Western Cape Government

Department of Health and Wellness
Chief Directorate: Emergency & Clinical Services Support
Directorate: Service Priorities Coordination
Enquiries: Dr Vanessa Mudaly & Dr Hilary Goeiman
Vanessa.Mudaly@westerncape.gov.za | Tel: 021 8158741

CHIEF DIRECTORS: **METRO HEALTH SERVICES, RURAL HEALTH SERVICES, STRATEGY AND SUPPORT**

EXECUTIVE DIRECTOR **CITY OF CAPE TOWN**
DIRECTORS: **DISTRICTS AND SUB STRUCTURES, PHARMACY SERVICES**
CEOs: **HOSPITALS**
FOR ATTENTION: **FACILITY MANAGERS, PHARMACISTS, PHARMACY ASSISTANTS, MEDICAL OFFICERS, CLINICAL NURSE PRACTITIONERS, NIMART NURSES**

CIRCULAR H 58/2022

RAPID GUIDANCE FOR REFERRAL OF CHILDREN FOR COLLECTION OF RESPIRATORY SPECIMENS FOR DIAGNOSIS OF UNCOMPLICATED PULMONARY TUBERCULOSIS (TB)

Background

Only 10% of childhood TB diagnosed in the community and 25-40% of TB diagnosed in hospital are confirmed despite extensive investigation. Where children are unable to expectorate, we accept that not all children should be required to have microbiological testing on a respiratory sample (gastric washing/induced sputum) in order to make a treatment decision BUT that for some children this will add value. Timeous initiation of treatment in children infected with TB can improve clinical outcomes significantly. Conversely, delaying treatment initiation results in poor outcomes.

Purpose of this circular

- Provides advice on the appropriate referral of children with presumptive TB to obtain respiratory specimens in the community.
- Facilitates community-based management of uncomplicated pulmonary tuberculosis in children
- Remove barriers to initiating TB treatment by deferring tests that rarely add value and which may cause delay in the treatment of uncomplicated drug sensitive pulmonary TB
- Does not replace referral and diagnostic approaches for complicated/severe tuberculosis or disseminated and extrapulmonary tuberculosis or uncomplicated nodes in the neck.

Which children should NOT be managed with this rapid advice?

The following children should not be managed by this rapid guide, and may require referral:

- Difficulty breathing with chest indrawing, nasal flare, grunting, unable to feed properly, struggling to speak, blue lips and tongue or saturation of <93% in air
- Persistent vomiting, headache, neck stiffness, seizures, focal neurological features
- Severe backache with or without abnormal spine curvature
- Abdominal distention

In which children SHOULD a respiratory specimen be taken?

Respiratory specimens should be taken in the following cases:

- ALL children with SYMPTOMS of TB OR suspected pulmonary TB who can expectorate sputum should have it collected at their local clinic.
- The following children with suspected pulmonary TB who CANNOT expectorate should be referred for a respiratory sample to the closest site that has the capacity to perform them:
  - Children living with HIV who have symptoms of TB
  - Children living with HIV who have no symptoms of TB but have a known exposure to TB AND an abnormal CXR
  - Children with TB symptoms who have known exposure to a drug-resistant TB case
  - Children without TB symptoms who have been exposed to a drug-resistant TB case AND have an abnormal CXR
  - Children with symptoms of TB and severe disease on the CXR regardless of whether there is a known exposure to a TB case and irrespective of the drug susceptibility of the source case. This include children with cavitation or significant alveolar opacification
  - Where the diagnosis of TB is not clear

When should the specimen be done?

- The sample should be taken as soon as possible.
- The time taken for sample collection and for the results to be returned should not interfere with the appropriate initiation of therapy.
- **NOTE: Children with suspected uncomplicated drug sensitive pulmonary TB who do not have one of the mentioned indications for specimen collection can initiate therapy without referral for collection or delay.**

Which sample should be taken?

The preferred respiratory specimen is determined by local expertise and includes both gastric aspiration OR induced sputum. Induced sputum requires appropriate technology and hypertonic saline, but no overnight fast and can be performed throughout the day. Gastric aspiration requires overnight fast and access to sodium bicarbonate. Although more specimens may have a higher yield the collection of one specimen is the minimum requirement.

How to use the result?

- In children who expectorated sputum
  - If the Xpert MTB/RIF result is positive, this assists in making the decision to start treatment if the child is not already on treatment and to utilize the rifampicin susceptibility to guide appropriate therapy.
    - If Xpert MTB/RIF result is positive and rifampicin is resistant or indeterminate, a further sample should be collected for culture prior to starting therapy if therapy has not yet been initiated. The referral path for drug-resistant TB should be followed.
  - If the Xpert MTB/RIF result is negative
    - Already on therapy: Do not alter therapy if already on treatment, follow the clinical course and consider referral to MO if not previously done.
    - Not on therapy: Manage according to the history of contact, clinical features and CXR

Summary Algorithms

The recommendations are summarized in algorithms attached as annexures (see below). It is acknowledged that clinical diagnosis of TB and exclusion of TB in children who are close contacts of people with TB can be very challenging. The intention is not to delay initiation of TB treatment or TPT unnecessarily. Therefore, if unsure of how to proceed, discuss with an expert.

