



**Attention: Chief directorates: Metro and Rural Health Services
Heads of Institutions
Executive Director Health; City of Cape Town**

Circular: H 85 /2023

Standard Operation Procedure (SOP) for community TB screening, testing and sputum collection.

Purpose: The purpose of the SOP is to ensure that the correct procedure is followed by Non-Profit organisations Professional Nurses and Community Health Workers to do Community sputum collection for contacts of TB index cases, and community screening and testing for Tuberculosis in TB Hotspot areas.

Target audience: Facility Managers, Health Care providers, PHC and hospital operational staff, and NPO staff.

Executive summary:

WCGHW identified the need to develop an SOP for NPOs to do community sputum collection. The USAID approved the development of the SOP through the TB G2G grant. The pilot project was implemented in collaboration with 3 NPO's covering both MHS and RHS.

The project was successfully completed, and the SOP was compiled including all processes and procedures. The SOP will be part of the CBS service package of care and PDC training package for NPO staff.

The aim of the SOP is to support the identification of clients for TB screening, on the spot sputum collection, linkage to care, in care of and prevention that integrates with the Western Cape's Community-Orientated Primary Care.

Household Contact Tracing and Community-based TB Screening and Testing aim to improve the identification and investigation of household contacts by making screening and testing more convenient and less expensive for household contacts.

Further concerns or enquiries relating to the content of this SOP can be directed to Dr H. Goeiman by email (Hilary.Goeiman@westerncape.gov.za) or Alice van Zyl (Alice.vanZyl@westerncape.gov.za).

Thanking you in this regard.



Ms Juanita Arendse
Chief Director: ECSS

Date: 07/07/2023

OVERVIEW:

The household contacts of patients with active TB are at risk of being infected with TB.

The aim of the SOP is to support the identification of clients for TB screening, on the spot sputum collection, linkage to care, in care of and Prevention that integrates with the Western Cape's Community-Orientated Primary Care.

Active case-finding for TB through household contact tracing, screening, and testing facilitates early diagnosis and treatment of infectious individuals and identifies those who need TB preventive treatment (TPT).

Household Contact Tracing and Community-based TB Screening and Testing aims to improve the identification and investigation of household contacts by making screening and testing more convenient and less expensive for household contacts.

The health facility will identify households of active TB patients who require TB screening. A CHW will then be sent to visit the household to conduct contact tracing and TB screening (TB symptom screen) and testing (sputum collection) from household contacts considered at risk. Any individuals who are diagnosed with TB or who require TPT will be linked to care.

OBJECTIVE (purpose):

The aim of this SOP is to provide guidance on the procedure for Non-Profit Organisations (NPOs) Professional Nurses (PN) and Community Health Workers (CHW) to do community screening and sputum collection for contacts (close and household) of Tuberculosis (TB) index cases in the community setting, and community screening and testing for TB in TB hotspot areas.

RESPONSIBILITY:

NPO PNs and CHWs

LEGISLATION & POLICIES

This SOP must be implemented and aligned with the following legislation and policies:
Occupational Health and Safety Act: 1993
PACK Guideline: 2023
National TB Management Guidelines: 2014
Management of Rifampicin Resistant Tuberculosis- A Clinical Reference Guide: November 2019
The National Infection Prevention and Control Policy Guidelines 2020
TB Screening and Testing- Standard Operating Procedure: June 2022
National Guidelines on the Treatment of Tuberculosis Infection: 2023

ABBREVIATIONS

CBS: Community-Based Services
CCT: City of Cape Town
CHW: Community Health Worker
CIR: Case Identification Register
DOH: Department of Health
HIV SS: HIV Human Immunodeficiency Virus Self Screening
HR: Human Resources
HTS: HIV Test Services
IEC: Information, Education and Communication
IPC: Infection Prevention Control
M&E: Monitoring and Evaluation
MHS: Metro Health Services
MTB: Mycobacterium Tuberculosis
NHLS: National Health Laboratory Service
NPO: Non-Profit Organization
NPO PN: Non-Profit Organisation Professional Nurse
NGO: Non-Governmental Organization
OTL: Outreach Team Leader
PHC: Primary Health Care
PPE: Personal Protective Equipment
PREHMIS: Patient Record Electronic Health Management Information System
RHS: Rural Health Services
RMR: Routine Monthly Report
SOP: Standard operating procedure
TBCIR: TB Case Identification Register
TB: Tuberculosis

