

# Referral of contacts in case of (possible signs or symptoms of) tuberculosis or leprosy

## 1. Purpose

This Standard Operating Procedure (SOP) describes the procedures to refer close contacts of index patients, that are screened as part of a SDR-PEP intervention and are suspected to have leprosy or tuberculosis (TB), to a local health facility.

## 2. Scope

This SOP applies to all aspects that involve referring close contacts of index patients that are suspected to have leprosy or TB.

## 3. Target group

This SOP applies to the staff involved in the screening and referral of contacts of index patients.

## 4. Procedure

Contacts are screened to determine whether or not they are eligible to receive SDR-PEP (see '**SOP 3: Eligibility criteria for SDR-PEP and screening of contacts**'). When there is suspicion of leprosy or TB (see below), the contact needs to be referred to rule out or confirm the diagnosis and provide treatment when required. If TB or leprosy is suspected, contacts do not receive SDR-PEP. If further examination/testing for TB or leprosy is negative (i.e. no TB/leprosy diagnosed), SDR-PEP can be provided at a health centre.

### 4.1. Leprosy

Leprosy diagnosis can be made in health care settings by any trained healthcare worker\*, based on clinical signs and symptoms. An individual should be regarded as having leprosy if he/she shows **ONE** of the following **cardinal signs (1)**:

- Hypo-pigmented (pale) or reddish skin lesion(s) with definite loss of sensation;
- A thickened or enlarged peripheral nerve with loss of sensation and/or weakness of the muscles supplied (innervated) by that nerve;
- Presence of acid-fast bacilli in slit-skin smears or histopathology.

**A person suspected to have leprosy may have one or multiple of the following signs and symptoms (1–3):**

- Hypo-pigmented (pale), erythematous (reddish) or copper-coloured skin patches/lesion (the most common sign of leprosy). The lesion can be flat (macule), raised (plaque), papules or nodular;
- Loss or impairment of sensation (feeling) in the skin patch;
- Infiltration of skin (thickened skin lesion which is smooth and shiny);
- Numbness (decreased sensation) or tingling of hands/feet or loss of sensation (temperature, touch, pain), especially in fingers tips and foot soles and located at skin lesions;
- Weakness or paralysis of the hands, feet or eyelids of unknown cause;
- Palpably thickened or enlarged, painful or tender peripheral nerves; especially behind the ear, around the elbow, wrist, knee and ankle joints;
- Very dry hands/feet (impaired sweating) with cracks in the skin;

\*The diagnosis should be made by the health professional that is assigned with this responsibility according to the national guidelines.

- Blisters, wounds or ulcers on hands/feet;
- Shortening of toes and fingers due to reabsorption;
- Painless swelling or lumps on the face or earlobes;
- Deformity and/or chronic wounds/ulcers (painless), especially on hands and feet;
- Loss of eyebrows or eyelashes;
- Eye problems that may lead to blindness (when facial nerves are affected).

An individual with any of the above signs and symptoms should be assessed by a health professional to rule out or confirm leprosy. If no health staff that can diagnose leprosy is present at the screening site, the person needs to be referred to ensure a proper assessment is done and multidrug therapy (MDT) is administered when needed. It is important that a newly diagnosed leprosy patient is also registered in the routine reporting and recording system and followed-up according to national guidelines.

Referral of (suspected) leprosy patients should be aligned with national guidelines and procedures. If a contact suspected to have leprosy is identified during the contact screening the following procedures should be followed:

- The contact suspected to have leprosy is registered on a designated contact registration form;
- Information of the contact suspected to have leprosy is then filled in a designated referral form and the contact is referred to the designated health facility;
- The contact (or parent/guardian if the contact is <18 years, or in case of mental impairment) needs to agree with the referral;
- Follow up: if leprosy is ruled out, the contact can still receive SDR-PEP (at a designated health facility).

Referral for confirmation of diagnosis:

- Diagnosis of leprosy should be made at a health facility where capacity to diagnose is available;
- If available, a slit-skin smear test is done to confirm doubtful cases;
- In case the slit-skin smear test is not available, the patient should be referred to the nearest facility with slit-skin smear capacity. If this is not possible, and the diagnosis could not be confirmed or ruled out, the contact remains a suspect and the cardinal signs should be re-examined after 3-6 months (1,4).

