



**COVID-19 Outbreak Control and Prevention State Cell  
Health & Family Welfare Department  
Government of Kerala**

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**Advisory for Ensuring TB Services in Kerala in the context of COVID-19**

**NO: 31 /F2/2020/Health- 20<sup>th</sup> April 2020**

COVID 19 pandemic has posed challenges to the health care services worldwide. While we fight the pandemic with all our strength, it is important to see the access to TB care services are maintained without interruption. TB patients are at increased risk of missing diagnosis and unfavorable treatment outcome during COVID 19 pandemic. While all citizens are encouraged to stay at home and follow the government orders on state lock-down, health system has to ensure that the essential health care services are maintained uninterrupted. This guidance document is issued to ensure that the interruptions to TB care service delivery in the state is foreseen and prevented.

**Principle**

As of 16<sup>th</sup> April 2020, 88855 people who are at any risk of contracting COVID-19 (travelers/ contacts of a confirmed case) are kept under home isolation and surveillance in Kerala. Additional precautions are needed while dealing with diagnosis, treatment and public health action for TB services among those kept under isolation/quarantine or those with suspected/confirmed COVID19. Rest of the citizens in the state (3.4 Crore) can go through non-COVID (routine health care track i.e. PHC-FHC- CHC-Taluka Hospital- General Hospitals) for their illness where the hospitals and health care staff follow standard infection control precautions.

**Diagnosis**

**Active Case Finding:** Individuals vulnerable to TB [ Elderly above 60 years, People with diabetes, tobacco users, Chronic Respiratory Diseases, Homebound and Bed-ridden cases, people on chronic immunosuppressants, children with severe acute malnutrition, household contacts of TB cases] are also vulnerable to COVID-19. Ward



Surveillance Team (ASHA guided by JHI/JPHN) while following up the vulnerable individuals in the community, should ask for TB symptoms as well.

Any person with symptoms suggestive of TB (cough >2 weeks/ fever > 2 weeks / weight loss/ haemoptysis) **who is not kept under quarantine/isolation** may be contacted through Tele Consultation at PHC. Based on the assessment, such persons could be asked to come to PHC for detailed evaluation or could be referred directly to DMC for testing. Facility could also be arranged to send samples directly to DMC as per the instructions in Annexure 1. Persons who are presumptive TB may be advised to follow respiratory hygiene and should be reminded to always wear masks.

STS/TBHV should keep in touch with all elderly homes, empower care takers to ask for TB symptoms and make arrangements for testing of the eligible as described above.

People who are under surveillance/isolation developing TB symptoms may be linked to Tele Health Services and should go through the COVID track (should not be referred to any institutions directly. Decisions on their management to be taken by the District COVID-19 Tele Health Team/Clinical Expert team at district).

**Triage and Infection Control Help Desk:** All hospitals/ health care institutions to triage all those who reach the institutions, ensure respiratory and hand hygiene for patients and fast track consultations and testing of presumptive TB patients by making them spend minimal time inside the institution.

**Testing:** All Microscopy centres, Rapid molecular testing laboratories, Culture and DST Laboratories as well as the Reference laboratories under NTEP are to ensure uninterrupted services.

Patient's travel and visits to health care institutions to be minimized. Two spot samples one hour apart can be collected for smear microscopy in current context. In case of positive smears, same specimen (at least 3 ml) can be transported to CB NAAT site for diagnosis/UDST in current context as per instructions in Annexure 1.

Universal standard precautions including hand washing must strictly be followed by patients and HCW while collecting, receiving and testing samples in all laboratories.

Laboratory technicians performing Microscopy/ Rapid molecular testing must wear N95 masks, gloves and disposable aprons in districts where COVID-19 community or regional spread has been confirmed. [As of today, there is no community or regional spread notified in Kerala].

For patients already diagnosed with TB, two specimens may be collected at home for UDST and handed over to DMC for package and transport to CBNAAT site (LPA



site in the case of Pathanamthitta, Idukki, Wayanad and Kasaragod districts). The second specimen is for reflex LPA if in case Rifampicin Resistance is diagnosed. Labelled Falcon tubes for collection of specimens need to be supplied to patient at the time of treatment initiation at home.

Result of microscopy/ CBNAAT should be communicated to Medical Officer. Patient should be informed on further management over phone by the Medical Officer.