DEFINITION OF TERMS & CONCEPTS	<p>Standard Operating Procedure (SOP): a clear, stepwise, written procedure for all repetitive processes for home/community sputum collection.</p> <p>Systematic TB screening: Screening for TB disease in a systematic way to identify people with active TB disease, using a standardised questionnaire, procedures, or tests such as Xpert MTB RIF Ultra assay, chest x-rays etc.</p> <p>Close contact: A person who shared an enclosed space, such as a social gathering place, workplace or congregate setting, more than 15 minutes over a period of 24 hours with the index patient, during the 3 months before the commencement of the current treatment episode.</p> <p>Household contact: a person who shared the same enclosed living space for one or more nights or for frequent or extended periods of up to 8 hours during the day with the index patient, during the 3 months before the start of current treatment episode.</p> <p>Index patient: the first patient to be diagnosed with new or recurrent TB in a specific household or other comparable settings in which others may have been exposed, irrespective of age.</p> <p>Hotspot: an area of elevated disease occurrence or risk</p> <p>Sputum: a thick mucus produced in the lungs and in the adjacent airways that is expectorated especially when the person has respiratory infections.</p>
TOOLS, MATERIALS & EQUIPMENT	<ul style="list-style-type: none"> • Black pens • Paper towel • Hand sanitizer • Non-surgical gloves • N-95 mask (respirators)/surgical mask x3 layer. • Specimen jars • Leak-proof biohazard specimen bags • Insulated cooler box and ice packs. • Rapid HIV tests • Sharp container • Biohazardous waste (red) bag • Gazebo, table, and chairs • Health Promotional material
RECORDS AND DOCUMENTS	<ul style="list-style-type: none"> • Index patient line list • HTS register. • HTS consent document • Label for lab form • NHLS N1 forms • NHLS N4 book • TB Case Identification Register • NPO Referral forms
SAFETY MEASURES	<ul style="list-style-type: none"> • IPC measures are integral to managing Infectious diseases. • Train and implement N-95 mask (respirators) fit test and surgical mask seal check for all staff members working with clients. • Staff need to screen themselves regularly for any TB symptoms. • Ensure any client symptomatic for TB and unwell is reviewed by the PN for timeous linkage to care. • Sputum collection is conducted outside a building in the open air, away from other people.
MEASURABLE TO ASSESS THE PERFORMANCE OF THE NPO	<ul style="list-style-type: none"> • Monthly Community-Based Services statistics • Quarterly M&E WCGHW and NPO

