COVID-19 Contact Tracing and TB Contact Investigation: An Integrated Implementation Approach
# Table of Contents

I. Introduction 1

II. Goals for a national integrated contact investigation (CI) response for TB and COVID-19 2

III. Key approaches (operational guide) to accelerate TBCI during COVID-19 pandemic 3
   A. TBCI and COVID-19 screening and testing at household level 4
   B. TBCI and COVID-19 screening and testing at health facilities 4

IV. TBCI and COVID-19 integrated standard operating procedures 4

V. Additional staff capacity requirements for integrated TBCI and COVID-19 services 5

VI. Mentoring, support, education, training and supervision for integrated services 5

VII. System requirements for integrated TBCI and COVID-19 implementation: Community based approaches 7
   A. Health facility based interventions 7
   B. Linkages between the community and facility approaches 8

VIII. Integrated TBCI and COVID-19 monitoring and evaluation tools and reporting formats 9
   A. Integrated household contact investigation form (illustrative) 9
   B. Integrated health facility level triage and screening tools and forms (illustrative) 10
   C. Integrated TB sample referral and laboratory diagnostic reporting formats (illustrative) 10

IX. Infection control and prevention requirements in the health facility and household: Administrative, environmental, and personal protection measures 11

Annex 1: Household (HH) level TB CI and COVID-19 screening algorithm 12

Annex 2: Facility level TB CI and COVID-19 screening algorithm 13

Annex 3: Integrated health facility triage and screening tool for TB and COVID-19 14

Annex 4: Integrated TB sample referral and lab diagnostic TB/COVID-19 reporting form 15
   Request for examination of biological specimen for TB and COVID -19 15

Annex 5: Tuberculosis and COVID-19 integrated household contact forms 16
   Form 1: Tuberculosis Household Contact Investigation Form 16
   Form 2: COVID-19 Household Contact Tracing Form (Illustrative) 17

Annex 6: Airborne Infection Defense Platform (AIDP) 18
I. Introduction

There is an urgent need to expand TB case finding during the COVID-19 pandemic to address the back-log of undiagnosed TB cases caused by workforce diversion and service interruption as well as to apply the proven approaches from years of experience with TB to limit spread of another airborne pathogen, COVID-19.

Expanding TB contact investigations (TBCI) is an opportunity to restore lagging TB and TB infection (TBI) case finding activities while integrating COVID-19 screening and testing referrals at the health facility and household levels. Synergizing the response to COVID-19 and TB case finding would help optimize resource requirements and enhance service delivery efficiency for both diseases.

In August 2020, USAID issued guidance on the Programmatic Implementation of Tuberculosis Contact Investigation (PI-TBCI), which provides an approach that is readily adaptable to guide implementation of COVID-19 contact tracing integrated with TBCI as conducted in households (HHs), Health facilities (HFs) and within the broader community. This dual TB and COVID-19 case finding approach will maximize the use of available staffing and resources and develop a strong community and facility level disease control and prevention strategy. Illustrative TBCI and COVID-19 screening algorithms for use at the HH and health HF levels are provided in Annexes 1 & 2. Annex 6 provides a framework for a model Airborne Respiratory Infection Defense Platform (AIDP) and describes key components needed to implement. The approach provides a guide to planning essential health system services in three critical areas including a community level early warning system, a primary health care early detection point, and a nationwide diagnostic network.

II. Goals for a national integrated contact investigation (CI) response for TB and COVID-19

2. To optimize TB and COVID-19 case detection.
3. To strengthen TB program capacity to conduct CIs in response to COVID-19 through optimizing resource utilization and building surge capacity.

To achieve these goals, the national response will require a strong and sustained political commitment and further investments in infrastructure, laboratory capability, information systems, and the necessary workforce to expand to meet the need to conduct TB and COVID-19 CIs in partnership with a mobilized and engaged community.

The TB platform has been used effectively for many years for active case finding through systematically conducting contact investigations in households and among social contacts of persons with active disease and should now be expanded to address the COVID-19 pandemic.

