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STANDARD OPERATING PROCEDURES FOR TB CASE DETECTION FOR GHANA

March 2010

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STANDARD OPERATING PROCEDURES FOR TB CASE DETECTION FOR GHANA

March 2010

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Foreword

These Standard Operating Procedures (SOPs) are a set of simple pocket reference tools aimed at guiding health workers in all departments of health care facilities to improve TB case detection. They are also useful to community health workers.

The objective of these SOPs is to standardise and optimise TB case detection practices in health care facilities and communities in Ghana. The SOPs are based on various guidelines of the National Tuberculosis Control Programme (NTP) and the World Health Organisation (WHO).

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Director General
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Acknowledgments

These SOPs and accompanying tools for improving tuberculosis case detection in Ghana are the result of collective efforts of many individuals working within and outside the country in support of the NTP.

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Dr. Frank Bonsu
Programme Manager, NTP

Acronyms and Abbreviations

AFB:	Acid-fast Bacilli
AIDS:	Acquired Immunodeficiency Syndrome
ART:	Antiretroviral Therapy
CBO:	Community Based Organisation
CHW:	Community Health Worker
CPT:	Cotrimoxazole Preventive Therapy
DTC:	District TB Coordinator
DOTS	Directly Observed Treatment Short Course
EQA	External Quality Assurance
HF:	Health Facility
HFTT:	Health Facility TB Team
HIV:	Human Immunodeficiency Virus
IPD:	In-patient Department
IPT:	Isoniazid Preventive Therapy
ITC:	Institutional Tuberculosis Coordinator
MDR TB:	Multidrug-Resistant Tuberculosis
MSH:	Management Sciences for Health
NGO:	Non-governmental Organisation

NPO	National Professional Officer
NTP:	National Tuberculosis Programme
OPD:	Out-patient Department
PCP:	Pneumocystis Carinii Pneumonia
PLHIV:	People Living with HIV and AIDS
PPM:	Public-Private Mix
SOPs:	Standard Operating Procedures
SS:	Sputum Smear
TB:	Tuberculosis
TBS:	Tuberculosis Suspect
TBSI:	Tuberculosis Suspect Identified
USAID	United Agency for International Development
WHO:	World Health Organisation

Introduction 1.0

1.1 TB case detection in Ghana

The World Health Organisation (WHO) estimates that Ghana is detecting only 26% of all forms of tuberculosis (TB) and 36% of smear positive TB cases. This is well below the African regional average rate of 47% and WHO target of 70%. Despite a slight increase of notified TB cases from 12,471 in 2006 to 14,479 in 2008, TB case detection rate in Ghana has not significantly increased over the years.

1.2 Reasons for low TB case detection

The comprehensive review of the Ghana National TB Programme (NTP) in 2007 and the National Tuberculosis Health Sector Strategic Plan for Ghana (2009-2013) clearly identified low TB case detection as one of the main challenges facing TB control in Ghana. The NTP is planning to conduct a prevalence survey to determine the true magnitude of TB in Ghana. The NTP has identified other possible reasons for low case detection in Ghana. Broadly, these potential reasons for the low TB case detection can be categorised into three main groups:

- Factors related to knowledge, attitude and practice of the community
- Factors related to the access to the health care facilities
- Factors related to the health system failing to identify TB suspects and patients reporting to the health care facilities.

The NTP is taking steps to address the above challenges. The SOPs are one attempt to address the challenges related to the health system failing to identify TB cases who already come into contact with the health system.

1.3 Rationale of the SOPs

In recent years, the NTP introduced a number of interventions, such as Public-Private Mix (PPM), directly observed treatment short course (DOTS) and Community TB DOTS, aimed at increasing TB case detection rates and achieve favourable TB treatment outcomes. Furthermore, the NTP developed and disseminated a number of documents, such as a TB Workbook, TB Training Manual and TB Desk Aide, to assist health workers in detecting and treating TB patients. However, health care providers need simple, clear and step by step tools to organise, optimise and standardise TB case detection practices both in the health facilities and in the community. In the new National TB Health Sector Strategic Plan (2009-2013), the NTP has planned to develop SOPs for TB case detection to be used by health care providers both in public and private health facilities and also by the communities hence these SOPs.