ROLES AND RESPONSIBILITIES	
ROLES, RESPONSIBILITIES AND PROCESSES OF THE DOH DISTRICT/SUB-DISTRICT	<ul style="list-style-type: none"> Identify Health facilities and NPOs for SOP implementation. NPO service package DOH District shares meeting and communication structures with NPO teams and health facilities to the implementation, coordination and management of the SOP to be implemented. Linkage and collaboration of role clarification between NPO and Health facility NPO CIR needs to be managed and stored in the NPO office (safely locked away in a cabinet) or the health facility. TB Training for NPOs will be facilitated by designated clinicians in SS/District/Sub-district.
ROLES, RESPONSIBILITIES AND PROCESSES OF THE NPO	<ul style="list-style-type: none"> NPO management conducts the following with the NPO team (OTL, PN, and CHWs): Distribute resources needed for community TB screening and testing. In-service training on TB screening and community sputum collection as well as completion of relevant documentation, contact tracing, dissemination of results, and linkage to care. The NPO PN/CHW is responsible for oversight of contact tracing and quality sputum specimen collection, storage, (before delivering it to the health facility), and delivery. Provide the team with appropriate PPE and resources. NPO PN provides weekly feedback and reporting to health facility as well as monthly data reporting.
ROLES AND RESPONSIBILITIES OF THE HEALTH FACILITIES	<ul style="list-style-type: none"> Provide resources needed for community screening and testing. In-service training on TB screening and community sputum collection as well as completion of relevant documentation. The health facility shares a referral form with the TB index client's name, surname, and address details with the NPO. Identify the community hotspots in community TB screening activity conducted by CHWs. Responsible for receiving the sputum samples from CHWs and sending to NHLS lab. Set up regular feedback sessions and improved communication to inform NPO and clinicians, Daily dissemination of TB results/index case contacts to NPO for tracking, linkage, and re-initiation of lost to follow-up to services by the health facility TB room.
NHLS	<ul style="list-style-type: none"> Ensure supply of commodities for collection of sputum specimens. Feedback on the quality of sputum specimens submitted. Monitor and provide feedback on the quality of completion of lab forms. Share client's TB results via SMS.
PROCESS OF COMMUNITY SCREENING AND TESTING FOR TB	<ol style="list-style-type: none"> Procedure to identify an index client. <ul style="list-style-type: none"> The TB clinic nurse/designated staff member identifies an index patient who has household contacts and/or close contacts, explains the need for TB screening of household/close contacts, and discussed the Community-Based TB Screening and Testing service with the client. The TB clinic nurse/designated staff member records the client's details (name, surname, address, contact number) on the INDEX PATIENT LINE-LIST. The staff member double check patient's contact details and address to ensure traceability. Referral to CHW for household contact tracing. <ul style="list-style-type: none"> The OTL/PN visits the clinic according to agreed schedule, to receive referrals for community TB contact management. The Health Facility TB nurse shares the Index Patient line-list referral with the NPO. The PN/OTL/CHW should aim to visit the household within 2 working days of referral. If unable to perform the visit within 5 days, the NPO staff must inform the Health Facility TB nurse.

- The preferred sputum collection procedures need to be prioritized for early morning to ensure the sputum specimen arrives timeously at the clinic as well as at the NHLS Laboratory. CHW work allocation should enable this. However, if the client is not available the sputum needs to be collected according to the client's availability. OTL/PN to arrange a relevant time for sputum collection.
- The NPO PN identifies the CHW and/or team that will conduct the TB screening and sputum collection including the HTS testing of the client.
- The NPO PN/OTL/CHW is responsible for oversight of contact screening and quality sputum specimen collection, storage, and delivery to the health facility.

3. The PN/OTL/CHW visits the index client's household.

- The CHW visits the home in the morning to ensure sputum specimens arrive at the health facility early for NHLS pick-up.
- The CHW uses appropriate PPE (gloves, N95 respirator)
- On arrival the PN/OTL/CHW explains the reason for the visit and the procedure.
- CHW conducts a household assessment and identifies TB index client's household and/or close contacts.
- Request a clinic file/folder number from the client/s.
- If unable to provide a clinic file/folder number, the minimum requirement to identify the client should be recorded such as full first and last name, ID number, contact number, and address.
- The CHW conducts Health education on infection prevention and control, TB, healthy eating, and sharing IEC material.
- Explain and discuss the following:
 - Conduct TB symptom screening.
 - Explain the procedure of sputum collection.
 - Which investigations will be performed and how the results will be communicated.
 - Ask the client about their HIV status. If they are known HIV positive, record on lab form.
 - Offer the client an HIV test if their HIV status is unknown. HIV testing will take place at the client's home using a rapid HIV Self Screening test (either self-administered or administered by NPO staff). If the HIV screening test is positive, refer to the health facility for a confirmatory HIV test. Record the result of the screening test on the lab form by writing: "HIV Screening test pos" or "HIV Screening test neg".
- The NPO PN/CHW may liaise with the individual's workplace to arrange TB screening and sputum collection if close contacts are identified at the workplace.