By addressing opportunities for integrating COVID-19 case finding into the screening, testing, contact tracing and monitoring systems already established for TB, it will be possible to begin to recover from the progress lost toward TB elimination due to the pandemic. When the additional resources for the pandemic response that will be made available to low and middle income countries (LMIC) are invested in the TB platform, TB case finding and linkage to care will bring many more persons with unrecognized TB into life saving treatment.\(^2\) In addition, the added benefit of this investment in the TB platform will strengthen critically needed local capacity, infrastructure and build a trained workforce to respond to the current pandemic, other disease outbreaks, and be better prepared to respond to the next pandemic or catastrophic event.

### III. Key approaches (operational guide) to accelerate TBCI during COVID-19 pandemic

Scenarios for entry points and suggestive screening, evaluation and testing algorithms for both diseases and TB infection (TBI).

According to the WHO Interim guidance, “COVID-19: Operational guidance for maintaining essential health services during an outbreak”,\(^3\) published on 25 March 2020, the following are some of the guiding principles outlined.

- Establish simplified purpose-designed governance and coordination mechanisms to complement response protocols
- Countries should identify context-relevant essential services
- Optimize service delivery settings and platforms
- Establish effective patient flow (screening, triage and targeted referral) at all levels
- Rapidly re-distribute health workforce capacity through measures including re-assignment and task sharing
- Identify mechanisms to maintain availability of essential medications, equipment and supplies

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This document provides a guide to optimize the utilization of available resources and maximize the effectiveness of an integrated service delivery system for TBCI and COVID-19 activities in the areas discussed below.

A. TBCI and COVID-19 screening and testing at household level

Contact investigations of household contacts (HHC) to persons with TB and confirmed COVID-19 cases should be initiated promptly. All household members should be enumerated and screened for TB symptoms based on WHO criteria. Field-based collection and integrated sample referral of blood, sputum and nasal swab specimens for the diagnosis of TB, TBI and COVID-19 may be obtained in the household of index cases by staff who are trained and able to deliver specimens to a laboratory within appropriate timeframes for testing. A model household level TBCI and COVID-19 screening algorithm is shown in Annex 1.

B. TBCI and COVID-19 screening and testing at health facilities

Systematic screening for active TB and COVID-19 should be implemented among all persons seeking health care upon entry to the HF. Triage of all patients for WHO-defined TB symptom criteria and respiratory or flu-like COVID-19 symptoms with temperature checks can be established and implemented successfully for all patients upon entry to the HF. A model facility level TBCI and COVID-19 screening algorithm is shown in Annex 2.

C. TBCI and COVID-19 integrated sample referral, diagnostic process

There is an urgent need to expand TB and COVID-19 diagnostic testing using molecular technology with GeneXpert or Truenat as an integrated diagnostic program service. This will require additional equipment, trained staff, and strengthening of the specimen transport and referral systems. Many LMIC are already functioning near capacity and will require additional resources to accommodate the increased demand for molecular diagnostic testing for TB and COVID-19. For additional information see the Guidance note: Bi-directional screening and testing for TB and COVID-19 issued by the Ministry of Health of India.⁴

(Add link to the latest bi-directional testing implementation approach when finalized)

IV. TBCI and COVID-19 integrated standard operating procedures

Development of integrated COVID-19 and TBCI standard operating procedures (SOPs) for use in HFs and HHs during contact investigation for TB or contact tracing for COVID-19 is an important

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⁴ “Guidance note on bi-directional TB-COVID screening - MoHFW."  
first step. SOPs will help guide countries as they plan, coordinate and maximize the effectiveness of the available human resources and activities in the community and HFs. SOPs should integrate both TBCI and COVID-19 using the same team of health providers and the same health service delivery model at the HH, community, and HF levels.

