similar study done in South Africa found that had not adequate supervision and direction from the district or provincial TB managers(50). Continuous on-the-job supervision helps ensure successful contact investigations. World health organization recommended that Monitoring should be done routinely using standardized methods based on data with documented quality(5). Monitoring and supportive supervision can contribute to improved health workers motivation performance, and to fill gaps on time so that they effectively perform their duties(8,51) Strengthening monitoring and supervision with detail checklist is crucial to achieve intended goal of contact tracing and investigation of TB.

This study indicated that distance influenced house hold contacts and index cases of adherence to contact tracing and investigation. House hold contacts of TB required to go long distance to reach health facilities for investigation of TB. Due to this house hold contacts miss investigation of TB. It is similar with study done in Brazil and Vietnam which identified the distance between the clinic and their house as a barrier to attend contacting investigation(31,52).

Socio-economic constraints, such as shortage of money for transportation and laboratory cost were described as barriers for contact tracing and investigation of TB. The findings from this study is similar with other study which found that not having money is a common obstacle to be investigated and traced for TB(25,34). Even when tuberculosis diagnosis and treatment are offered free of charge, social protection measures are needed to alleviate the burden of income loss and non-medical costs of seeking and staying in care(5).

This study identified that poor knowledge and awareness of house hold contacts and index case on contact tracing and investigation of TB. Index case and house hold contacts did not understand importance of TB, felt health if there were no symptoms of TB, and waiting until severely. Finding of this study similar with done in Kenya found that TB patients did not know

about the need of investigating contacts(53). The poor awareness and knowledge of contact tracing and investigating among the TB patients and house hold contacts may have contributed to the poor knowledge of the meaning of contact tracing an investigation reported among patients .The negative result of poor awareness and knowledge about contact tracing and investigation would be more appreciated when recognize that a single person with active TB/ capable of spreading infecting others who remained undetected can infect between ten and fifteen persons every year, making a vicious cycle of failing control efforts (43). It is better to increase awareness and knowledge on importance early contact tracing and investigation of TB for house hold contacts and index case in general community member by using mass media, community meeting and conversion. Health workers counsel and educate to increase knowledge and awareness of index case and house hold contacts about TB including contact tracing and investigation.

Other barrier related to patient in the current study for no-adherence to contact tracing and investigation was being busy at work to go health facility. similarly with this study, studies done on South Africa and Uganda shows that difficulty to get time off other duties such as work was the reason for contacts non-attendance of health facilities for evaluation (42,48).

One problem related to health worker was lack of motivation and commitment on contact tracing and investigation which affect contact tracing and investigation of TB. Similarly, in Botswana motivation and commitments was barrier for implementation of contact tracing and investigation of TB(44). Health workers motivation and commitment important to delivery better care and to improve performance contact tracing and investigation(54).

Availability of contact tracing and investigation registration books, referral and screening checklist, and report formats were reported as facilitator for contact tracing and investigation of TB. But in Kenya, lack of tools for systematic investigation by health workers, and documentation tools were a barrier(53). World health organization recommended the minimum requirements for contact investigation was information to be reported and have been documented(4). Registration and document appropriately helps to monitor and evaluate continuously. Outcomes will be assessed and data will be collected using TB registration data, and TB recording and reporting system is very important to monitor and evaluate progress(8).

Social support like community support and family is identified as facilitators for contact tracing and contact investigation of TB. It is possible that family support can alleviate economic and

social problems. Family and community were very important to keep them motivated and source of encouragement as study participant reported. Similarly, qualitative study done in Uganda(48) found that in social support from family was facilitators for contact tracing and investigation of TB.

Socio-cultural factors, such as stigma and discrimination, also had undesirable effects treatment adherence and early screening of TB adherence and remaining in care. Interviewees from clients and health care professionals experienced that index case and contacts did not face stigma and discrimination from both their own family and their local community. Index case and contacts did not fear community and family and disclose their status to family and neighborhood as study participants reported. But, in Uganda, Vietnam and South Africa discrimination and stigma as major barriers to uptake clinical evaluation at health facility (38,42,48).The difference could be education and counseling from health workers about TB.

Strength and Limitations

The findings offer an understanding of different barriers and facilitators that may influence contact investigation and tracing of TB. The results of this study reflect diversity in views and experiences; the researcher also triangulated participants in order to strengthen the trustworthiness of the results

Limitation

- Researcher was not interviewed community member from no TB household members which limits their perception and understanding about contact tracing of TB
- Participants may have omitted information and positive thing on the basis of social desirability, leading to some bias. Since researcher is from study setting and staff of district.
- Researcher did not include close contact of index TB patient

CHAPTER 7: CONCLUSION AND RECOMMENDATION

Conclusion

This study explored that there are a range of barriers and facilitators to contact tracing and investigation in Anlemo district.

The findings were health system related, health workers related, index case and household contacts related, socio-economic and cultural related barriers and facilitators contributing to improvement or failure of activities.

Thus, attention was not given for monitoring and supervision of contact tracing and investigation of TB even if contact tracing and investigation of TB is an initiative to increase TB detection and to prevent TB by treating latent TB early. This implies that contact tracing and investigation of TB was not owned by the concerned body.

Shortage of logistics and infrastructure hinders contact tracing and investigation of TB. Waiting time and institution readiness affect household contacts and index case adherence on contact screening. To reduce waiting time, health facilities improve documentation of patient cards through computerizing card rooms and opening card rooms on time and appointing full-time workers at TB units.

Health workers related barriers like low commitment and motivation of health workers negatively affect contact tracing and investigation of TB. This results from the absence of a conducive working environment and workload.

There is low awareness and knowledge of index cases and household contacts on the importance of contact tracing and investigation of TB. This shows that index cases and household contacts were not educated and counselled adequately on contact tracing and investigation of TB by health workers. Household contacts are relatively healthy and busy at work due to this they don't go to health facilities on time. Contact tracing and investigation of TB will not be fruitful without awareness and knowledge of index cases and household contacts on the importance of contact tracing and investigation of TB.

Socio-economic and cultural barriers like shortage of money hinders household contacts adherence on contact tracing and investigation of TB. Household contacts don't go to health

facility due to economic constraints for transportation and for some laboratory. It is necessary to alleviate economic problem by strength social policy like community based insurance.