DTO (District TB Officers) to ensure a sputum collection and transportation mechanisms from all PHI to DMCs to CB NAAT sites/CDST lab/IRL. Local solution to be sought for transporting specimens (Permission to agency for essential services/ human carrier (ASHA/Volunteer) / designated auto rickshaws/ India Post/ special vehicle /club with another sample transportation system / drug delivery system/ Mobile Units of NHM). All additional precautions as mentioned in Annexure 1 to be followed.

All specimens collected from individuals on home quarantine/hospital isolation and presumptive /COVID-19 positive patients for TB testing, are to be transported to BSL2 laboratories at all Medical colleges, other BSL2 laboratories and IRL Thiruvananthapuram. Arrival of such specimens to be informed in advance to the concerned labs. The test request accompanying the specimen must be labelled as "specimen from presumptive/ COVID-19 positive patient" if applicable.

### **Recommended General Bio-safety practices for laboratories**

The following additional precautions to be taken while collecting specimens from presumptive/ COVID-19 positive patients for TB diagnosis:

- Sputum specimens are to be collected in sterile universal specimen containers. Patients must be instructed to provide a good quality specimen (mucopurulent).
- Delay opening caps until aerosols have settled. Open the caps ideally after 10 minutes giving sufficient time for the aerosols to settle.
- Laboratory technicians performing Microscopy/ Rapid molecular testing must wear N95 masks in districts where COVID-19 community or regional spread has been confirmed [As of 16<sup>th</sup> April 2020, no place in Kerala notified community or regional spread]. Reuse and Extended use of N-95 masks is not recommended in such areas.

- Lab technicians using N95 masks in other areas may see the policy on reuse and extended use attached as Annexure 2.
- After specimen is collected, HCW must ensure surface sterilization of specimen container. Surface sterilization is performed by wiping the exterior of the container with absorbent cotton/ tissue / paper towel soaked in freshly prepared 1% Hypochlorite solution
- Used cotton / tissue / paper towels are to be discarded in closed bins containing freshly prepared 1% Hypochlorite solution for 30 minutes and then disposed in yellow bags which have to be handed over to biomedical waste management system/incinerated.
- The container is to be labelled appropriately and transported in triple layer packaging (as per Annexure 1).
- Instruction to be given to transport agency/ personnel on safe handling of specimens during transport and provided with the details of a focal point for contact in case of exigency.
- Universal safety precautions including hand washing must strictly be followed by patients and HCW while collecting, receiving and testing samples.
- All biological specimens and materials used for specimen transport as well as testing are potentially infectious. They are to be discarded in freshly prepared 1% Hypochlorite solution and disposed as per BMW guidelines.
- Place all wastes in a leak-proof container or autoclavable plastic bag that contains disinfectant solution which should be sealed and autoclaved.
- The autoclave should be monitored with an autoclave tape at least monthly to ensure that sterility is achieved. Autoclave Tape is a packaging tape with steam-sensitive indicator ink. A strip of the autoclave tape is placed on the pack/pouch to be sterilized in the autoclave. At the end of the autoclaving procedure high contrast colour change on the tape is designed to show at a glance that the pack has been exposed to adequate sterilization process.



- Do not touch face, registers and annexure with gloves used for sample processing. Practice hand hygiene and social distancing.

**Clinical Diagnosis:** Clinical diagnosis of pulmonary DS-TB is encouraged with history and supportive investigations (X ray/ CT) during lock down period if there is any difficulty in obtaining a microbiological confirmation due to logistic reasons.

**A clinical TB expert committee** with a minimum of 3 members need to be formulated at every district. Committee can include DTC Consultant/ Junior Consultant/ Physician/ Pulmonologists. Clinical TB Expert committee could help doctors at field to arrive at a clinical diagnosis of TB through dedicated TB -Tele Health Help Line. Decisions of the committee need to be documented on a case to case basis. An official communication in this regard with the details of members, phone number for TB - Tele Health Help Line need to be issued at every district. TB -tele health help line to be linked to District COVID control Tele Health Help Line/ District COVID Control Room.

District TB Tele Health Help Line / District DRTB Committee can interact online with Nodal DR TB Committee for final clinical decisions related to DS/DR TB if required. STDC Kerala to train the clinical TB team at districts and co-ordinate smooth communication between District and State TB Clinical Expert Committees.