The USAID toolkit for the Programmatic Implementation of Tuberculosis Contact Investigation (PI-TBCI) provides an important resource for the development of a set of clear and comprehensive SOPs for TBCIs and can be readily adapted to COVID-19 contact tracing. The toolkit has important details to establish prioritized standard procedures and formats for TBCIs that can be used to integrate into COVID-19 SOPs. The toolkit provides an outline of the requirements to include in a comprehensive SOP to implement TBCI and TB preventive therapy (TPT) (see Annexes 2-5 and pages 19-20 in the Programmatic Implementation of Tuberculosis Contact Investigation (PI-TBCI)). The inclusion of COVID-19 will need to be further developed as per specific conditions in the country. Illustrative HH and HF level algorithms for TBCI and COVID-19 are proposed in Annex 1&2 and can be adapted to the country context.

V. Additional staff capacity requirements for integrated TBCI and COVID-19 services

Community health workers (CHWs) play an essential role in meeting the need for additional human resources to provide both essential health services and pandemic response. CHWs are critical to the successful implementation of TBCIs and the pandemic response. Based in their communities but with strong support and supervision linked to their local health facilities, CHWs have the trust and support of their community which is essential to identify and bring required services to the most needy.

VI. Mentoring, support, education, training and supervision for integrated services

As noted in the WHO, COVID-19: Operational guidance for maintaining essential health services during an outbreak, the rapid redistribution of workforce capacity through re-assignment and task sharing among healthcare workers is critical until the staffing is increased or the outbreak abates. An integrated management approach with support of existing staff is needed while developing a work plan to meet the increased demand for TBCI and COVID-19 activities within health facilities and adjacent communities.

The planning and implementation of task shifting and reassignments for integration for TBCI and COVID-19 will require leverage of available resources and joint mentorship, training and supportive supervision of front line workers. The recruitment, training, and compensation of

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CHWs will be critical to the implementation of integrated TBCIs and COVID-19 activities as they are the essential workforce for conducting community activities and HH visits.

Providing mentorship, resources, and training to CHWs about COVID-19 is imperative for them to expand their ability and effectiveness to conduct TBCIs. Providing ongoing training to CHWs about the importance of continuing to prioritize their TBCI outreach as well as keeping them up to date on COVID-19 response (access to testing, diagnosis, treatment) is key. As the cadre of the health workforce who makes household visits, the CHWs play a central role in educating HH and community members. It has long been demonstrated the importance and impact of CHW HH visits not just for screening contacts, but in providing education about TB, infection control, and the signs and symptoms to look for. Educating this workforce about COVID-19 signs, symptoms and most importantly protection and infection control is an efficient use of existing workforce resources.

CHWs are often engaged in TBCI on a volunteer basis. While this may be successful in the short-term, an investment in this workforce to reduce turn-over and maintain a well-trained cadre and sustain community level interventions is important. The critical community interaction and disease intervention work of CHWs in LMIC must be recognized and compensated. Conducting HH visits, documenting the findings and continued follow up takes time and justifies making CHWs a paid workforce. Adding training and screening for COVID-19 is an efficient use of this workforce, and the additional tasks should be acknowledged and the CHWs should be compensated for the work.

Training should be developed for all levels of staff involved in the combined TBCI and COVID-19 work, from the HF personnel to the CHWs who interact most closely with the index cases and their contacts in the household. Repeated and refresher training offers an opportunity for CHWs to share their successes, challenges, and approaches for conducting the household screenings. Adding COVID-19 contact tracing to routine TBCI is a new approach and building a community of practice at all cadres of the workforce via regular training will strengthen the activity as a whole.

A brief outline of key elements of a training program is shown below:

- Rationale for combined TBCI and COVID-19 contact investigation
- Basic information about signs, symptoms, and transmission on both diseases, comparing/contrasting how they are similar and different
- Self-protection, PPE, and infection control procedures
- Review of local strategy for combine TBCI and COVID-19 contact investigation
  - Overview of the model/algorithm of the intervention
  - Review of algorithms for screening
  - Discussion of high-risk contacts (TB vs COVID-19)
  - Review of strategies for household visits, gaining trust, providing education
VII. System requirements for integrated TBCI and COVID-19 implementation: Community based approaches

System requirements for an integrated TBCI and COVID-19 implementation is based on the premise that there is political commitment and that the community has the screening, diagnostic, and clinical capacity to implement successful TBCI and COVID-19 contact tracing. In this regard, it is essential that adequate human resources are available and that all HCWs and CHWs are trained based on national TBCI and COVID-19 protocols, policies and guidelines. The capacitated workforce should be engaged not only with the National TB Program but also with partner NGOs and community-based organizations through a tightly connected and coordinated network.