The SOPs will ensure that TB case detection activities are optimised and standardised in both public and private health facilities as well in communities. The SOPs will also ensure that TB case detection becomes a permanent, routine and consistent activity carried out among people with symptoms suggestive of TB visiting health care facilities and in the community.

Consistent with WHO recommendations, the NTP has made a policy decision that the number of sputum specimens to be examined for screening of TB suspects be reduced from three to two. This change from three to two sputum strategy has been made based on concrete evidence that has shown that the first and second sputum samples pick as higher as 97% of TB cases. Furthermore, this two sputum strategy will reduce the laboratory workload. These sputum samples will be collected as one “spot” and one 'morning.” In a situation where the patient comes far away from the sputum smear microscopy centre a second sputum sample can be collected one to three hours after the first “spot” sample using a novel strategy which is now referred to as “ Front-loaded' or “ Same Day” or “one Stop shop” microscopy. In order to successfully implement these innovative strategies external quality assurance (EQA) for smear microscopy has to be well functioning. The SOPs have been developed in line with these policy decisions in mind.

1.4 The objectives of the SOPs

The main objective of the manual is to standardise and optimise TB case detection practices in health care facilities and in the communities so that they become permanent and routine practices.

1.5 The SOPs target group

The SOPs are targeted at health care facility staff and community workers who come into contact with patients presenting with any form of ailment and primarily those with respiratory symptoms in health facilities and communities. These include staff at health facilities' waiting and records rooms, nurses and clinicians/doctors in consultation rooms, HIV/ART clinics, Diabetics clinics and DOTs centres, laboratory staff, clinicians/doctors in different departments and hospital wards. The SOPs are also useful for social and community health workers and other relevant persons involved with health related community work such as TB and HIV and AIDS.

1.6 How to use the SOPs

The SOPs described in this pocket manual are not designed to be a comprehensive reference manual but a simple and quick guide on TB case detection. The manual is also complemented with algorithms, and wall posters to assist in organising and standardising TB case detection. When detailed information is required, the manual should be used in conjunction with other NTP documents. The SOPs are organised in six main chapters. Chapter one describe the organisation of TB case detection activities in the health facilities and communities. Health facilities TB teams and any other designated health care worker will be responsible for overseeing the implementation of the SOPs. Chapter two provides information on how to suspect TB. It is the responsibility of the respective health facilities to ensure that the

SOPs are implemented in all relevant departments. Chapter three provides step-by step information on how to make a diagnosis of TB based on a TB algorithms for HIV negative and HIV positive persons. The information is useful for clinicians/doctors and those who are involved in diagnosis of TB. Important Information on ensuring improved TB case detection in laboratory is found in chapter four. Chapters five and six provide information on monitoring and evaluation, as well as important definitions used in the SOPs.

Organising TB Case Detection 2.0

Case detection should be a permanent, routine and consistent activity carried out among people visiting a health facility or in the community. Every staff in the pathway of care of patients needs to be involved in TB case detection activities. These include staff at patients' waiting areas, health records, consultation rooms, outpatient departments (OPDs), TB clinics, HIV/ART clinics, diabetic clinics laboratories, wards and community health workers, and staff in pharmacies and chemical stores.

2.1 Composition of Health Facility TB teams (HFT)

- The health facility TB teams will be strengthened to carry-out TB case detection improvement activities.

- The composition of the HFTT will be multi-disciplinary and the core team will include, but not be limited to, the following members:
  - Medical superintendent/Hospital Director - Chairperson
  - Institutional TB coordinator (ITC) - Secretary
  - DOTS corner nurse
  - Lab technologist-in-charge
  - Pharmacist
  - Institutional public health nurse
  - Institutional health promotion Officer

- Other staff in the health facility can also be co-opted into HFTT or assigned certain responsibilities depending on the need and their expertise.

2.2. Objectives and tasks of the health facility TB team

- The main objectives of the HFTT team is to improve TB case detection by ensuring that TB case detection becomes a permanent, routine and consistent activity carried out among people with TB symptoms visiting health facilities and in the communities.

- The HFTT should sensitize health personnel and Community Health Workers (CHWs) on SOPs for TB case detection.

- The HFTT should ensure that TB case detection activities are promoted and standardised in both public and private health facilities and in communities.

