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4. Contact details of DTCOs and availability of microscopy centres

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Snippets on Tuberculosis National Programme for Tuberculosis Control and Chest Diseases **March 2022**

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1. Featuring article: Tuberculosis in Sri Lanka. Pathway to END TB.....

Tuberculosis (TB) reports the third highest incidence and second highest mortality among infectious diseases in Sri Lanka. According to current national programme goals of END TB, Sri Lanka should reach targets in reduced incidence and mortality for TB while maintaining zero levels of catastrophic cost due to TB by 2035 (Figure 1).

However, the latest estimates for TB incidence for Sri Lanka is 64/100,000 in 2021 while 602 TB deaths were reported in 2019. The catastrophic cost due to TB still remains to be estimated with the ongoing survey.



Figure 1; End TB strategy of Sri Lanka

Currently, annually around 8,000 - 9,000 diagnosed patients with TB are reported to the national programme with highest contributions from Colombo, Gampaha, Kandy and Kalutara districts respectively.

During 2021, a total of 6,771 TB patients were reported with a similar district distribution (Figure 2). However, this figure is expected to be affected by the prevailing COVID 19 pandemic, suggesting missed TB patients in the community. Compared to 2021 for the year 2020, a total of 7,258 patients have been detected. This indicates nearly a 500 reduction of detected TB patients in 2021 while the number of patients' estimates remained the same (64/100,000). The patients' health

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seeking behaviour and availability of investigations (sputum microscopy etc.) were affected during the 2020 -2021 period by the COVID pandemic. In addition, the COVID precautions such as use of face masks could have had a potivive effect on reduced patient numbers.

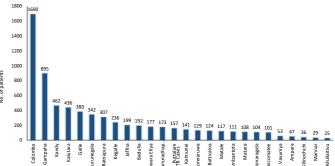


Figure 2; District wise distribution of TB cases 2021 Since the third quarter of 2021, there was a positive reversal of detected number of TB patients per quarter (Q1 – 1,491, Q2 - 1,604, Q3 - 1,891). This trend is seen at the national level as well as in most of the districts indicating community and health services adaption to new normalcy. This trend needs to be strengthened further in the future through active involvement by the health care providers.

Although anyone can get TB, certain groups are at higher risk. These include, close contacts of TB patients, malnourished, immune suppressed (PLHIV, CKD patients, those on immune suppressive treatment etc.), people from congested settings (slum areas, estates, prisons, institutionalized etc.) and health care workers. The suspected TB patients (with cough >2weeks +/-SOB, chest pain, fever and night sweats, loss of appetite, loss of weight, fatigue and haemoptysis) need to be identified at the OPD, ward settings or GP encounters and directed for TB screening and diagnosis.

The Chest Xray is the mainstay of screening along with sputum examination (smear or Xpert/RIF) being the main diagnostic measures. The Xpert/RIF services are available in all districts free of charge and performed at District Chest Clinics or tertiary care hospitals.

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2. Facts about management of patients with Tuberculosis

Classification of TB

It is important to classify the cases of TB in order to determine the correct treatment regimen and the duration of treatment and for recording and reporting purposes.

Site of TB disease	Pulmonary TB Extra pulmonary TB	
Type of diagnosis	Bacteriologically confirmed Clinically diagnosed	
History of previous TB treatment	New Relapse Treatment after failure Treatment after loss to follow up Other previously treated Unknown Previous TB Treatment History	

Diagnosis of pulmonary TB

Any person who presents with symptoms or signs suggestive of TB, particularly, those who have cough for more than two weeks duration should be investigated for TB.

Investigations			
Sputum Microscopy	At least three sputum samples should be collected and examined by microscopy for Acid Fast Bacilli (AFB).		
Xpert	Sample of sputum or any other sample can be examined. Better sensitivity and less time consuming. Resistance to Rifampicin also can be tested.		
Chest X-ray	Chest X-ray has a limited role in the diagnosis of pulmonary TB.		
Sputum culture for AFB	This is a more expensive method and needs at least 6-8 weeks to get the results.		

Treatment of TB

The modern treatment strategy is based on standardized short course chemotherapy regimens and proper case management to ensure completion of treatment and cure.

Standard code for TB treatment regimens

There are four essential anti-TB drugs		
Isoniazid (H)	Rifampicin (R)	
Pyrazinamide (Z)	Ethambutol (E)	

A TB treatment regimen consists of two phases:

Intensive phase: A combination of 4 drugs (available as a single tablet) are given at this phase to achieve rapid killing of actively multiplying bacillary population.