DTO to help District Health Administration to monitor OPD, Referral for Testing and actual Testing, institution-wise and guide the institutions properly based on trends.

## **Treatment**

- If found to have TB, treatment need to be initiated preferably by issuing medicines at home along with initial home visits and counselling by Field Staff. Field staff to practice standard precautions during home visits.
- Provision of anti-tuberculosis treatment must be ensured for all TB patients, including those in COVID-19 quarantine and those with confirmed infection.
- Family DOT with monitoring through 99 DOTS should be preferred over institutional DOT to reduce travel for DOT.
- Patients are to be supplied with 1-month stock of FDCs

- Clinical Review and assessment of co-morbidity for every TB patient to be ensured through tele health help line at PHC/CHC. Such consultations need to be documented in Treatment card kept at PHC/CHC. Improper management of co-morbidity could lead to death and poor outcome. Medications for co-morbidity for such patients also need to be issued pro-actively through ASHA/ Volunteers/ Family members/ Patients directly.
- Transportation services to be arranged by the DTO for all DRTB patients to reach DDRTBC/ NDRTBC. DRTB Coordinator to coordinate uninterrupted treatment to all patients with DRTB.
- District Administration need to identify admission facilities for both DS TB and DR TB cases if such existing facilities have been taken over for COVID-19 management. Support of District TB Tele Health Help Line may be used for clinical management.
- District TB Tele Health help line to assess the clinical condition of DRTB patients and if required to call them for physical examination and investigations.
- District Administration may also identify separate shelter for homeless TB patients. If they already are put up in shelters along with individual who do not have active TB disease, identify such shelters and move the patient to the separate shelter home identified for the purpose. If the treatment has been interrupted, re-start the treatment as per NTEP guidelines. Screen other inmates for TB.

### **Public Health Action**

- Contact screening, Provision of TB preventive treatment should be maintained among PLHIV and children, use of Household AIC kit and sensitization on its usage, Notification, Nikshay Entry and enrollment for DBT to continue as per the existing policy.
- Additionally, all patient on treatment (DSTB & DRTB) must be directly contacted over phone by STS/ TBHV/ DRTBC once in a week to ensure adherence, compliance with AIC, facilitate co-morbidity detection and management, ensure uninterrupted drug supply, facilitate public health actions and for early detection and management of ADR in coordination with local primary health care team. Such follow ups to be documented in Tour diary



and Nikshay Follow Up Module.

District TB Officers should also ensure uninterrupted engagement for diagnosis, continuum of care and treatment support to all private sector TB patients through STEPS.

DTO may train LT /MO / Block TBE Officers/ MOTC /STEPS Team at field level through online platforms regarding the same and plan cascade trainings. STLS' to hand hold LTs and transporting agencies on standard safety practices for sample pickup, packaging and transportation.

  
**Principal Secretary**

Annexure – Attached.

## **Annexure I**

### **Collection and transport of sample at PHI/ Home for TB examination**

- The HCP/Lab technician must hand over the Falcon tube for sputum collection maintaining a social distance of 6 feet after instructing the patient about the method of sputum collection
- The patient must collect the sample in a secluded location preferably in an open well-ventilated isolated area and return the closed falcon to the HCP/LT.
- The HCP/LT shall receive this falcon only after donning a pair of gloves and shall disinfect the surface of the closed falcon with 70% alcohol/ 1% sodium hypochlorite solution.
- The falcon with the sample shall be labelled by the HCP, sealed using para-film, covered by enough absorbent material to absorb all fluid in case of breakage and put into a secondary durable, watertight, leak-proof receptacle to enclose and protect the primary receptacle. A self-locking cover can be used for this purpose. Details of packing are described below.
- Annexure 15 A (RNTCP request form for examination of biological specimen for TB) with patient details to be put in a self-lock cover (multiple request forms of samples in the same consignment can be put in a single self-locking cover) and placed along with the secondary receptacles housing patient samples; in the outer shipping package capable of content protection from physical damage and water while in transit.
- Samples should be safely packed as described above and transported to the testing laboratory with prior intimation. Before dispatching, disinfect the outer surface of container using 1: 100 dilution of bleach or 5% Lysol solution.
- The HCP must wear a 3-ply face mask/ cotton mask for source control at all times while visiting the patient.