- The HFTT should assess TB case detection activities in their health facilities and surrounding community based on the standardized checklist which is accompanying these SOPs.

- The HFTT should develop a plan for improving TB case detection in the Health Facility (HF) and its community based on the findings of the rapid health facility TB case detection assessment.

- The HFTT should supervise the implementation of the TB case detection improvement plan.

- The HFTT should assign designated health workers to be responsible for daily monitoring of the implementation of the plan in each unit/department.

- Institutional TB Coordinator (ITC) should supervise and monitor the day to day implementation of the plan. The ITC should collate data on TB case detection activities monthly and report to the management.

- The HFTT should review the implementation of the plan quarterly.

- The HFTT should meet at least once monthly to monitor progress of TB case detection and review weekly reports from ITC.

- The ITC should report monthly to the district TB coordinator the progress of the implementation of the TB case detection improvement plan.

- The HFTT should work closely with the public health nurse, community-based organisations/CHWs to address the issue of TB case detection in their catchment areas.

- The HFTT should provide on-the-job training to health workers and CHWs on SOPs for TB case detection.

- The health promotion officer should ensure that TB case detection materials (such as SOPs, flow charts, flip charts, algorithms and wall posters) are available and used.

- The HFTT should ensure that TB case detection activities are organised in such a way that patients are not missed or lost in the process.

- The HFTT should ensure that referrals and linkages within the different departments/clinics along the pathway of care of TB suspects are adequate and functional.

- The ITC should ensure that data of all TB suspects and patients are properly recorded and timely and systematically reported in the various documents (institutional TB register and cough/suspect register, health facility records, laboratory register, TB01 cards, etc.).

- The HFTT should ensure that TB case detection activities are consistent with TB infection control practices. For more information on TB infection, refer to the infection control policy guideline for health care facilities as well SOPs for TB infection Control.

Suspecting TB

3.0

TB case detection is defined as a public health activity addressing early identification of TB patients, with special emphasis on those with sputum smear positive pulmonary tuberculosis. The main objectives of the case detection are to: identify early sputum smear positive patients, decrease TB transmission in the community and alleviate human suffering and prevent disability and death due to TB. Case detection is carried out through the identification and sputum smear examination of people with respiratory symptoms (cough of two weeks or more) and constitutional symptoms (such as fever) who, for any cause, visit health facilities or are contacted in the community. Every individual who presents to any health facility should be asked about TB symptoms and this should be done at every stage of the pathway of health care.

3.1 SOPs for suspecting TB at OPD reception/records/waiting area

The OPD nurse in-charge and staff working at the OPD should:

- Display posters on TB symptoms and TB infection control in all areas of OPDs, including waiting areas.
- Educate patients on the basics of TB, TB infection control and TB/HIV co-infection issues.
- At registration/reception or waiting area, ask all patients about cough regardless of the presenting symptoms. If the person is identified to have a cough, the staff at pre-screening area should indicate this in the screening tool and add to his/her card/folder.

- Register all TB suspects in the cough register or OPD register.
- Ensure those coughing ≥ 2 weeks are referred to the laboratory for sputum smear examination.
- Advise those coughing to observe cough hygiene/etiquette (cover nose and mouth using handkerchiefs or elbow/tissues/cloth when coughing or sneezing, wash hands, dispose of used tissues, not to spit indiscriminately).
- Ensure the time a coughing patient spends in the waiting area until he/she is seen in the examination/consulting room, is minimized as much as possible.
- Promptly identify and separate (potential) infectious TB patients.
- Ensure those referred for diagnosis in the laboratory and X-ray department are escorted and followed-up and they have access to services.
- Keep records of all TB suspects in a cough/suspect register or OPD register. Ensure that data on TB suspects are reported and utilised at a health facility and submitted to a district, regional and national level.
- Ensure adequate ventilation and keep windows open.

A patient is suspected of having TB if she/he presents with cough of two weeks or more OR coughing up blood, difficulty in breathing, chest pains, fever, weight loss, night sweat, loss of appetite, previous TB in the patient, close contacts and failure to thrive in children. In case of patient already known to the health care worker as HIV positive a cough of any duration, fever, night sweat and weight loss she/she be considered a potential TB suspect.