Recommendations

Health extension workers and TB focal

- Should Community mobilization, education and counseling to improve awareness and knowledge of index case and house hold contacts on importance of contact tracing and investigation of TB.
- Should have to strength the health post-health center linkage to provide regular or continuous supportive supervision.
- Should do contact tracing and investigation of TB as other Health extension program routine.

District Health of office

- Should Employing adequate and trained staff which will helps to provide quality of care and shorten waiting times in of clients TB unit.
- Should improve monitoring and strengthening supportive supervision to improve contact tracing and investigation of TB.
- Should provide refreshment training and on job training for HEWs on prioritized category contact tracing and investigation.

Zonal Health Department

- Should train health workers of health center and health center through on job training or basic training
- Should provide continuous supervision and monitoring to lower health facilities to continue implementing contact tracing and investigation of TB activities.

Ethiopian Public Health Institute (EPHI)

- Should conduct national wide research both qualitative and quantitative to explore factors and to determine burden of TB among contact of TB both household contacts and close contacts.

Federal Ministry of health.

- Should doing advocacy activities and resources that could improve contact tracing and investigation of TB.

- Should improve health facility infrastructures and logistics to facilitate the activity of health care provider and to manage the constraints of investigation of household contacts, counseling and educating house contacts and index case.

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JIMMA UNIVERSITY

**Institute Health, Faculty of Public Health,
Department of Health, Behavior and Society**

Anex1: Informed Consent form

Hello, how are you? Thank you for taking the time to meet. Researcher postgraduate student of Jimma University. Researcher here on the behalf of Jimma University post graduate research team. Researcher to study on **Identifying Barriers and Facilitators to Contact investigation and Contact tracing of Tuberculosis in Anlemo District**. You are selected to participate in this study and you would be in a position to provide relevant information for questions that asked you to meet study objectives. All responses will be kept confidential. Ensure that any information include in report does not identify you as the respondent. Your name or your identification information will not be registered instead will use codes.

The information obtain using this interview will be used only for research purpose and also need to assure you that confidentiality is our main quality.

Therefore, requesting you politely for your cooperation to participate in this interview. You do have the right not to respond at all or to withdraw in the meantime, but your input has great value for the success of our objective If you are volunteer, will proceed to the interview.

Dear Sir/madam;

Did you agree _____

Did not agree _____

Thank you for your cooperation!!!

Anex2: Information Sheet

Adapted this from World Health Organization prepared by Research Ethics Review Committee (WHO ERC) which was prepared for Qualitative Studies(55)

Titled “**Identifying Barriers and Facilitator to Contact Investigation and Contact Tracing of TB** ”.

Name of Principle Investigator:-**Legesse Tesfaye**

Organization: Jimma University Institute of Health department of Health, Behavior and Society.

Information Sheet

Introduction

Research will be done on the “**Identifying Barriers and Facilitator to Contact Investigation and Contact Tracing of TB**” whom TB is very common in this district studying by Investigator from Jimma University studying of Masters of public health in Health Promotion and Behavior at Department of Health, Behavior and Society (HBS). You will get information and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research.

This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and you will take time to understand from explanation. If you have questions later, you can ask me

Purpose of the research

TB is making many people sick in your community. Researcher wants to find ways to stop this from happening. Researcher believes that you can help us by telling us what you know both about TB contact investigation and contact tracing and about local health practices in general. He wants to learn what people who live or work here know about the causes of TB, barrier and facilitators of TB and why some people get it. He also wants to know more about local health practices because this knowledge might help us to learn how to better control TB and improve contact tracing and contact investigation in this district

Type of Research Intervention

This research will involve your participation in an in-depth interview that will take about one and a half hour.

Participant Selection

You are being invited to take part in this research because feeling that your experience on contact investigation and contact tracing of TB as Health worker or as TB patient member or as community member (as responsible citizen) can contribute much to understanding and knowledge of local health practice. Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate all the services you receive at this Centre will continue and nothing will change. The choice that you make will have no bearing on your job or on any work-related evaluations or reports. You may change your mind later and stop participating even if you agreed earlier.

Procedures

You help to learn more about TB contact tracing and contact investigation in your community / health facility. You are inviting you to take part in this research project. If you accept, you will be asked to different question related to contact investigations and contact tracing

In-depth interview

You will participate in an interview with principal investigator. During the interview, you will sit down in a comfortable place at the your health facility office for health workers or at your or natural setting for TB clients. If it is better for you, the interview can take place in your home or a friend's home. If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else except advisors of this research will access to the information documented during your interview. The entire interview will be tape-recorded, but no-one will be identified by name on the tape. The tape will be kept in my computer which will be locked by security and transcribed data also secured. Your quotation and main finding will be presented for concerning body like Jimma university department of health, behavior and society, district and might be published, without mentioning your names and place where you are .The information recorded is confidential, and no one else except advisors of this research will have access to the tapes. The tapes will be destroyed after data transcribed and final presentation for department

Duration: The research takes place over one month in total. During that time, you will be visited once for interviewing. It will last for about some minutes.

Risks: in this research there will be not potential risk at you but it consume your time

Benefits: There will be no direct benefit to you, but your participation is likely to help to find out more about how to prevent and control TB and improve TB contact tracing and investigation in your community

Reimbursements: You will not be provided any incentive to take part in the research.

Confidentiality: Your information will not be shared to anyone outside of the research team. The information that collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researcher will know what your number is and your information will lock up with a lock and key in computer security. It will not be shared with or given to anyone except advisors of this research will have access to the information,

Sharing the Results: Nothing that you tell that will be not shared with anybody outside the research team, and nothing will be attributed to you by name. The knowledge that get from this research will be shared with you and your community. The findings will be presented for Jimma University, department of Health, Behavior and Society (HBS). After that researcher will publish the results so that other interested people may learn from the research

Right to Refuse or Withdraw: You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your job or job-related evaluations in any way. You may stop participating in the interview at any time that you wish without your job being affected. You have an opportunity at the end of the interview/discussion to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with notes or if not understand you correctly.

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following: Zeleke Mekonnen +251471120945: Email zeleke.mekonnen@ju.edu.et

This proposal has been reviewed and approved by Jimma University, institute of health, which is a committee whose task it is to make sure that research participants are protected from harm.