Community mapping of high burden sites and HHs are essential to having a targeted TBCI and COVID-19 contact tracing in the community. Both TBCI and COVID-19 approaches must be implemented with proper infection prevention and control systems to ensure provider and patient safety. This includes adhering to stringent context specific infection control protocols and guidelines within various decentralized service delivery models. It is also important that proper community surveillance mechanisms are in place to capture TB and COVID-19 using electronic or paper-based records, registers, and forms that are integrated into the national health information systems.

The diagnostic capacity is another critical system requirement for the integration of TBCI and COVID-19. Not only must there be a safe environment for sample collection in the community but also a strong transport referral system from the community to the laboratory. As a corollary to diagnosis, the planning, forecasting, procurement and supply of drugs for community treatment of TB disease, TB infection, and COVID-19 are critical to providing quality health care and improved patient outcomes for both diseases. Ideally community-based treatment monitoring or digital adherence interventions should be used for TB, and TB preventive treatments and to monitor associated adverse events.

A. Health facility-based interventions

Health facility system requirements for the integration of COVID-19 and TBCI mirror that of the community but differ in terms of level of care and resources required to achieve advanced screening, clinical diagnosis and treatment for TB and COVID-19. The system requirements to facilitate this integrative process are numerous. These include the existence of coordinating
bodies within facilities for joint planning and development of TBCI and COVID-19 policies, SOPs, work plans and guidelines. This can be implemented and evaluated through mechanisms already established within a country’s Ministry of Health. Unified systems for monitoring and evaluation of TBCI and COVID-19 through quality assurance, data management, quality supervision and real time reporting will be important to providing an integrated and optimum TBCI and COVID-19 response.

In addition to monitoring and evaluating, ensuring that systems are in place for strengthening the diagnostic capacity for both TB and COVID-19 will be needed. The availability of advanced radiology diagnosis using portable x-ray units and remote reading with artificial intelligence (CAD/AI) along with rapid dual use molecular testing with GeneXpert and Truenat provides an opportunity to bring high quality services beyond urban centers to remote areas of a country and can be combined with TBCI and COVID-19 contact tracing efforts to rapidly identity index cases and their contacts containing further community spread of disease.

In addition, the laboratory information systems will also play an important role by reducing delays in the provision of results to health care providers, facilitating rapid treatment for TB, TB infection and COVID-19 and the timely referral of index cases and initiation of TBCI and COVID-19 contact tracing. This expanded intervention capacity must also be supported by establishing quality assurance measures and continuous quality improvement programs.

An adequate and trained workforce within health facilities is a critical system requirement for an integrated TBCI and COVID-19 response. Healthcare workers must be competent in the management of both TB and COVID-19 diseases and have the ability to task shift in case of urgency. This requires training, mentorship and continuous learning and development programs that are aimed at maintaining high standards of practice. Providing staff within health care facilities with adequate PPE to prevent transmission of both TB and COVID-19 is also imperative.

Infection prevention and control (IPC) is another critical system requirement. This must be a meticulous process that involves early identification and separation of symptomatic persons, their contacts, and fast tracking for expedited diagnostic testing, implementation of droplet and contact precautions, frequent handwashing, environmental engineering controls and appropriate use of PPE. Furthermore, an integrative TBCI and COVID-19 system cannot be sustained unless the HF has an annual budget allocation that supports TBCI and COVID-19 programmatic interventions based in the HF and linked to the community.