#### **4.2. Tuberculosis (TB)**

Contacts with symptoms or signs suggestive of TB need to be referred to a health facility where TB can be diagnosed and treated when required. A contact suspected to have TB is defined as someone having a sign or a symptom suggestive for tuberculosis listed below (5–7):

- A chronic cough of 2 weeks or more (or cough of any duration in people living with HIV);
- Night sweats;
- Unexplained fever;
- Unexplained weight loss;
- Chest pain, or pain with breathing or coughing;
- Extreme tiredness without clear reason;
- Coughing up blood;
- Loss of appetite;
- Enlarged lymph nodes (usually painless/non-tender).

Contacts with one or more signs and/or symptoms suggestive of tuberculosis should be referred for confirmation of diagnosis and should not be given SDR-PEP until TB is ruled out.

#### *Tuberculosis diagnosis:*

Diagnosis of tuberculosis can be made either bacteriologically or clinically. Bacteriological diagnosis can be made by positive confirmation of *Mycobacterium tuberculosis bacilli* (MTB) using any of the following: Xpert MTB/Rifampicin (RIF) assay, Acid Fast Bacilli (AFB) sputum smear microscopy or bacterial culture. Clinical diagnosis can be made through the assessment of one's medical history by a trained clinician, and by using radiological investigation (X-ray), histopathology, or cytology (8,9).

Registration and referral of (suspected) TB patients should be aligned with national guidelines and procedures. If a contact suspected to have TB is identified during the contact screening the following procedure should be followed:

- Contacts suspected to have TB are registered in designated contact registration forms;
- Information of contacts with signs and symptoms suggestive for TB is then filled in the referral form and the contact is referred to the nearest health facility for diagnosis and treatment, if required;
- The contact (or parent/guardian if the contact is <18 years, or in case of mental impairment) needs to agree with the referral;
- TB examination is conducted at the designated health facility;
- Follow up: If TB is ruled out, the contact should be referred back for SDR-PEP.

## **5. Definitions and abbreviations**

An overview of all definitions and abbreviations can be found in the document '**Introduction, content and definitions**'.

## **6. Related SOPs**

- *SOP 2: Informing contacts and obtaining their consent*
- *SOP 3: Eligibility criteria for SDR-PEP and screening of contacts*
- *SOP 4: SDR-PEP administration*

## **7. References**

1. World Health Organization; Regional Office for South-East Asia. Guidelines for the diagnosis, treatment and prevention of leprosy. 2018.
2. World Health Organization. Guide to eliminate leprosy as a public health problem. 2000.
3. Centers for Disease Control and Prevention (CDC). Signs and Symptoms - Hansen's Disease (Leprosy) [Internet]. 2017 [cited 2023 May 11]. Available from: <https://www.cdc.gov/leprosy/symptoms/index.html>
4. World Health Organization. Leprosy/Hansen Disease: Management of reactions and prevention of disabilities. Technical Guidance. New Delhi; 2017.
5. World Health Organization; Regional Office for South-East Asia. Leprosy/Hansen disease: contact tracing and post-exposure prophylaxis. Technical guidance. 2020.



6. Mayo Clinic. Tuberculosis - Symptoms and causes [Internet]. 2023 [cited 2023 May 11]. Available from: <https://www.mayoclinic.org/diseases-conditions/tuberculosis/symptoms-causes/syc-20351250>
7. Centers for Disease Control and Prevention (CDC). Signs & Symptoms - Tuberculosis [Internet]. [cited 2023 Oct 9]. Available from: <https://www.cdc.gov/tb/topic/basics/signsandsymptoms.htm>
8. Centers for Disease Control and Prevention. TB Testing & Diagnosis [Internet]. 2022 [cited 2023 May 11]. Available from: <https://www.cdc.gov/tb/topic/testing/default.htm>
9. Mayo Clinic. 2023. [cited 2023 May 11]. Tuberculosis - Diagnosis and treatment. Available from: <https://www.mayoclinic.org/diseases-conditions/tuberculosis/diagnosis-treatment/drc-20351256>