Consent form

You have been invited to participate in research about “**Identifying barriers and facilitators to contact investigation and contact tracing TB.**”

You have read the foregoing information, or it has been read to you. You have had the opportunity to ask questions about it and any questions. You have been asked and have been answered to your satisfaction. You consent voluntarily to be a participant in this study

Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

Statement by the researcher

Researcher have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands. Researcher confirm that the participant will be given an opportunity to ask questions about the study, and all the questions asked by the participant will be answered correctly and to the best of my ability. Researcher confirm that the individual will not be coerced into giving consent, and the consent has been given freely and voluntarily.

Researcher Name _____

Researcher Signature _____

Date _____

Day/month/year

Annex 3: Guidelines 1 In-depth interview for Health extension works.

Name of facility: _____

Interviewee code: _____

Date: _____

Started time _____

End time _____

1. Background information on informant

1.	Code	
2.	Sex	
3.	Age	
4.	Profession	
5.	Experience	
6.	Responsibility	

1. Do you know TB contact tracing and investigation to conducted in you kebele? Please tell me who are they (probing questions: Infectious pulmonary TB, has presumptive or confirmed drug-resistant TB, a child under 5 years of age, PLHIV)

2. What do you do for household or other contacts of index case in you kebele (role and responsibility HEW) probing questions: Identify the households of the index case, Conduct initial screening using symptom based TB screening questions, Identify those who require appropriate evaluation for TB at health facility, Refer contacts to the health facility whom (probing questions : Symptomatic contact of the index patient, Contacts who are living with HIV, Contacts who are under-five children, Contact of an index case with presumed/confirmed DR-TB))

3. In what ways are contacts informed about and prepared for screening TB? What kind of information do give to them? Probing: disease process, transmission, treatment and prevention.

4. How you screen contacts of household at your kebele and what are challenges to screen?

5. How do you refer your patient’s contacts and what are challenges to referral contacts?

6. How contacts perceive contact tracing and investigation of TB in your kebele? Probing: how often, reason, what do you do about the contact tracing and contact in the guidelines you use

to trace always available? probing questions (Clear steps of contact tracing and contact investigation)

7. Why some contacts not screened in your kebele?(probing social stigma, social support cost,)
8. Why some house hold contacts not respect appointment in your kebeles? probing questions (appointment card, busy, considering TB)
9. From your experience mostly bring their house hold contacts women and men, older clients and younger clients (Educational level ,employment, marital status, cost, time, distance to the health facility, having or not having a treatment-support partner (Family and social support Risk behaviors (using alcohol, drug, and smoking.)
10. How your community perceived contact tracing and investigation of TB in your kebele?
11. How was client's motivation and attitude for contact investigation and tracing?
12. How you and your kebele community to support your index TB case to bring their contact?
13. Have you ever been afraid of being infected with TB through your work? What were you specifically afraid about? How do you feel now about the TB-infection risks? Do you take any extra precautions when working with them?
14. Main challenges you are face more generally in your work? (If necessary, prompt workload, stress, Policy.
15. What say you role and responsibility contact investigation and tracing? Why? Which responsibility obstacles you.
16. Is there anything you would like to see done differently in this facility? If yes, what?
17. How do you see support for contact tracing a contact investigation? Community, district, health center....
18. What do you think could be done to improve the contact tracing and contact investigation?
Is there anything else you would like to tell me or ask me?

Anex4: Guidelines 2. In-depth interview for TB focal.

Name of facility: _____

Interviewee code: _____

Date: _____

Started time_____

End time_____

Contents.

Background information on informant

1	Code	
2	Sex	
3	Age	
4	Profession	
5	Experience	
6	Responsibility	

- 1) Do you know contact tracing and investigation to conducted in you kebele? Please tell me who are they probing (infectious pulmonary TB, has presumptive or confirmed drug-resistant TB, a child under 5 years of age, PLHIV)
- 2) what do you do if for household or other house hold contactsof index case(role and responsibility TB focal) probing)
 - a. (initiate contact tracing index case is registered to receive TB treatment
 - b. Interview the index case to assess the need for contact tracing (When? up on registering a case of pulmonary TB for treatment)
 - c. Educate the patient on the need for initiating contact tracing and investigation
 - d. If household/close contact are identified, communicate the responsible HEW)
 - e. The TB focal person should arrange for evaluation of referred cases.
- 3) What should be done for exposed contacts? (Appropriate clinical Evaluation and Management of TB exposed house hold contacts)
- 4) During evaluation what kinds information you registries? And why?
 - a. Age of the person

- b. HIV status of the contact
 - c. Risk for harboring drug resistant TB in the source
 - d. Presence of Active Tuberculosis
6. How you request index case to bring their house hold contactsTB?
 7. Why contact investigation and tracing not done for some index case and house hold contacts of TB?
 8. Why some index case did not their contact for contact investigation and tracing? Probing questions (Distance, stigma, motivation, attitude social support, cost considering...)
 9. Who mostly bring house hold contacts and who didn't bring? probing questions (women and men, older clients and younger clients ,educational level, employment, marital status, cost, time, conflict to clients, distance to the health facility, Having or not having a treatment-support partner (Family and social supports, use adherence aid
 10. Why some HEW do not conduct contact screening and refer house hold contacts at your cluster? Probing questions (Training, motivation, commitment, attitude, work overload.....)
 11. How your community perceived person with TB?
 12. What are the main challenges you are face more generally in your work? probing questions (If necessary, prompt workload, stress, Policy)
 13. What are challenges for contact investigation and tracing at your cluster?
 14. Have you ever been afraid of being infected with TB through your work? What were you specifically afraid about? How do you feel now about the TB-infection risks? Do you take any extra precautions when working with them? Is there anything else you would like to tell me or ask me?

Thank you for your time and cooperation

Anex5: Guideline 3 in-depth interview with index TB patients

Name of facility: _____

Interviewee coder: _____

Date: _____

Started time _____

End time _____

Note: At the beginning: greeting (to create rapport), introduce to the study, statement of confidentiality, get consent form.

Contents.