B. Linkages between the community and facility approaches

An integrated response between the facility and the community for TBCI and COVID-19 is necessary to improve patient outcomes regardless of the approach used. Some of the system
requirements include an efficient sample referral system that is able to receive specimens and test and return results to the community. Another important linkage is the proper documentation of the referral process between the community and HF that is complemented by agreed upon communication protocols and procedures. Clear lines of communication with delineation of roles and responsibilities between facility and community based CHWs with proper support, mentoring, supervisory and managerial mechanisms should be in place to ensure a strong and systematically integrated approach. Moreover, it is important that there are regular meetings between the community and facilities to communicate progress, discuss the implementation of integrated TBCI and COVID-19 contact tracing activities and ensure continuous community support and engagement.

VIII. Integrated TBCI and COVID-19 monitoring and evaluation tools and reporting formats

Establishing integrated TBCI and COVID-19 monitoring and evaluation requires the right reporting tools and framework. These tools must be modified to capture both TB and COVID-19 routinely in all stages of data collection, analysis and reporting to reduce the burden and to integrate data collection into existing surveillance systems. Such tools include screening questionnaire forms that have well defined case definitions for TB and COVID-19. Patient clinical records and registers for TB and COVID-19 case reporting and contact tracing should be linked to the electronic database system for analyzing TB and COVID-19 data jointly. The flow of information for reporting of TB and COVID-19 will depend on the health system infrastructure but it is important that information is transferred seamlessly into the central repository of a country’s Health Information Management System (HMIS) from the satellite reporting sites in the community or private healthcare sector. Data quality audits in addition to regular weekly meetings by the monitoring and evaluation team to validate and clean the data for each disease is an important part of optimizing the integration of TBCI and COVID-19. The data collection forms in Annex 5 from the Programmatic Implementation of Tuberculosis Contact Investigation (PI-TBCI) toolkit can modified and used to integrate TBCI and COVID-19 monitoring and evaluation with only minor country specific adjustments such as adding columns that fulfill checklist requirements for COVID-19 contact tracing.

A. Integrated household contact investigation form (illustrative)

1. Expand TB symptom screening section on form to include in the case definition respiratory, flu-like and other symptoms of COVID-19.
2. Think TB first then COVID-19 due to symptom duration
3. Add column to document whether specimens were collected for diagnostic testing for TB and COVID-19
4. Add history of exposure to COVID-19 for epidemiological linkage
5. Indicate whether contact investigation initiated for both TB and COVID-19
6. Indicate whether contact was found positive for both TB and COVID-19 with TB and COVID-19 registry number (following up with referring institution is required)

**B. Integrated health facility level triage and screening tools and forms (illustrative)**

An integrated TB and COVID-19 flow chart is presented in Annex 3 and includes the following key elements:

1. Should be informed by analysis of patient flow in health facility
2. Pre-triage forms should include routine symptom check for COVID-19 and TB, if positive for either diseases the patient should be referred for appropriate evaluation based on national guidelines
3. For patients seeking admittance to health facility ensure that the case definition section on the triage forms contain the clinical and epidemiological criteria for COVID-19 to guide TB/COVID-19 clinical decision making
4. Triage forms should provide pathways for discharge and higher level of care for COVID-19 and TB based on severity of symptoms
5. For integrated screening tools ensure that the screening questions for TB and COVID-19 are applied based on national guidelines and protocols and provide the opportunity for the referral of TPT for PLHIV and high-risk groups
6. On screening tool forms ensure that samples for TB and COVID-19 are collected and results recorded for screening test i.e., CXR

**C. Integrated TB sample referral and laboratory diagnostic reporting formats (illustrative)**

An integrated TB and COVID-19 sample referral and laboratory diagnostic reporting form is presented in Annex 4 and includes the following key elements:

1. On sample referral forms ensure that the reason for examination includes both TB and COVID-19 and that the relevant COVID-19 test requested is included
2. Provide area on form for completion of results for both TB and COVID-19
3. For laboratory diagnostic reporting forms include both TB and COVID-19 test results and indicated whether case is for diagnosis or follow up