Local Referral pathways

Currently, respiratory specimen collection by gastric aspiration or induced sputum is offered at all district and regional hospitals and a few primary health care facilities. Referral pathways differ within districts and sub-districts and may be confirmed with the relevant managers.

Upscaling of access to community-based specimen collection

Where capacity and expertise are available, primary health care facilities are encouraged to offer on-site respiratory collection for eligible children. The People Development Centre (PDC) is developing an on-line training package on respiratory specimen collection for children via induced sputum and/or gastric aspiration methods. Contact Ceridwyn.klopper@westerncape.gov.za for further information.

Implementation

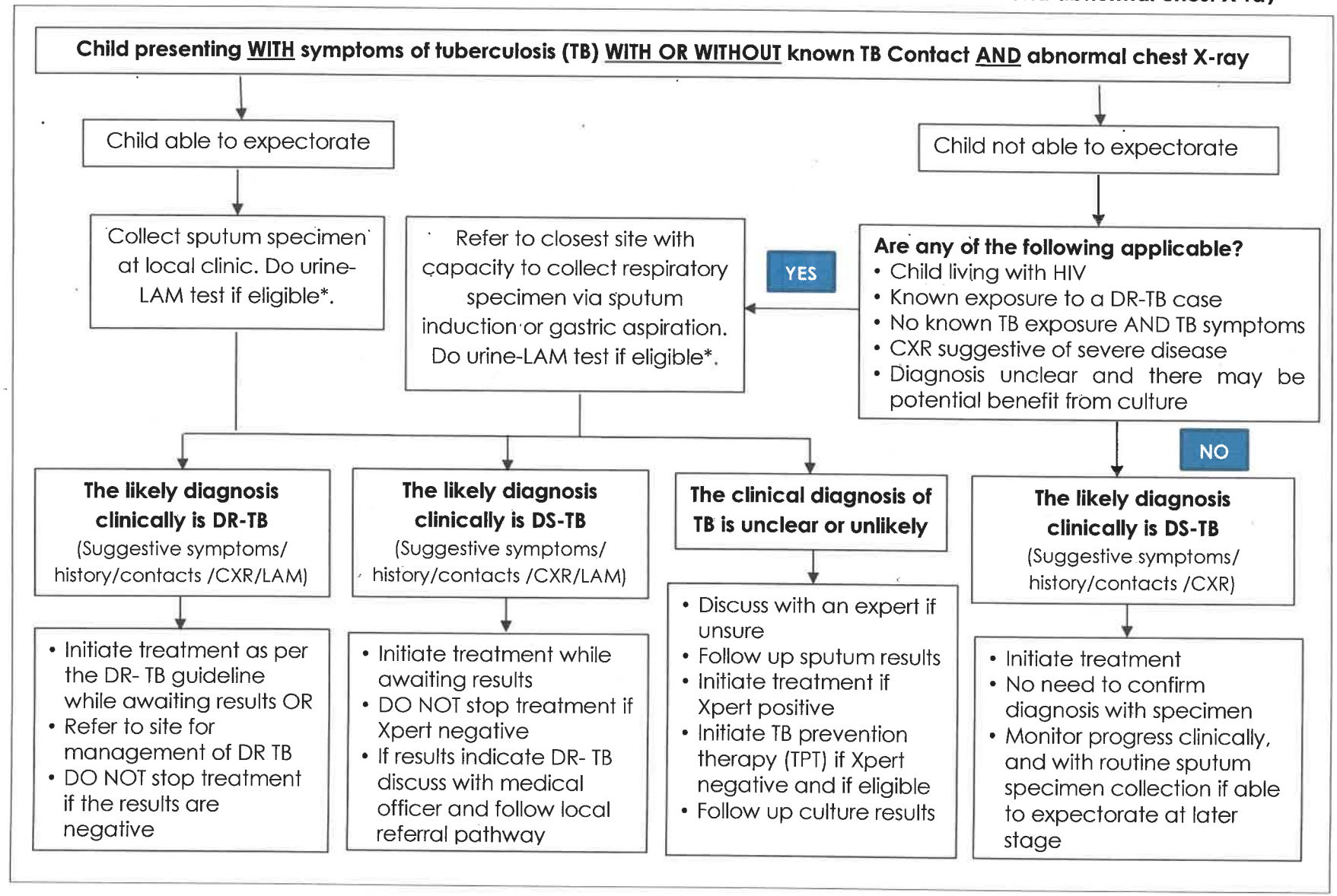
The recommendations of the rapid guide can be implemented with immediate effect.