1. Background information of Index cases

1	Code	
2	Sex	
3	Age	
4	Religion	
5	Occupation	
6	Category of TB	

1. How to you perceive TB? Probing questions (: cause of TB infection, transmission TB, treatment of TB, prevention for themselves and others, etc.)
2. Why you decide to go health facility?
3. How you community perceive about TB? Probing questions (cause of TB infection, transmission TB, treatment of TB, prevention for themselves and others, etc.)
4. Did you disclosed yourself for family and others about your TB? Why?
5. Did you family screened for TB after you started treatment ,Please can you tell, any one from your family screened about TB? Is there anyone not screened for TB and why?
6. What do you think happens in your family if your family not screened for TB?
7. How do seen support from family and social support? Why? Financial and emotional support
8. What do you perceive as the problem regarding taking screening and contact investigation your family /house hold contacts for TB? Why?

9. What are challenges you faced at health facility when you bring your family contacts?
(Waiting time, distance, shortage of drug, cost....
10. How do you see service at health post and health center?(health professional commitment ,attitude, motivation, respecting clients ,feel listened to, state your problems and ask questions, treated with respect, trust the health workers, privacy during consultation and counseling)
11. What have you and/or your health facility, Hews and other community members had to give up in order to be able to take your family for screening?
12. What do you think could be done to improve this? Do you have any questions for me?

Thank you for your time and cooperation!

Anex6: Guideline 4 in-depth interview with house hold contacts of patients

Name of facility: _____

Date: _____

Started time_____

End time_____

Note: At the beginning: greeting (to create rapport), introduce to the study, statement of confidentiality, get consent form.

2. Background information of Index cases

1	Code	
2	Sex	
3	Age	
4	Religion	
5	Occupation	
6	Relation with index case	

1. How to you perceive TB? Probing questions (: cause of TB infection, transmission TB, treatment of TB, prevention for themselves and others, etc.)
 2. Did you screened for TB after you started treatment? Why?
 3. What happens to you if you are not screened for TB?
 4. How do seen support from family and social support? Why? financial and emotional support
 5. What do you perceive as the problem regarding taking screening and contact investigation your family /house hold contacts for TB? Why?
 6. What challenges you faced at health facility when you go for screening? (Waiting time, distance, shortage of drug, cost....
 7. How do you see service at health post and health center?(health professional commitment ,attitude, motivation, respecting clients ,feel listened to, state your problems and ask questions, treated with respect, trust the health workers, and counseling)
 8. What have you and/or your health facility, Hews and other community members had to give up in order to be able to take your family for screening?
 9. What do you think could be done to improve this? Do you have any questions for me?
- Thank you for your time and cooperation*

Annex7: Guideline interview district TB Coordinator

Name of District: _____

Date of interviewed: _____

Note Interviewer appropriately greets person to be interviewed, explains purpose of the interview. The main purpose of these interviews shall be to find out to what extent contact tracing and contact investigation of important to TB prevention and control, and to identified barriers and facilitators to contact tracing and contact investigation.

1. How was your district TB activities in general?
2. What are factor affecting contact tracing and contact investigation of you organization? (probing questions :budget, standardized checklist, supportive supervision, training, sensitive of guideline to contact tracing and contact investigation, monitoring and evaluation
3. Do you think your district health worker conducting contact tracing and contact investigation as expected? probing questions (What are barriers and facilitator to health worker to conduct contact tracing and contact investigation of TB (Training, staff status, support supervisor, know role and responsibility, work over load, motivation ,commitment)
4. Do you think your district index TB client and contact to adhere in contact tracing and contact investigation? What factors affecting index TB client and contact to adhered to contact tracing and contact investigation in your district? (Probing distance to health facility, Health workers requesting, Cost consideration, Quality of care, Stigma, Religious, knowledge)
5. How your district community perceive TB? (Transmission, treatment, cause...etc.)
6. Who participate in contact tracing and contact investigation of TB from community (HAD, religious leaders, community leaders....etc.)
7. How community engagement in TB control specifically contact tracing and contact investigation? (Support of TB patient, actively participation on TB activities , Referring of TB patient?
8. Do you think your district community participate in contact tracing and contact investigation? What are factors affecting community engagement in contact tracing and contact investigation of TB

9. Is there any strategies put in place to enhance adherence of Health works and TB patients? Why?
10. Is there any organization and any one working on contact tracing and contact investigation other than government?
11. Is there any challenges for contact tracing and contact investigation? How it affect?
12. How district monitor contact investigation and tracing activities? and what challenges
13. How to conduct supportive supervision to health post and health center? And what are challenges?
14. What strategies are being put in place to improve contact tracing and contact investigation?

Is there comment to add or any issue not discussed?

Thank you for your time and cooperation!

Annex 8: document review Checklist

S.No	Items to be check	Yes or no	Remark
1	Guidelines		
2	INH		
3	Is thereregistration book contact screening book at health center and health post		
4	Is HMIS reporting tools included Contact screening		
5	Total number TB patient (PTB+, MDR, under five, and HIV) from June 2018-April2019		
6	Total number interview index whose household screened		
7	Number house hold		
8	Number of house hold screened		
9	Number of house diagnose TB		
10	Number of under-five children		
11	Number of under-five screened		
12	Number of under-five diagnosed with TB		
13	Number under five linked to INH		
14	Is there supervision checklist for contact investigation		
15	Is supervision checklist for contact investigation and tracing of TB appropriately filled		
16	Referral format		
17	Supporting IEC material		

Amharic version

የጅም ዩኒቨርሲቲ

ጤና ኢንስቲትዩት ፣ የህብረሰብ ጤና ፋካልቲ፣

ጤና፣ ስናባህሪ እና ማህበረሰብ ድጋፍ ማዕከል

ሰላም እንደምን አለህ? ጊዜ በመውሰድዎ እናመሰግናለን። ተመራማሪ የጅም ዩኒቨርሲቲ የድህረ ምረቃ ተማሪ። የጅም ዩኒቨርሲቲ የድህረ ምረቃ ምርምር ቡድን በመወከል እዚህ ተመራማሪ ነው **Identifying “and Facilitators to Contact investigation and Contact tracing of Tuberculosis in Anlemo District:”** በዚህ ጥናት ለመሳተፍ ተመርጠዋል እናም የጥናት ግቦችን ለማሟላት ጥያቄ ላቀረቡ ጥያቄዎች ጠቃሚ መረጃ ለመስጠት ይችላሉ። ሆኖም ምላሾች በሚስጥር ይያዛሉ። በሪፖርት ውስጥ ያካተቱ ማናቸውም መረጃዎች እንደ መልስ ሰጪው እንደማይለይ ያረጋግጡ። በምትኩ ስምዎ ወይም የመለያ መረጃዎ አይመዘገብም ምክንያቱም ኮዶችን ይጠቀማል። ይህንን ቃለ-መጠይቅ መጠቀም የሚቻለው መረጃ ለጥናት ዓላማ ብቻ ጥቅም ላይ የሚውል ሲሆን ምስጢራዊነት ዋናው ዋናው መሆናችንን ያረጋግጣል። ስለዚህ በዚህ ቃለ መጠይቅ ለመሳተፍ ትብብርዎን እየጠየቁ እስከመጨረሻው ምላሽ ላለመስጠት ወይም ለመቋረጥ መብት አለዎት። ነገር ግን ለግብዓት ግስጋሴ ግብአቶች ትልቅ ዋጋ ይኖራቸዋል።