On all of the above forms the notes section should be updated to include definition and explanation of new terms for COVID-19.
IX. Infection control and prevention requirements in the health facility and household: Administrative, environmental, and personal protection measures

Administrative, environmental and personal protection measures should be adhered to at facilities. Staff and patients are protected through requiring face covering for all patients entering the HF (or the HH) or providing masks to those without adequate covering. HF ventilation systems and patient waiting areas should be reviewed and where possible modified to increase air flow. Patient flow into service areas should be regulated to allow adequate social distancing (2 meters) whenever possible. Temperature checks and patient hand washing stations should be available to patients upon entering into the facility.
Annex 1: Household (HH) level TB CI and COVID-19 screening algorithm

*For HH TB and COVID-19 contacts of an index case with variant strains, consider universal testing for TB and COVID-19 if resources permit.
Annex 2: Facility level TB CI and COVID-19 screening algorithm

OUTPATIENT VISITORS INCLUDING TB AND COVID-19 CONTACTS

One triage team and integrated screening tools

COVID-19 screening +ve but TB -ve

COVID-19 and TB screening +ve

TB screening +ve but COVID-19 -ve

Integrated COVID-19 and TB lab and X-ray diagnostics, registers and reporting

COVID-19 +ve: Management as per national guidelines

COVID-19 and TB CI Index case: Follow household (HH) level screening algorithm 1

If TB is diagnosed, provide TB treatment and if no TB provide TPT
Annex 3: Integrated health facility triage and screening tool for TB and COVID-19

Case Definition of COVID-19

**Clinical Criteria**
Acute onset of fever followed by respiratory disease and any one of the following symptoms: cough, shortness of breath, difficulty breathing, new olfactory disorder, new taste disorder or at least two of the following fever (measured or subjective), chills, rigors, myalgia, headache, sore throat, nausea or vomiting, diarrhea, fatigue, congestion or runny nose.

**Epidemiological Criteria**
One or more of the following exposures in the prior 14 days:
- Close contact **with a confirmed or probable case of COVID-19 disease**
- Member of a risk cohort as defined as defined by public health authorities during an outbreak
- Patient is screened on entry based on above clinical, epidemiological criteria and temperature check criteria

Meets COVID-19 case definition criteria

- No
  - Follow the normal flow of assistance from the health unit.
- Yes

COVID-19 Triage

- Fill the triage record book
- Screen for tuberculosis, Test for HIV
- Perform DNA FCR for COVID-19
- Assess for severity (Oxygen saturation O2, clinical status and co-morbidity)
- Provide medical treatment and care according to clinical condition

TB Symptom positive

- Evaluate for TB

TB Symptom Negative

For clinical management decisions see respective flow chart for Children, Adult and pregnant women

Criteria for inpatient admission

- Pneumonia (fever, dyspnea, tachypnea* )
- SPO2<95%
- Decompensated co-morbidity
- Other clinical criteria

- Yes
  - Request an ambulance
  - Isolate the patient
  - Start the case management of COVID-19 protocol
  - Report to COVID-19 treatment facility/unit

- No
  - Recommend home quarantine

Apply supportive measures (O2) during the transfer of the patient to the COVID-19 facility/unit

Annotations
*Tachypnea based on age criteria - * Respiratory rate ≥50 breaths/min for <1 year; ≥40 for 1-4 years; ≥30 for 5-12 years; ≥20 for ≥13 years
**Close contact is generally defined as being within 6 feet for at least 15 minutes. However, it depends on the exposure level and setting; for example, in the setting of an aerosol-generating procedure in healthcare settings without proper personal protective equipment (PPE), this may be defined as any duration. Data are insufficient to precisely define the duration of exposure that constitutes prolonged exposure and thus a close contact.