Ms KB Lowenherz

Acting Chief Director: ECSS

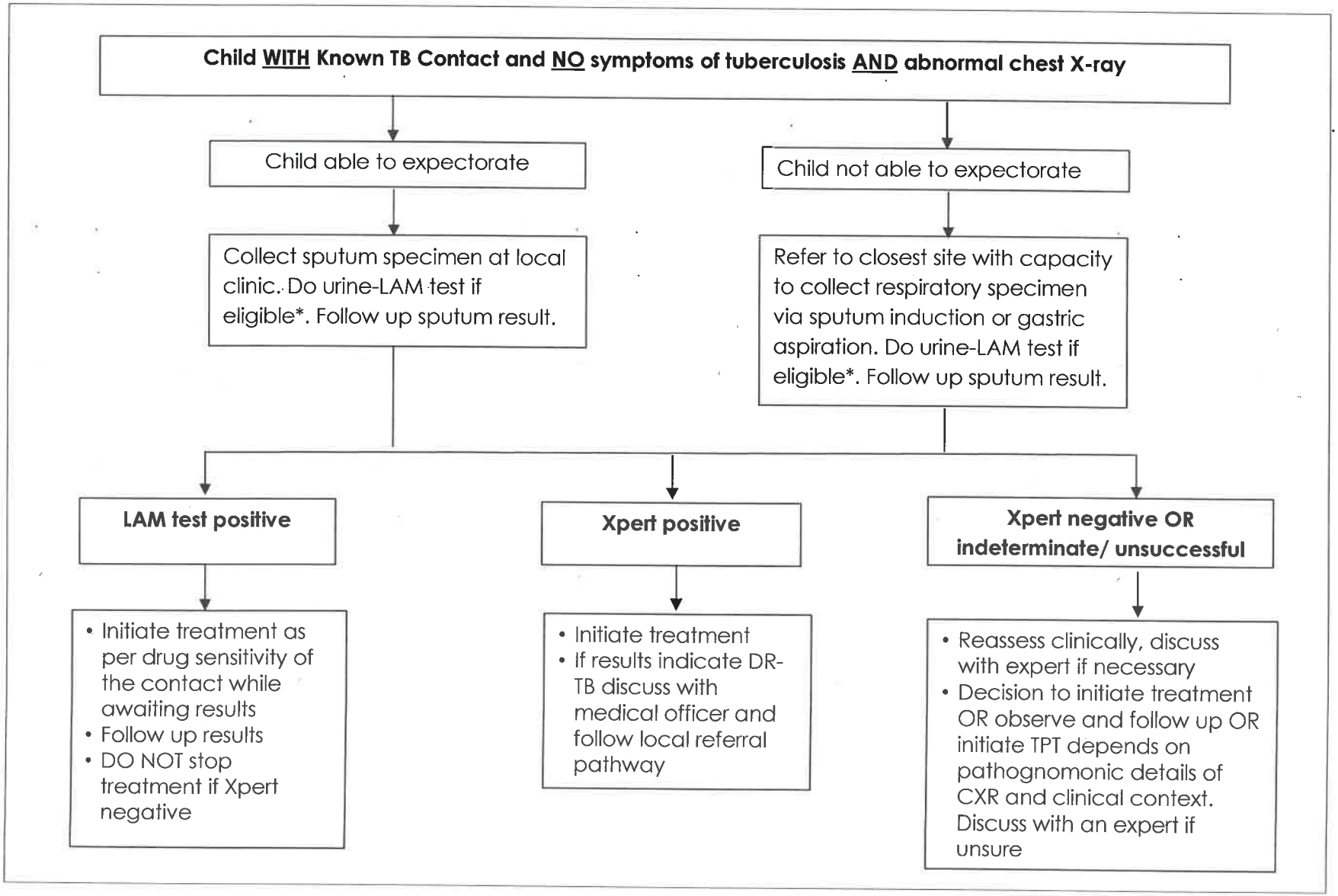
Date: 22/04/22

Annexure 1: Algorithm for child presenting with symptoms of TB with or without known TB contact and abnormal chest X-ray



*Refer to Guidance Document: Guidance on the use of urine LF-LAM for the diagnosis of people living with HIV. NDOH. April 2021

Annexure 2: Algorithm for child WITH known TB contact and NO symptoms of TB AND abnormal chest X-ray



*Refer to Guidance Document: Guidance on the use of urine LF-LAM for the diagnosis of people living with HIV. NDOH. April 2021