ፈቃደኞች ከሆኑ ወደ ቃለ-መጠይቅ ይቀጥላል.

እስማማሁ? _____

አልስማማሁ? _____

ለትብብር እናመሰግናለን !!!

ለበጠ መረጃ

ማንኛውም ጥያቄ ካለዎት አሁን ወይም በኋላ መጠየቅ ይችላሉ። ጥያቄዎችን ኋላ መጠየቅ ከፈለጉ ከሚከተሉት ውስጥ አንዱን ማነጋገር ይችላሉ Zeleke Mekonnen +251471120945: Email zeleke.mekonnen@ju.edu.et

የስምምነት ቅጽ

እርሷ “Identifying barriers and facilitators to contact investigation and contact tracing TB”

በሚል በጥናት ላይ እንዲሳተፉ ተጋብዘዋል።

ከላይ የተጠቀሱትን መረጃዎች አንብበዋል ወይም ተነቧል ። ስለ ጉዳዩ እና ስለማንኛውም ጥያቄ ለመጠየቅ ዕድል አግኝተዋል። ጥያቄ ሲጠየቁ እና ለርስዎ ፍላጎት ተፈልጎልዎታል። በዚህ ጥናት ተሳታፊ ለመሆን በፈቃደኝነት ተስማምተዋል።

ታሰተፍ ስም _____

ፊርማ _____

ቀን _____

ቀን / ወሩ / አመት

ተመራማሪው የመረጃ

ተመራማሪው የመረጃ ማቅረቢያውን ተሳታፊ ለሆነ ተሳታፊ በትክክል በማንበብ ተሳካዬው ተሳታፊው እንደሚረዳው እርግጠኛ ነኝ። ተሳታፊዎች ስለ ጥናቱ ጥያቄዎችን ለመጠየቅ ዕድል እንደሚሰጣቸው ያረጋግጣሉ፤ እና በአመልካቹ የተጠየቁትን ጥያቄዎች በሙሉ በትክክል እና በተቻለ መጠን እንድንመልስ ይደረጋል። ተመራማሪው ግለሰቡ በግዳጅ ፈቃድ እንደሚሰጥና ፈቃደኝነት በነፃ እና በፈቃደኝነት እንደቀረበ ያረጋግጣል።

ተመራማሪ ስም _____

ተመራማሪ ፊርማ _____

ቀን _____

Annex 3: Guidelines 1 In-depth interview for Health extension works.

ተቋሙ ስም: _____

ቀን: _____

የጀመረች ሰዓት _____

ያለቀባችሁ ሰዓት _____

1. መሠረተኛ መረጃ

1.	ከድ	
2.	ፆታ	
3.	ዕድሜ	
4.	ሙያ	
5.	ልምድ	
6.	ሃላፊነት	

1. በቀበሌ ውስጥ የቲቢ ክትትል መከታተያ እና ምርመራን ያውቃሉ? እባክዎን እነማን እንደሆኑ ይንገሯቸው (የክትባት ጥያቄዎች, ተላላፊ የሰምባ ነቀርሳ, መድሃኒት መቋቋም የሚችል መድሃኒት, እድሜያቸው ከ 5 ዓመት በታች የሆነ ህፃናት, PLHIV)
2. በቀበሌ ውስጥ ለቤተሰብ ወይም ሌሎች አብረው የሚኖሩ ሰዎች ፤ምን ያደርጋሉ (ሚና እና ሃላፊነት HEW) ታሰቢ ጥያቄዎች: የindex case ቤተሰቦች መለየት ፤ ቲቢ የማጣሪያ ምርመራ ጥያቄዎች በመጠቀም የመጀመሪያ ምርመራ ማድረግ ፤ በጤና ተቋማት ውስጥ ለቲቢ ተገቢ ምርመራ ማድረግ የሚያስፈልጋቸውን መለየት ፤ ወደ ጤና ተቋማት አብረው የሚኖሩ ሰዎች ማስተላለፍ (ታሰቢ ጥያቄዎች: ከኤች አይ ቪ ጋር አብረው የሚኖሩ ሰዎች፤እድሜያቸው ከአምስት በታች የሆኑ ልጆች ፤የተረጋገጠ / የተረጋገጠ የ DR-MDR)
3. ስለ ቲቢ የማጣሪያ መረጃን በተመለከተ በየትኞቹ መንገዶች ሊኖሩ ይችላሉ? ምን ዓይነት መረጃ ይሰጣቸዋል? ታሰቢ ጥያቄዎች: በሽታን ሂደት, መተላለፍ, ህክምና እና መከላከያ ናቸው
4. በቀበሌ አብረው የሚኖሩ ሰዎች እንዴት ይለያቸዋል እና በማለያት ላይ ያሉ ችግሮችስ?
5. ከቲቢ የታካሚዎ አብረው የሚኖሩ ሰዎች እንዴት ምትልኩት እና ወደከቲቢ በሽታኛ አብረው የሚኖሩ ሰዎች መሄጃዎች ለመላክ ምን ተፈታታኝ ሁኔታዎች አሉ?