4. PN/OTL/CHW prepares the following:

- The PN/OTL/CHW completes one NHLS LAB FORM for each household contact.
- If the client has a clinic folder number, it should be included.
- If the client knows his/her HIV status, it should be included. If the client does not know their HIV status, HIV testing should be offered to the client. HIV testing will either take place at the client's home by the client through an HIV self-test or NPO staff (trained in HIV test procedure) or refer to a health facility.

5. The minimum requirements for processing at the lab are:

- Name and Surname
- ID number
- Date of birth
- Updated Contact number with each consultation

- Address
 - Facility name
 - Service point: Health facility
 - Date of sputum collection
 - Type of test: GeneXpert
 - NHLS bar code sticker
 - All NHLS Lab Forms must be reviewed by the OTL/NPO PN, who then completes the final 2 fields on the form.
 - Name of PN/OTL/HCW
 - Contact details of PN/OTL/HCW
 - The CHW labels two SPECIMEN JARS for each household contact, including:
 - Name and Surname
 - Date of birth (or ID number or folder number)
 - Date of sputum collection
 - NHLS bar code sticker
 - The CHW explains how to safely produce a good sputum sample.
- 6. Sputum collection, storage, and delivery of specimen procedure**
- Sputum collection was conducted outside the building in the open air, away from other people.
 - Give the client 2 sputum containers and a "double" specimen bag (do not separate the bags) and explain the procedure of sputum collection and storage.
 - Collect two sputum specimens one hour apart.
 - CHW explains to the client how to close the sputum container. The PN/OTL/CHW checks if the sputum container is accurately closed.
 - Place the sputum in the container and seal the specimen bag.
 - All above needs to happen under the CHW's supervision.
 - CHW to transport and deliver the sputum collected in a cooler box to the health facility on the same day that the sputum has been collected (before the clinic time slot for courier pickups closing time).
- 7. Storage of the sputum specimen**
- A sealed specimen bag with sputum specimen should be stored in a cooler box with ice packs to keep the specimen cool.
- 8. Waste management**
- NPO PN/CHW discard all waste according to the waste management procedure.
 - After the handling of specimen's bags, hands must be sanitised.
- 9. Referral of the following clients to the health facility:**
- Referral of symptomatic clients who are unable to produce sputum.
 - Referral of asymptomatic clients who are unable to produce sputum for TPT.
 - Identify and refer to facility children under 18 for an HIV test.
 - Any client in the household that is unwell (for reasons other than suspected TB) needs to be referred to the health facility.
- 10. All clients need to receive a TB result through the NPO staff.**
- TB results to be shared by NPO staff within 3 days to the clients that received a TB test.
- 11. If a client's sputum result is positive the following needs to be done:**
- **RHS Health Facility CIR:** Record contacts in Health Facility CIR (managed by the Health Facility team) and follow and record the TB cascade.
 - **MHS NPO CIR:** Record contacts in Health Facility CIR (managed by NPO team) and follow and record the TB cascade.