3.2 SOPs for suspecting TB at OPD consultation rooms

Doctors and clinicians or any designated person at consultation room should:

- Display posters on TB symptoms, infection control and TB diagnosis algorithm.
- Actively ask all patients about cough regardless of presenting symptoms.
- Advise all those coughing to observe cough hygiene (cover nose and mouth using handkerchiefs or elbow/tissues/cloth when coughing or sneezing, wash hands, dispose of used tissues, not to spit indiscriminately).
- Conduct thorough clinical examination of all patients to rule-out extra-pulmonary TB, even if a patient does not complain of a cough.

- Request sputum examination by filling in a sputum request form. Ensure the form is completely filled in with a full traceable address.
- Refer all TB suspects to the laboratory for sputum smear examination, even if suspecting extra-pulmonary TB.
- Use the new TB algorithm for diagnosis of TB.
- Ensure all TB suspects and those referred are recorded in the TB cough/suspect register and are reported.
- Ensure those referred for diagnosis and treatment have accessed services.
- Re-asses all those with smear negative results for pulmonary smear negative and extra-pulmonary TB.
- Expedite referral of TB positive patients to the TB clinic/DOTS centre for treatment.
- Open windows to ensure adequate ventilation in the rooms.

3.3 SOPs for suspecting TB at HIV and AIDS/ ART clinic

A designated person selected by the hospital management will supervise and monitor the implementation of the SOPs during each clinic session

Doctors, nurses and any designated person for the HIV/ART Clinic should:

- Open windows to ensure adequate ventilation in the room.
- Display posters on TB symptoms, TB infection control and TB/HIV in all areas of the HIV clinic, including waiting areas.
- Educate patients on TB and TB/HIV co-infection issues.
- Educate patients on TB infection control. Advise all those coughing to observe cough hygiene (cover nose and mouth using handkerchiefs or elbow/tissues/cloth when coughing or sneezing, wash hands, dispose of used tissues, not to spit indiscriminately).
- Actively ask all PLHIV about coughing, regardless of presenting symptoms.

- PLHIV with the following presenting signs and symptoms should be considered a TB suspect:
  - A cough of any duration
  - Fever
  - Night sweats
  - Weight loss

- Administer the TB screening questionnaire to all the PLHIV.

- Refer and if possible escort all TB suspects to the laboratory for sputum examination.

- Use an algorithm for screening of TB among PLHIV illustrated in Annex 1.

- Ensure that new pulmonary smear positive TB patients or TB suspects are separated / have minimal contact with other PLHIV.

- Record and report those screened for TB and referred for TB diagnosis and treatment.

- Refer and escort TB positive patients to the TB clinic/DOTS centre/corner for treatment.

The District TB coordinator shall:

- Ensure that HIV/ART clinics have received supplies of all necessary TB recording and reporting tools such as TB05, Cough Register

- Provide direct assistance and supervision on regular basis

NOTE: The HIV/ART Clinic prescribers should screen any individual person who is living with HIV at least twice a year

3.4 SOPs for improving TB case detection in DOTS centres/corners

DOTS corner nurse and staff should:

- Open windows to ensure adequate ventilation in the clinic.

- Display posters on TB symptoms, TB infection control and TB/HIV in all areas of DOTS centre/corner including waiting areas.

- Educate patients on TB, TB Infection control, TB/HIV and HIV/AIDS.

- Advise all those coughing to observe cough hygiene (cover nose and mouth using handkerchiefs or elbow/tissues/cloth when coughing or sneezing, wash hands, dispose of used tissues, not to spit indiscriminately).

3.5 SOPs for suspecting TB in the wards

Nurse in-charge and the staff in the ward should:

- Display posters on TB symptoms, TB infection control and TB/HIV in all areas of the wards.
- Educate patients on TB, TB Infection control, TB/HIV and HIV/AIDS.
- Actively ask for TB symptoms to all patients admitted in the ward regardless of the presenting symptoms.
- Collect sputum from all TB suspects for laboratory sputum smear examination (one spot and one morning).
- Advise all those coughing to observe cough hygiene (cover nose and mouth using handkerchiefs or elbow/tissues/cloth when coughing or sneezing, wash hands, dispose of used tissues, not to spit indiscriminately).
- Use TB algorithm for diagnosis of TB.
- Offer HIV counselling and testing services to all patients unless they opt out.
- Open windows to ensure adequate ventilation in the wards.