Adapted from Mozambique Ministry of Health COVID-19 triage screening guidelines
Annex 4: Integrated TB sample referral and lab diagnostic TB/COVID-19 reporting form

Request for examination of biological specimen for TB and COVID-19 ( illustrative)

Treatment unit: ________________________________ Date of request: ____________________ Patient name: ____________________________________________

___________________________________________ Sex: Male Female ___ Age (years): ______ Date of birth: ________________

Patient address: ________________________________________________________________ Telephone: ____________________________

Reason for examination: __________________________________________________________

If diagnosis for, presumptive RR-TB/MDR-TB?: Yes No If follow-up, month of treatment: ______

If diagnosis for COVID-19? Yes, No, If follow up, Vaccination status___ months since vaccination___

HIV infection? ☐ YES ☐ NO ☐ Unknown

Previously treated for TB? ☐ YES ☐ NO ☐ Unknown

Previously tested for COVID-19 ☐ YES ☐ NO ☐ Unknown

<table>
<thead>
<tr>
<th>Category</th>
<th>TB</th>
<th>COVID 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Type</td>
<td>Sputum: ☐</td>
<td>Nasal Swab ☐</td>
</tr>
<tr>
<td></td>
<td>Stool: ☐</td>
<td>Blood ☐</td>
</tr>
<tr>
<td></td>
<td>Urine: ☐</td>
<td>Saliva ☐</td>
</tr>
<tr>
<td>Test requested</td>
<td>Gene- Xpert MTB/RIF ☐</td>
<td>DNA PCR ☐</td>
</tr>
<tr>
<td></td>
<td>Gene Xpert Stool- Ultra ☐</td>
<td>Antibody Titer. ☐</td>
</tr>
<tr>
<td></td>
<td>LF-LAM ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Truenat-sputum ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Microscopy ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Culture ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drug Sensitivity ☐</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Line Probe Assay ☐</td>
<td></td>
</tr>
</tbody>
</table>

Requested by (Name and signature): ________________________________ Date of result: __________________

Results of TB and COVID-19 Examinations

Xpert MTB/RIF test result (to be completed in the laboratory)

Date sample collected: ____________________ Specimen ID_____________________

<table>
<thead>
<tr>
<th>M. tuberculosis:</th>
<th>☐ Detected</th>
<th>☐ Not detected</th>
<th>☐ Invalid / No result / Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rifampicin resistance:</td>
<td>☐ Detected</td>
<td>☐ Not detected</td>
<td>☐ Indeterminate result</td>
</tr>
<tr>
<td>COVID-19:</td>
<td>☐ Detected</td>
<td>☐ Not detected</td>
<td>☐ Indeterminate result</td>
</tr>
</tbody>
</table>

Examined by (name and signature): ________________________________ Date of result: __________________
Annex 5: Tuberculosis and COVID-19 integrated household contact forms (For illustrative purposes only)

**Form 1: Tuberculosis Household Contact Investigation Form (illustrative)**

Index Case Name ________________________ Index Case TB Type: □ Bac+ve □ Bac-ve □ EPT

Index Case HIV: □+ □- □ UNKNOWN/NOT TESTED Date of Index Case Diagnosis _ _ _ / _ _ _ / _ _ _ _ (DD / MM / YYYY )

Clinic / District where Index Case was diagnosed: ________________________

TB Contact Investigator (TBCI) Name: ____________________________________ Date of household visit: _ _ _ / _ _ _ / _ _ _ _