6. በቀበሌዎ ውስጥ የቲቢ በሽታ ክትትል እና ምርመራን የሚመለከቱት እንዴት ነው? ለመከታተል በሚጠቀሙት መመሪያ ውስጥ ስለ መገናኛ መከታተያ እና ግንኙነት ምን እናገኛለን? ለመከታተል በሚጠቀሙት መመሪያ ውስጥ ስለ መገናኛ መከታተያ እና ግንኙነት ምን እናገኛለን?
7. ለምንድነው አንዳንድ ከቲቢ በሽታኛ አብረው የሚኖሩ ሰዎች ለቲቢ ምርመራ አያደርግም? (በማህበራዊ መገለል & በማህበራዊ ድጋፍ & ወጪ)
8. ለምንድነው አንዳንድ ከቲቢ በሽታኛ አብረው የሚኖሩ ሰዎች ቀጠሮዎችን አያከብሩም? (የቀጠሮ ካርድ & በሥራ መጠመደ &)
9. ከእርስዎ ልምድ ብዙውን ጊዜ ከቲቢ በሽታኛ አብረው የሚኖሩ ሰዎች ያመጣል (ሴቶችና ለወንዶች, ለአረጋዊ የትምህርት ደረጃ, ሥራ, የጋብቻ ሁኔታ, ዋጋ, ጊዜ, ለጤና ተቋማት, የሕክምና ድጋፍ ሰጪ (ወይም የቤተሰብ) እና የማኅበራዊ ድጋፍ ድጋፍ (ወይም አልያም አልኮል, ዕፅ እና ሲጋራ ማጫስ)
10. በቀበሌዎ ውስጥ የቲቢ በሽታ ክትትል እና ምርመራን ማህበረሰቡ እንዴት እንዳየ ነው?
11. ከቲቢ በሽታኛ አብረው የሚኖሩ ሰዎች ለቲቢ በሽታ ክትትል እና ምርመራ ያለው ማበረታቻ እና አመለካከት እንዴት ነበር?
12. አንቴ እና የቀበሌ ማህበረሰብ Index case አብረው የሚኖሩ ሰዎች ለክትትል እና ለምርመራን እንደመጣ እንዴት ትደገፍላችሁ?
13. በስራዎ በኩል በቲቢ ያስይዘዎታል? ምን ፈሩ ነበር? ስለ ቲቢ ኢንፎክሽን አደጋዎች አሁን ምን ይሰማዎታል? ስለ ቲቢ ኢንፎክሽን አደጋዎች አሁን ምን ይሰማዎታል? ከእነሱ ጋር አብሮ በመስራት ማንኛውንም ተጨማሪ ጥንቃቄዎችን ይወሰዳል?
14. በአጠቃላይ በስራዎ ውስጥ የሚገጥሙዎት ዋና ዋና ተግዳሮቶች? (አስፈላጊ ከሆነ, የስራ ጫና, ጭንቀት, ፖሊሲ)
15. የእርስዎን ሚና እና ሃላፊነት እንዴት ያይታል? ለምን? የትኛው ሀላፊነት እርስዎን ይከብደል?
16. በዚህ ተቋሚ ላይ የተለየ ሠርቶዎ? አዎን ከሆነ, ምን?
17. ለክትትል እና ለምርመራ ተመርኩዘ እንዴት ድጋፍ ያገኛሉ? ማህበረሰብ, ወረዳ, የጤና ማዕከል
18. ክትትል እና ምርመራ ለማሻሻል ምን ማድረግ ይቻላል ብለው ያስባሉ?

ሌላ ሊነግሩን ወይም ሊጠይቁኝ የሚፈልጉት ሌላ ነገር አለ?

ለትብብሮ እናመሰግናለን !!!

Anex4: Guidelines 2. In-depth interview for TB focal.

ተቋሙ ስም: _____

ቀን: _____

የጀማረት ሰዓት _____

ያለቀባት ሰዓት _____

19. መሠረተዉ መረጃ

1.	ከድ	
2.	ፆታ	
3.	ዕድሜ	
4.	ሙያ	
5.	ልምድ	
6.	ሃላፊነት	

1) በቀበሌ ውስጥ ለቤተሰብ ወይም ሌሎች አብረው የሚኖሩ ሰዎች የሚደረገው የመከታተል እና ማጣሪያ ምን እንደሆነ ያውቃሉ? እባክዎን ይንገሩኝ (በሽታው ተላላፊ የሰምባ ነቀርሳ, መድሃኒት መቋቋም የሚችል መድሃኒት ወይም የ 5 ዓመት እድሜ ላላቸው ህፃናት, PLHIV)

2) ለቤተሰብ ወይም ሌሎች አብረው የሚኖሩ ሰዎች ምን ያደርጋሉ? (ሚና እና ሃላፊነት)

1. ሌሎች አብረው የሚኖሩ ሰዎችን መፈለጊያ እና ምርመራን ቲቢ የገኘትሰው ለመድሃኒት ስመዘገብ ወድያውኑ መጀመር

2. ሐኪሙ አብረው የሚኖሩ ሰዎች መፈለጊያ እና ምርመራን ለማነሳሳት አስፈላጊውን ፍላጎት እንዲያሳጣ ማድረግ

3. አብረው የሚኖሩ ሰዎች ተለይቶ ከታወቀ በኋላ ኃላፊነት ያለው የጤና ኤክስቴንሽን ይልካሉ)

4. የTB ተቀጣጣሪ ግለሰብ(TB focal) ጉዳዩን በተመለከተ ምርመራን ያመቻቻል.

3) ለተጋለጡና አብረው የሚኖሩ ሰዎች ምን መደረግ አለበት? (ተገቢው የቲቢ ምርመራ እና የቲቢ መጋለጥ እውቂያዎች)

4) በምርመራ ወቅት ምን ዓይነት መረጃዎችን ይመዘግባል? እና ለምን?