- Ensure that sputum results of in-patients who submitted sputum are available within 24 hours.
- Admit smear positive TB patients in a separate area of the ward.
- Minimise time spent by visitors and other people in the hospital, particularly the TB and medical wards.
- Ensure all admitted TB patients are registered and started TB treatment.
- Ensure all HIV positive patients have access to HIV/AIDS care and treatment services.

3.6 SOPs for suspecting TB in children

Any child infected with TB is as a result of transmission from an adult (often a family member) with smear-positive TB disease

In children the risk of progressing to disease is influenced by age of the child (the younger the child the higher the risk), HIV infection, nutritional status and other infectious such as measles.

More often infection in children and clinical features as well as chest X-rays features are non-specific and if uncertain, refer the child to experienced clinicians and/or pediatricians for further investigations.

Doctors and clinicians should:

1. Take history of:
   - Contact with sputum smear positive adult TB case
   - Weight loss
   - Poor appetite
   - Failure to thrive or prolonged illness.

2. Screen all children for TB who are in contact with adult pulmonary TB patients.

3. All children under five years of age who are in contact with pulmonary smear positive TB patients and who do not have TB disease should be given Isoniazid Preventive Therapy (IPT) (5mg/kg daily for 6 months). This should include new born babies from mothers with sputum smear positive TB

4. Ensure all infants are immunized with BCG to prevent severe forms of TB. But if HIV infection is certain BCG should be deferred

5. Ensure all children with TB disease are appropriately categorised and adequately treated for TB.

3.7 SOPs for suspecting TB in the community

NGOs and CBOs working in the community in collaboration with health facility in the catchment area should:

- Display TB posters in all public areas and congregate settings in the community.
- Non-governmental organizations (NGOs) and community-based organizations (CBOs) should educate the community on TB symptoms and the importance of early TB diagnosis and treatment.
- CHW should get the address of all TB cases from DOTS centre/corner for follow-up and contact tracing activities.
- CHW should conduct TB screening of all contacts of pulmonary smear positive patients in the community.
- Conduct TB screening in an open and well ventilated area/room.
- Refer all TB suspects to a health facility for sputum smear examination.
- Advise those with other symptoms (non suggestive of TB) to report to a health facility.

- Advise all those coughing to observe cough hygiene (cover nose and mouth using handkerchiefs or elbow/tissues/cloth when coughing or sneezing, wash hands, dispose of used tissues, not to spit indiscriminately).

- Ensure those referred have reported and been registered in the community register.

- Provide feedback on TB case detection activities to Public Health Nurse regularly.

- If TB suspects have a problem accessing laboratory services, discuss with health staff the possibility of establishing a sputum collection point in the community.

Diagnosis of Tuberculosis 4.0

A case of tuberculosis is a patient with symptomatic disease caused by Mycobacterium tuberculosis. TB can either be diagnosed bacteriologically or by a clinician through clinical assessment and other investigation such as chest x-ray. The type of TB is defined by the site of the disease. Pulmonary TB (PTB) is the most common form of TB which occurs in lung tissue. PTB can either be sputum smear positive or sputum smear negative. Extra pulmonary TB can occur anywhere in the body other than the lungs. The steps for diagnosis of TB are described in 4.1 and 4.2. The algorithm for diagnosis of TB is found in Annex 1.

4.1 Diagnosis of TB in a suspected TB case

- Display TB diagnosis algorithm in consultations rooms in the OPD, HIV clinic and in-patient department (IPD).
  See annex 1.

- Request two sputum smears from a TB suspect. The sputum sample should contain at least one early morning specimen.

If a patient has one or more positive sputum smear result:

- Treat patient for TB

- If a patient has two sputum smear negative results:
  - Treat the patient with broad spectrum antibiotic. Fluoroquinolones should not be used as they are reserved for Multidrug-resistant (MDR) treatment

- Reassess the patient. If not responding to antibiotic:
  - Repeat sputum smear examination AND
  - Request chest-X ray investigation

- If all the sputum smear results are negative, a clinician has to make a decision based on clinical features and X-ray examination results, if:
  - A patient has pulmonary smear negative TB he/she should be treated with a full course of anti-tuberculosis chemotherapy, OR
  - A patient has no TB

- Ensure that all TB patients are provided with HIV testing and counselling services if their HIV status is not known.