Continuation phase: Treated with fewer drugs for a comparatively longer time to eliminate persisting organisms which are responsible for relapses (given as a single tablet).

Multi drug Resistant Tuberculosis (MDR TB)

Emergence of drug resistant strains of the tubercle bacillus has become a major threat to control of TB worldwide .

MDR TB is defined as tuberculosis in patients whose infecting isolates are resistant in vitro to both isoniazid and rifampicin with or without resistance to other first line drugs.

The major causes for emergence of multi drug resistant forms are poor case management and poor compliance of patients to treatment.

Directly Observed treatment (DOT)

Directly Observed Treatment is one of the most important strategies in TB control.

This ensures the compliance of the patient to correct treatment regimen, that a TB patient takes the right anti- tuberculosis drugs, in the right doses at the right intervals without interruption and ensures that the patient completes the full course of treatment.

In DOTS strategy, patient swallows the tablets under the direct observation of a health worker or a trained volunteer.

It also helps to motivate the patient to continue treatment and provides opportunity for early detection of adverse effects.

Who will receive DOT?

All TB patients should be given daily DOT during the entire period of treatment, both in the intensive and continuation phases of the treatment.

This should be arranged or hospital based in the case of very ill patients or for those who are unable to attend daily for supervised treatment.

Who will be a DOT provider?

- · Health workers at state healthcare facilities
- Field health care workers
- General practitioners
- Trained community volunteers Community leaders
- **Monitoring of treatment**

Bacteriological monitoring is done for pulmonary TB cases by examination of sputum smears at regular intervals during treatment.

Clinical monitoring by symptomatic improvement and weight gain especially in the case of extra pulmonary and sputum smear negative pulmonary TB.

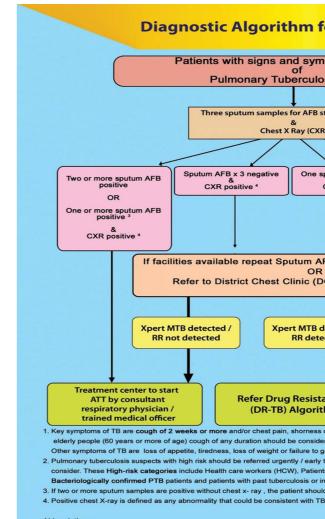
Monitoring the drug intake during intensive phase and drug collection during the continuation phase by reviewing the treatment cards.

3. The role of GPs in detecting TB patients and referral pathways

The Role of General Practitioner in Control of TB

General Practitioners are among the first contacts for the majority of patients. Therefore, he or she should have a high index of alertness in order to identify TB suspects timely and to do the necessary investigations or refer them to the District Chest Clinic for investigations and further management. General Practitioners can also provide their service as DOT providers. As the caring physician or as the DOT provider, the GP will;

- Maintain a minimal volume of documents which is essential for proper management and follow up of TB patients.
- Refer patients under his/her care for follow-up sputum smears to Microscopy Centers or District Chest Clinics at regular intervals.
- Promptly refer patients who develop side effects to anti-TB drugs to the District Chest Clinic as early as possible.
- Refer patients who do not show satisfactory improvement (which may be suggestive of drug resistant TB or wrong diagnosis) to a Consultant Respiratory Physician or to the District Chest Clinic.
- Refer patients to relevant specialist in special situations such as pregnancy, HIV infection and children.
- Attempt to trace patients who interrupt (default) treatment even for a day and inform the DTCO if it is unable to trace them and back on treatment.
- Assure confidentiality / professional secrecy of the information about the patient.
- Provide necessary advice to the patient or educate him regarding his health status.



AFB - Acid Fast Bacilli , Xpert - Gene Xpert , MTB - Mycobacter

for Tubercu	llosis
nptoms suggesti	ve
osis(PTB) ^{1,2}	J
staining (AFB x 3)	
(R)	
sputum AFB positive & CXR negative	Sputum AFB x 3 negative, CXR negative & Persistent symptoms
AFB, Xpert MTB/RI R DCC) for further in	
detected / ected	pert MTB not detected
\mathbf{I}	
tant TB thm	For further evaluation by specialist team
lered. gain weight in children, lov y to District Chest Clinics o	n immunosuppressed individuals and in w grade fever, night sweats. r situation where no other diagnosis to be , prisoners, drug addicts, close contacts of nt
R - Rifampicine Resistanc	e. ATT - Anti Tuberculosis Treatment