a. ግለሰብ እድሜ

- b. HIV ሁኔታ
- c. መድሃኒትን የሚቋቋም መድሃኒት ለመያዝ አደጋ መንስኤ
- d. ቲቢ በሽታ መኖሩ

6. የቲቢ በሽታኞች አብረው የሚኖሩ ሰዎች እንዲመጡላቸው እንዴትምን ምን ያርጋሉ?
7. ከቲቢ በሽታኞች አብረው የሚኖሩ ሰዎች ለምን ምርመራ አልተሠራም?
8. የተወሰኑ የቲቢ በሽታኞች አብረው የሚኖሩ ሰዎችን ለምርመራ እና መከታተያቸው ለምን አለመጡ? ጥያቄዎችን ለመጠየቅ (ርቀት, መገለል, ማነሳሳት, አመለካከት ማህበራዊ ድጋፍ, ወጪን ...)
9. ከቲቢ በሽታኞች አብረው የሚኖሩ ሰዎች አዘብኛ ጊዜ ለማን ያመጣሉ እና ማን አየጣም? (ሴቶችና ወንዶች, በዕድሜ የገፋ ደንበኞች እና ወጣት ደንበኞች, የትምህርት ደረጃ, ቅጥር, የጋብቻ ሁኔታ, ዋጋ, ጊዜ, ግጭት, ወደ ጤና ተቋማት ቀርበው, የሕክምና ድጋፍ ሰጪ (የቤተሰብ እና ማህበራዊ ድጋፍ) የተጣራ እርዳታን ይጠቀሙ
10. የጤና ኤክስቴንሽኖች ሠራተኞች ለምን ከቲቢ በሽታኞች አብረው የሚኖሩ ሰዎች ለይቶ አይልኩም? ጥያቄዎችን ማካሄድ (ስልጠና, ተነሳሽነት, ቁርጠኝነት, አመለካከት, የስራ ጫና?
11. ማህበረሰብዎ በቲቢ በሽታ የተያዘው እንዴት ነው?
12. በአጠቃላይ በስራ በታዎ ውስጥ ያሉት ዋና ዋና ችግሮች ምንድን ናቸው? (አስፈላጊ ከሆነ የሥራ ጫና፣ ጭንቀት፣ ፖሊሲ)
13. ለምርመራ እና በትኩረትዎ መፈተሽ ምን ምን ችግሮች አሉት?
14. በሥራዎ በኩል የቲቢ በሽታ መያዣ ይፈጠርብዎታል? ምን ፈሩ ነበር? ስለ ቲቢ ኢንፌክሽን አደጋዎች አሁን ምን ይሰማዎታል? ከእነሱ ጋር አብሮ በመስራት ማንኛውንም ተጨማሪ ጥንቃቄዎችን ይወሰዳል?

ሌላ ሊነግሩን ወይም ሊጠይቁኝ የሚፈልጉት ሌላ ነገር አለ?

ለግዜ እና ትብብርዎ ከልብ እናመሰግናለን

Anex5: Guideline 3 in-depth interview with index TB patients

ተቋሙ ስም: _____

ቀን: _____

የጀመረች ሰዓት _____

ያለቀባች ሰዓት _____

መሠረተዉ መረጃ

1.	ከድ	
2.	ፆታ	
3.	ዕድሜ	
4.	ሀይማኖት	
5.	ስራ	
6.	Category of TB	

1. እርሷ ስለቲቢን በሽታን እንዴት ይገነዘባል ? ጥያቄዎችን ለመጠየቅ (የቲቢ ኢንፌክሽን መንስኤ, ቲቢ ማስተላለፍ, የቲቢ ሕክምና, መከላከያ ወዘተ)
2. ለምንድን ነው ወዳ የጤና ተቋማት ለመሄድ የወሰንከው?
3. ማህበረሰቡ ስለ ቲቢ በሽታን እንዴት በሽታን ይገነዘባል? ጥያቄዎችን ለመጠየቅ (የቲቢ ኢንፌክሽን መንስኤ, ቲቢ ማስተላለፍ, የቲቢ ሕክምና, ለራስ እና ለሌሎች መከላከያ ወዘተ)
4. ለቤተሰብ እና ለሌሎች ስለ ራስዎን ቲቢ ይነግሩዎታል? ለምን?
5. ህክምናውን ከጀመሩ በኋላ ቤተሰብ ለቲቢ ምርመራ ተደርጎልዎት, እርስዎ የቤተሰብዎን አባላት ስለ ቲቢ ማጣሪያ ያሳውቁዎታል? ለቲቢ ምርመራ ያልተደረገበት ሰው አለ እና ለምን?
6. ቤተሰብዎ ለቲቢ ምርመራ የማያደርግ ከሆነ በቤተሰብዎ ውስጥ ምን ሊሆን ይችላል ብለዉ ያስበሉ?
7. ቤተሰብ እና ማህበራዊ እንዴት ይደግፋል? ለምን? የገንዘብ እና ስሜታዊ ድጋፍ
8. የቤተሰብዎን / አብረው የሚኖሩ ሰዎችን ቲቢን ከማጣራት ጋር የተያያዘ ችግር ምን እንደ ሆነ ያስተውላሉ? ለምን?

9. የቤተሰብ ለቲቢ ማጣሪያ ምርመራ በሚያመጡበት ጊዜ በጤና ተቋማት ውስጥ ምን ተፈታታኝ ሁኔታዎች አሉ? (ይጠብቁ ጊዜ, ርቀት, የአደገኛ ዕጽ እጥረት, ወጭ)
10. የጤና ኬላና የጤና ጤቢያ አገልግሎት እንዴት ይመለከታሉ? (የጤና ባለሙያ ቁርጠኝነት, አቋም, ተነሳሽነት, ማክበር, ችግራቸውን መከታተል, ችግሮችን መግለጽ እና ጥያቄዎች መጠየቅ, በክብር መታከም, የጤና ባለሙያዎችን ማመን, የምክር አገልግሎት)
11. ቤተሰቦችዎ የማጣሪያ ምርመራ ለማድረግ ከፈለጉ እርስዎ እና / ወይም የጤና እንክብካቤ ሰጪዎ, የጤና ኤክስቴንሻኖች ሠራተኞች እና ሌሎች የማህበረሰብ አባላት ምንድን ማድረግ አለባቸው?
12. ይህን ለማሻሻል ምን ሊደረግ ይችላል ብለው ያሰቡት?
 ለኔ ምንም ጥያቄዎች አሉዎት?

ለግዜ እና ትብብርዎ ከልብ እናመሰግናለን!