4.2. Diagnosis of TB in a known HIV positive TB suspect

- Display TB diagnosis algorithm in consultations rooms in the OPD, HIV clinic and IPD. See annex 1.

- Request two sputum smears from a TB suspect. The sputum sample should contain at least one early morning specimen.

- If a patient has one or more positive sputum smear result:
  - Treat patient for TB
  - Provide co-trimoxazole preventive therapy
  - Refer to the TB patient to ART clinic for assessment to start ART. This includes determination of CD4 count

- If a patient has two sputum smear negative results:
  - Request a chest-X ray investigation, AND if
  - A patient has pulmonary smear negative TB, they should be treated with a full course of anti-tuberculosis chemotherap

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- If TB is unlikely:
  - Reassess for other diseases
  - Consider Pnuemocistis Carinii Pneumonia (PCP) and treat with cotrimoxazole
  - Refer the patient to ART clinic for assessment to start ART. This includes determination of CD4 count.

Laboratory Investigation 5.0

Sputum examination is the key investigation in the diagnosis of TB. Health workers and CHWs will need to explain to the patients how to produce good sputum specimens. If the patient is seen at a health facility, send the patient to the laboratory with the completed sputum request form. If seen in the community, instruct the patient how to produce a sputum sample and supervise the sputum collection; the public health nurse or a community worker should submit sputum samples to a nearby diagnostic centre.

5.1 SOPs for improving TB case detection in laboratory

Laboratory staff should:

- Display SOPs for TB smear microscopy and TB infection control in the laboratory.
- Explain to TB suspect in simple language, why and how to obtain a good sputum sample.
- Explain and ensure that patients submit at least two sputum samples including early morning sputum sample (one spot and one morning).
- Ensure that all patients who have at least one smear positive result and have not returned for their result should be followed-up.
- Refer all patients with sputum smear negative results to clinicians for reassessment for TB and other co-morbidities.

- All smear positive TB patients who start TB treatment should also be recorded in the laboratory register by putting TB patients' individual district/institutional register number against the name of the patient.
- Ensure that tests are completed and smear results are available within 24 hours after receiving sputum sample.
- Ensure all smear positive patients are referred to DOTS centre/corner and have been reported.
- Ensure all smear negative patients are reporting back to clinicians for re-assessment.
- Ensure proper recording and reporting in TB laboratory register.
- Ensure TB quality assurance for smear microscopy is conducted quarterly.
- Full traceable address (including a telephone number) for all TB suspects who submit sputum to the laboratory should be taken and recorded in the laboratory register/form.
- The date the TB suspects collect sputum smear results should be recorded in the laboratory register.
- Ensure that sputum smear results of smear positive TB suspects who do not come back for their sputum smear results are made available to the ITC for immediate followed-up.

5.2 SOPs for collection of sputum sample in the health facilities/ community sputum collection points

A laboratory staff, health worker or community health worker should:

- Label the sputum container on the side and not on the lid with patient's name, outpatient or unit number, age, sex, date of specimen collection, sample (either 1 or 2).
- Fill sputum request form with the following information; name of treatment centre, patient's name, age, sex, full patient's address including telephone number, date sample requested.
- Find a suitable space or area for collecting the specimen.
- The area should be outside
- OR in a well-ventilated space, away from other people
- Do not collect the sputum while others are watching
- Do not stand in front of the person producing the specimen.
- Observe wind direction

- Supervise the collection of the first specimen. Give the patient the container without the lid. Hold the lid yourself.

- Explain in a simple language about steps for sputum specimen collection:
  - Take in a lot of air (inhale) deeply
  - Retain the air in the lungs and exhale
  - Repeat this procedure for three times
  - After third inhalation, make effort to cough in order to produce sputum
  - Spit produced sputum into container
  - Cover the sputum container

- Give the patient the lid to fit tightly. Record that the sample has been taken.

- Give labelled sputum container to the patient for collection of second specimen. Tell the patient to produce specimen early in the morning before eating and repeat the same actions during the second sample

- A good sputum should be:
  - 3-5mls
  - Usually thick and mucous but may be fluid with pieces of purulent material.
  - Colour may vary from opaque white to green, reddish to brown when blood is present.
  - Clear saliva is not suitable, but examine saliva if a better specimen cannot be produced especially for follow-up examinations.