<table>
<thead>
<tr>
<th>Contact Number</th>
<th>Contact name (First name, Surname)</th>
<th>Age</th>
<th>Sex (M, F)</th>
<th>Contact found?</th>
<th>Date contact screened (DD/MM/YYYY)</th>
<th>Cough? (circle)</th>
<th>If YES to Cough:</th>
<th>Weight loss? (&gt;3kgs/mth)</th>
<th>Abnormal night sweats? (past 4 wks)</th>
<th>Swelling or lumps? (neck, arm pits, groin)</th>
<th>Prior TB?</th>
<th>HIV? (Reactive, Non-reactive, Unknown, not tested)</th>
<th>Contact specimen was collected</th>
<th>Contact sought evaluation?</th>
<th>Contact positive for TB?</th>
<th>TB Registry Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>M F</td>
<td></td>
<td></td>
<td></td>
<td>YES NO</td>
<td>How long? □&lt;1 wk □1-3 wks □3 wks – 1 yr □&gt;1 yr Coughing blood? YES/NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>R NR UNK/NT</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>Registry #: __________________ Date diagnosed? _ _ _ / _ _ _ _</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>M F</td>
<td></td>
<td></td>
<td></td>
<td>YES NO</td>
<td>How long? □&lt;1 wk □1-3 wks □3 wks – 1 yr □&gt;1 yr Coughing blood? YES/NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>R NR UNK/NT</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>Registry #: __________________ Date diagnosed? _ _ _ / _ _ _ _</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>M F</td>
<td></td>
<td></td>
<td></td>
<td>YES NO</td>
<td>How long? □&lt;1 wk □1-3 wks □3 wks – 1 yr □&gt;1 yr Coughing blood? YES/NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>R NR UNK/NT</td>
<td>YES NO</td>
<td>YES NO</td>
<td>YES NO</td>
<td>Registry #: __________________ Date diagnosed? _ _ _ / _ _ _ _</td>
</tr>
</tbody>
</table>
**Form 2: COVID-19 Household Contact Tracing Form (Illustrative)**

(EVERYONE IN THE HOUSEHOLD SHOULD BE SCREENED FOR COVID-19 FIRST)

<table>
<thead>
<tr>
<th>COVID-19 Contact screening number</th>
<th>Contact/person name (First name, Surname)</th>
<th>Age</th>
<th>Sex (M, F)</th>
<th>Date contact screened (DD/MM/YYYY)</th>
<th>Self-reported Fever or measured fever of 38 degree C and above (circle)</th>
<th>Cough:</th>
<th>Dyspnoea (Shortness of breath) or Tachypnoea*</th>
<th>Clinical suspicion of ARI* despite not meeting other clinical criteria</th>
<th>Contact specimen was collected</th>
<th>Contact positive for COVID-19?</th>
<th>COVID-19 Registry Number /facility</th>
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<td>M</td>
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<td>If cough, how long?</td>
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<td>Date screened?</td>
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</tbody>
</table>

* Respiratory rate ≥50 breaths/min for <1 year; ≥40 for 1-4 years; ≥30 for 5-12 years; ≥20 for ≥13 years

* ARI: Acute Respiratory Infection

Reference

**Annex 6: Airborne Infection Defense Platform (AIDP)**

<table>
<thead>
<tr>
<th>Activity</th>
<th>What is needed</th>
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</table>
| Community Level Early Warning System          | ● HR for community-based interventions (screening, testing, integrated contact and outbreak investigations)  
● Integrated screening (and testing) algorithms  
● MAST activities and use of mobile screening and testing approaches (CXR, IGRA, Truenat)  
● Airborne IPC measures (PPEs)  
● Civil society mobilization and community engagement  
● Advocacy and public health campaigns  
● Data and M&E system |
| Primary Health Care (PHC) early detection point | ● Bi-directional screening and testing  
● HCWs HR for strong support linkages with community-based activities  
● Molecular diagnostics and CXRs  
● Specimen transportation system  
● IPC (administrative, environmental and PPE)  
● Frequent and timely data reporting and surveillance |
| Nationwide Diagnostic Network                 | ● Both decentralized and centralized system in place  
● Molecular diagnostics and expanded multi-disease testing platforms  
● GXAlert, Genotyping  
● Integrated and interoperable laboratory modules and disease surveillance systems |

**References:**
- COVID Integrating TB, HIV, and malaria screening and testing into COVID-19 national guidelines PEPFAR Mozambique, 23 March, 2021 USAID.
- Global TB Programs and COVID-19 Key Considerations and Resources, 12 Jun. 2020 CDC.
- Coronavirus Disease 2019 (COVID-19) | 2020 Interim Case Definition, Approved August 5, 2020
- Challenge TB Revised TB recording and Reporting forms. Definitions and reporting framework for tuberculosis-2013 revision.