Anex6: Guideline 4 in-depth interview with contacts of patients

ተቋሙ ስም: _____

ቀን: _____

የጀማሪት ሰዓት _____

የላቀባት ሰዓት _____

7.	ኮድ	
8.	ፆታ	
9.	ዕድሜ	
10.	ሀይማኖት	
11.	ስራ	
12.	ከቲቢ ተካሚ የላው ዝምድና	

1. እርሷ ስለቲቢን በሽታን እንዴት ይገነዘባል ? ጥያቄዎችን ለመጠየቅ (የቲቢ ኢንፎክሽን መንስኤ, ቲቢ ማስተላለፍ, የቲቢ ሕክምና, መከላከያ ወዘተ)
2. ለቲቢ ምርመራ የተጎዋል? ለምን ለምንድን
3. ለቲቢ ምርመራ ካልታዩ ምን ይደርስብዎታል?
4. ከቤተሰብ እና ማህበራዊ እንዴት ይደግፋል? ለምን? የገንዘብ እና ስሜታዊ ድጋፍ
5. ምርመራ ከማድረግ ጋር የተያያዘ ችግር ምን እንደ ሆነ ያስተውላሉ? ለምን?
6. ለቲቢ ማጣሪያ ምርመራ በሚያመጡበት ጊዜ በጤና ተቋማት ውስጥ ምን ተፈታታኝ ሁኔታዎች አሉ? (ይጠብቁ ጊዜ, ርቀት, የመድሐኒት እጥረት , ወጭ)?
7. የጤና ኬላና የጤና ጤቢያ አገልግሎት እንዴት ይመለከታሉ? (የጤና ባለሙያ ቁርጠኝነት, አቋም, ተነሳሽነት, ደንበኞች ማክበር, ችግራቸውን መከታተል, ችግሮችን መግለጽ እና ጥያቄዎች መጠየቅ, በክብር መታከም, የጤና ባለሙያዎችን ማመን, የምክር አገልግሎት)?
8. ቤተሰቦችዎ ለምርመራዎ እንዲመጡ ለማድረግ, እርስዎ እና / ወይም የጤና አገልግሎት ሰጪዎ, ምን ያህሉ እና ሌሎች የማህበረሰብ አባላት ምን ለክሉ መስራት አለባቸው?
9. ይህን ለማሻሻል ምን ቢደረግ ይሻላልብለው ያሰበሉ?

ለኔ ምንም ጥያቄዎች አሉዎት?

ለግዜ እና ትብብርዎ ከልብ እናመሰግናለን!!

Annex7: Guideline interview district TB Coordinator

7.	ከድ	
8.	ፆታ	
9.	ዕድሜ	
10.	ሙያ	
11.	ልምድ	
12.	ሃላፊነት	

1. በአጠቃላይ የዲስትሪክት ቲቢ እንቅስቃሴዎ እንዴት ነበር?
2. የዲስትሪክታችሁ ለቲቢ ምርመራ ሥራ ላይ መናቆ የሚሆኑ ነገሮች ምንድን ናቸው? (ጥያቄዎች ፡-በጀት፣ ቼክ ልስት፣ ድጋፍ ወይንም ክትትል ፣ ስልጠና፣ ጋይድ ላይን፣ መከታተል ና ግምገማ)
3. የዲስትሪክቱ የጤና ባለሙያ እንደ ተጠበቀው የምርመራ ሥራ የእሳብ ነው ብላው ይያስበሉ? (ለጤና ባለሙያዎች የቲቢ ክትትል እና ምርመራ ሥራ እንዳሳቡ የሚያዳርግ እንቅፋቶች (ስልጠና፣ የሰራተኞች ሁኔታ፣ የድጋፍ ሰጪ / ሱፐርቫይዘር)፣ ሚና እና ሃላፊነት ከማወቅ፣ ተነሳሽነት፣ ቁርጠኝነትን)
4. በዲስትሪክቱ ውስጥ የቲቢ የምርመራ ሥራና መፈለጊያ ሥራ ምን ዓይነት ነገሮች ምንድን ናቸው? (ርቀት፣ የጤና ባለሙያዎች ይጠይቃሉ ፣ ወጪ ዋጋ፣ የአገልግሎት ጥራት፣ ማግለል፣ ሃይማኖታዊ፣ ዕውቀት)
5. የዲስትሪክቱ ማህበረሰብ ቲቢ ምን እንደሆነ ያስተውላል? (ማስተላለፊያ፣ ህክምና፣ ምክንያት ... ወዘተ.)
6. ከማህበረሰብ በቲቢ ምርመራና በክትትል ማን ይሳተፋል (HAD፣ የሃይማኖት መሪዎች፣ የማህበረሰብ መሪ ... ወዘተ ...).
7. በቲቢ ቁጥጥር ውስጥ የማህበረሰብ ተሳትፎ በተለይም የመከታተያ እና አብረው የሚኖሩ ሰዎች ምርመራን እንዴት ያካትታል? (የቲቢ ሕመምተኛ ድጋፍ ፣ በቲቢ እንቅስቃሴዎች ላይ በንቃት ተሳትፎ፣ የቲቢ ሕመምተኛን ማላክ)

8. የእርሶ ዲስትሪክት ማህበረሰብ የመከታተያ እና አብረው የሚኖሩ ሰዎች ምርመራን ይሳተፋሉ? በማህበረሰብ ተሳትፎ ላይ ተጽዕኖ የሚያደርጉ ነገሮች ምንድን ናቸው?
9. የጤና በላሙያዎች እና የቲቢ ሕመምተኞችን የመከታተያ እና አብረው የሚኖሩ ሰዎች ምርመራን ሥራ ለማሻሻል ምን ስትራቴጂዎች አሉ? ለምን?
10. ከመንግስት ውጪ የሚሰሩ መንግስት ያልኑ ድርጅት አሉ?
11. አብረው የሚኖሩ ሰዎች ለ መፈለጊያ እና ለ ምርመራዎች ላይ ያሉ ችግሮች ምንድን ናቸው? እንዴት ተጽዕኖ ይኖረዋል?
12. አብረው የሚኖሩ ሰዎች የመፈለጊያ እና ምርመራ ሥራ አፃፃፍም እንዴት ይካተታሉ? ፈተናዎችስ ምንድን ናቸው?
13. የጤና ኬላና የጤና ጤቢያ አገልግሎት ድጋፍ ክትትል እንዴት እየካሄድዳቹ ነው? ፈተናዎችስ ምንድን ናቸው?
14. መከታተያ እና የመገኛ ቅኝት ለማሻሻል ምን ዓይነት ስልቶች እየሰሩ ናቸው?
 ለማከል ወይም አስተያየት ያልተሰጠበት ነገር አለ?

ለግዜ እና ትብብርዎ ከልብ እናመሰግናለን