- A specimen mainly containing blood should not be examined; the patient should immediately be referred to the doctor for assessment and management.

- The specimen should be delivered to the laboratory immediately; if the laboratory is far, specimen should be delivered not more than 48 hours after collection of specimen.

- Ensure that the date the patient has come to collect sputum results is recorded preferably using red pen.

NOTE: *Before producing a spot sputum sample the mouth should first be rinsed (washed) in order to remove any food particles.*

Monitoring and Evaluation 6.0

Monitoring and evaluation of TB case detection activities will be integrated into the NTP monitoring and evaluation and supervision plan. Monitoring will be conducted at all levels, starting at the health facility level, district, regional and national level. At the health facility level, monitoring will be done monthly, quarterly at the district and regional and biannually at the national level.

6.1 National level

Indicator	Source	Frequency	Monitoring tool
Proportion of health facility with TB case detection plan per region	Health facility plan	Biannual	Supervision checklist/report
Rate of increase of TB case notification per region	TB register	Quarterly	Notification reports
Rate of increase of TB case detection for Ghana	WHO estimates	Annual	WHO report

6.2 Regional/District Level

Indicator	Source	Frequency	Monitoring tool
Number and proportion of health facilities conducted TB case detection assessment	Assessment report	Baseline	Supervision reports
Number and proportions of health facility with TB case detection plan	Health facility plan	Quarterly	Supervision report
Number and proportion of health facility with functional TB team	TB team meeting reports/TB team plan of work	Quarterly	Supervision report
Rate of increase of TB case notification per district/region	Quarterly case notification reports	Quarterly	Notification reports

6.3 Health facility level

Indicator	Source	Frequency	Monitoring tool
Number of TB team meetings	Meeting reports	Monthly	TB team quarterly reports
Gaps and challenges of TB case detection identified	Baseline assessment checklist	Baseline	Assessment report
Presence of SOPs for TB case detection in all designated/important departments of health facility	SOPs supervision checklist	Monthly	TB team quarterly reports
Presence and use of TB algorithms, wall posters and TB screening tools	SOPs supervision checklist	Monthly	TB team quarterly reports
Availability of updated detection plan of action	Plan of action	Quarterly	TB team quarterly reports
Rate of TB suspects identified	Hospital records/TB suspect register	Quarterly	Quarterly TB suspect report
Rate of TB notified among suspects	Hospital records/Laboratory registers/TB suspect register vs TB register	Quarterly	TB team quarterly reports

6.4 TB suspects indicators

Indicator	Output	Frequency	Source
Rate of TB suspects identified No of TB suspects identified X 100	10%	Quarterly	Hospital records/HIMS records
Rate of TB suspects examined No of TBS examined X 100 No of TBS identified	100%	Quarterly	Hospital records/HIMS records/TB suspect register
Rate of TB suspects examined SS+ (positive rate) No of TBS examined SS+ X 100 No of TBS examined	10%	Quarterly	Hospital records/HIMS records/TB suspect register vs laboratory register
Average of sputum samples No of sputum sample in all TBS examined No of TBS examined	2	Quarterly	Laboratory register

Important definition 7.0

TB Case Detection

There are two types of case detection; passive case detection and active case detection.

Passive case detection: This is based on self referral of symptomatic individuals who consult a health care provider and who are suspected as TB cases. TB suspects may also be referred to health facilities by community based individuals or groups. This is the way case detection is largely carried out in Ghana.

Active case detection: This when a health care personnel or the community worker actively look for TB cases among hospitals/clinic attendees and in the community. This type of case detection is not done in large scale in Ghana but these SOPs are advocating this type of TB case detection.

TB suspect

A person presenting with cough of two weeks or more and other symptoms suggestive TB such as fever, weight loss, night sweat. In the case of PLHIV a cough of any duration should alert health care providers to suspect an individual a potential TB suspect.

TB suspect case expected

The expected number of TB suspects cases, using as programming criteria 5% of health facility attendees aged 10 years and older.