### **Packing and transportation of samples from DMC to CBNAAT site for UDST**

#### **Packing of Samples: Basic triple layer packaging system**

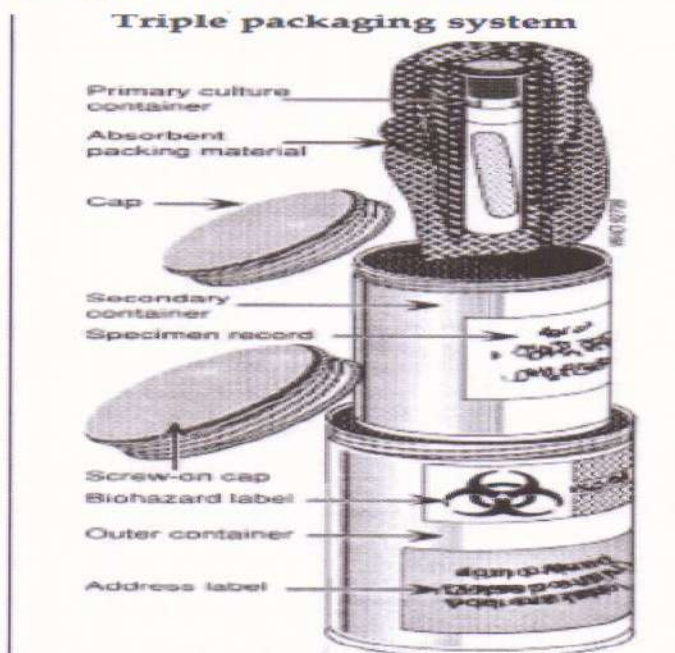
The system consists of three layers as follows.

1. Primary receptacle. A labelled primary watertight, leak-proof receptacle containing the specimen. The receptacle is wrapped in enough absorbent material to absorb all fluid in case of breakage.



2. Secondary receptacle. A second durable, watertight, leak-proof receptacle to enclose and protect the primary receptacle(s). Several wrapped primary receptacles may be placed in one secondary receptacle. Sufficient additional absorbent material must be used to cushion multiple primary receptacles. Annexure number 15A (RNTCP request form for examination of biological specimen for TB) with patient details to be put in a self-lock cover and placed outside the secondary receptacle encompassing it. Details of COVID-19 status and the reason for sending the sample to CBNAAT site/CDST lab/IRL is to be documented on top of annexure 15A in RED.

3. Outer shipping package. The secondary receptacle is placed in an outer shipping package which protects it and its contents from outside influences such as physical damage and water while in transit.



## **Annexure II**

### **Re-use/ extended use of N95 masks in Non-Hotspot areas**

Disposable filtering facepiece respirators (FFRs) commonly known as N95 masks are not approved for reuse as standard of care. However, N95 mask reuse may need to be considered as a crisis capacity strategy to ensure continued availability during the current COVID-19 Pandemic in non-hotspot areas.

#### **General Measures**

- Re-use of N95 mask is NOT recommended in areas with ongoing local/ community transmission.
- Minimize the number of individuals who need to use respiratory protection through the preferential use LTs/key staff.
- Prioritize the use of N95 respirators for those personnel at the highest risk of contracting or experiencing complications of infection.

#### **Extended use**

N95 mask use can be used for up to 8 hours in areas where no local/community transmission is ongoing.

#### **Re-use**

The number of times a mask can safely be re-used depends on multiple factors, including whether the user was exposed to aerosolizing procedures, how it was stored, and whether the mask was soiled. Assuming there is no soiling and minimal to no viral contamination to the outside of the mask in non- hotspot areas, the masks can be hung to dry or stored in a paper bag in between uses. Removal of the mask should be done strictly avoiding contamination of the inside of the mask during placement or removal.

#### **Mask Rotation**

Provide a set of four N95 masks to each staff who may be at the risk of exposure and rotate their use each day, allowing them to air dry for three days that the virus is no longer viable. Removal of the mask should be done strictly avoiding contamination of the inside of the mask during placement or removal

#### **Precautionary measures prior to re-using N95 masks**

- Clean hands with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the mask.



- Avoid touching the inside of the mask.
- Use a pair of clean (non-sterile) gloves when donning and performing a user seal check.
- Visually inspect the mask to determine if its integrity has been compromised. If so, do not re-use