	<ul style="list-style-type: none"> • Clinic PN/CNP will inform the NPO about the positive sputum result and complete the NPO referral form for the NPO PN/CHW to do linkage to care. • Assign health facility staff to share the NHLS sputum result with the NPO team to record in the NPO CIR. • The NPO PN/CHW must record the sputum result on the NPO stationary/documentation. • The NPO PN/CHW must share the sputum result verbally with the client in the community and share a referral letter to the clinic. • Follow up with the health facility if the client attended the facility. • If the client does not attend the health facility the CHW needs to do 3 follow-up visits at the index client's household and report back to the health facility. <p>12. If a client's sputum result is negative the following needs to be done:</p> <ul style="list-style-type: none"> • If the sputum result is negative, the CHW explains the result is negative, but the household contact may still have latent TB infection and advises on symptom monitoring and safe practices at home (eg. open windows, masks). • the CHW links the client to the facility for TPT using an NPO referral form.
Community TB HOTSPOT TB screening and sputum collection	<p>TB HOTSPOT TB screening and sputum collection</p> <ul style="list-style-type: none"> • Health facility and NPO identify a TB HOTSPOT TB screening and sputum collection campaign/activity and develop a plan with the date, area, HR support, resources needed, communication with all relevant role players, and media campaign. • The clinic informs the NHLS lab of the plan and shares the projected number of GXP tests. <p>The following to be done at the event:</p> <ul style="list-style-type: none"> • Do TB symptom screening and record it on the NPO stationery. • Clients with no TB symptoms receive integrated health education and share IEC material. <p>If one or more TB symptom/s are identified record and explain the following:</p> <ul style="list-style-type: none"> • Explain the procedure of sputum collection. • Which investigations will be performed and the result's feedback structure? • Offer the client an HTS test if their HIV status is unknown, or they tested HIV negative > 3 months ago. • Do HTS SS test if required. If the client does not know their HIV status, HIV testing should be offered to the client. HIV testing will either take place at the client's home by the client through an HIV self-test (if HIV self-test positive refer to health facility) or NPO staff (trained HIV test procedure) or refer to a health facility. <p>Following the same process from 4-11.</p>
NPO RECORDING:	<ul style="list-style-type: none"> • CHW record the activity conducted on NPO stationary. • HIV test needs to be recorded in the HTS register. • HIV consent form completed. • The NPO PN/CHW completes the TB CIR including the NHLS bar code. Each identified facility will have a separate TB CIR as it is linked to the geographical area. <ul style="list-style-type: none"> ➢ RHS Health Facility CIR: Record contacts in Health Facility CIR (managed by the Health Facility team) and follow and record the TB cascade. ➢ MHS NPO CIR: Record contacts in Health Facility CIR (managed by the NPO team) and follow and record the TB cascade. • The NPO PN/CHW needs to follow up with health facility staff on the sputum result within 48 hours.

	<ul style="list-style-type: none"> Record the sputum result received from NHLS: <ul style="list-style-type: none"> RHS Health Facility CIR: Record contacts in Health Facility CIR (managed by the Health Facility team) and follow and record the TB cascade. MHS NPO CIR: Record contacts in Health Facility CIR (managed by NPO team) and follow and record the TB cascade.
Monitoring and evaluation and Indicator list	<ul style="list-style-type: none"> Standardise and implement data collection tools. Capacity building of the CHW on TB-related guidelines TB asymptomatic clients (documentation and capturing) PN to collate data into the weekly Summary for NPO CIR Sheet by the OTL/NPO PN submits the weekly summary from the TB CIR to the CBS Coordinator Routine NPO weekly tick sheets to be completed by the CHW and collated by the NPO into the Monthly RMR to be submitted to the CBS Coordinator. The data will be consolidated by the information management clerk at the substructure and captured onto Sinjani. <p>Indicator list and definitions as in PIDS:</p> <ul style="list-style-type: none"> Number of households referred for household assessment. Number of Household Contacts traced. Number of clients screened for TB symptoms. Number of clients screened positive for TB symptoms (i.e presumptive TB). Number of clients tested i.e.; sputum collected for TB testing. Number of sputum tested Number of clients tested positive for TB. Number of clients started on TB treatment. Number identified contacts < 5yrs Number contacts <5yrs referred for TPT. Number of contacts <5years screened. Number of contacts <5years investigated. Number contacts <5years TB positive Number contacts <5years TB negative Number of clients started on TPT.
MONITORING/ MEASUREMENT	<ul style="list-style-type: none"> NHLS/NPO GXP verification GXP project target monitoring NPO CIR verification NPO TB cascade monitoring and evaluation WCGHW and NPO weekly TB cascade monitoring and evaluation meeting