TB suspect identified (TBSI)

The TB suspects detected and recorded in the TB Register

Positivity Rate

The rate of sputum smear positive TB cases out of all TB suspects examined for AFB

TB suspect case examined

The TB suspect identified from whom at least two sputum smear diagnostic exams have been obtained.

TB case

A TB case is defined as any person in whom TB has been bacteriologically confirmed (sputum smear positive) or a person diagnosed by a doctor with TB sputum smear negative or extra pulmonary TB.

Pulmonary TB sputum smear positive case

Defined as a patient whom pulmonary TB has been bacteriologically confirmed as follows:

- ***Presence of at least one acid fast bacilli (AFB) in at least one of the two sputum samples examined.***

Pulmonary TB sputum smear negative

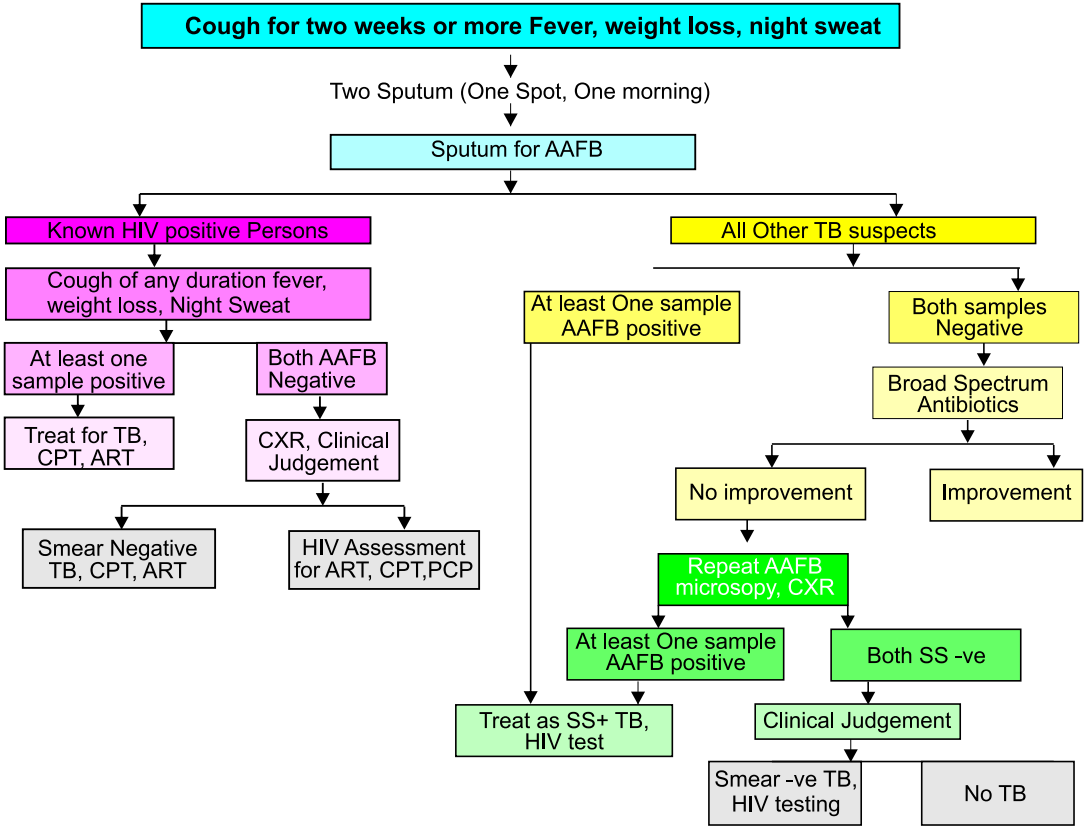
Defined as any patient whom pulmonary TB has not been bacteriologically confirmed but for whom a clinician has decided to start medication on the basis of; at least two sputum smear negative results, chest radiographic abnormalities suggestive of pulmonary TB and no response to a full course of broad spectrum antibiotics.

Extra Pulmonary

Extra pulmonary TB is defined as a tuberculosis disease affecting organs other than the lungs. Diagnosis should be based on one culture-positive specimen, or histological or strong clinical evidence consistent with active extra-pulmonary tuberculosis, followed by a decision by a experienced clinician to treat with a full course of anti-tuberculosis chemotherapy.

Annexes

TB Algorithm



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