Operational guidance on service delivery to TB patients (drug-susceptible and drug-resistant) during the COVID-19 pandemic
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OVERVIEW
To support TB patients during the COVID-19 pandemic, it is critical both to patients and the healthcare system to minimize visits to health facilities. Below, we outline key adaptations to the TB care service delivery that should be considered to reduce health facility visits during the COVID-19 pandemic. This guidance prioritizes how to provide uninterrupted TB treatment in resource constrained health systems with a high burden of TB. In addition to outlining recommended service delivery approaches for drug-susceptible (DS-TB) and drug-resistant TB (DR-TB) patients, guidance on additional areas (including patient support, contact tracing, provision of the influenza vaccine, differentiating TB from COVID-19 and telephonic monitoring) is provided.

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I. DS-TB patients

i. Summary main recommendation

Provide 2-months of intensive phase TB treatment to align with scheduled return to the health facility for clinical assessment 8 weeks after TB treatment start. If smear negative at 8-week visit, provide 4-months of continuation phase TB treatment. At 6 months and completion of treatment, return for an exit clinical consultation.

ii. Operational details for specific populations:

a. Patients already on DS-TB treatment

For those in intensive phase:

- At next scheduled health facility visit, provide sufficient intensive phase TB treatment refill to last until 8-week visit. Schedule a return appointment to health facility for Week 8 follow up.
    - If smear was positive at diagnosis, also provide two labelled TB sputum jars and instruction to produce two sputum samples at home at the 7 week mark (give date reminder). Patient to drop sputum samples off, as soon as possible after sputum production, at the health facility (no need to wait for consultation). Return for clinical assessment at 8 weeks.
- At the 8-week clinical assessment:
    - Where Week 7 sample is smear negative and no clinically significant deterioration: Provide continuation phase TB treatment refill for the remaining 4 months of treatment, schedule a return appointment to the health facility for an exit clinical consultation at completion of 6 months of treatment.
        - If smear was positive at diagnosis, again provide two labelled TB sputum jars with similar instructions to produce and drop sputum samples at Month 5 and return for exit clinical consultation at Month 6.
    - Where Week 7 sample is smear positive or patient clinically deteriorating: Request culture and DST on second sample from Week 7 (if available) or send additional sample for smear, culture and DST. Provide a further intensive phase TB treatment refill for an additional 4 weeks, schedule a return appointment to health facility at Week 12. Again provide two labelled TB sputum jars with similar instructions to produce and drop sputum samples off at the health facility 3 weeks later and return for a further clinical assessment in 4 weeks. Clinicians to follow up on culture and DST results and recall patient urgently if drug resistance detected.
    - If smear result not available at 8-week clinical assessment:
        - Because patient did not return sputum sample at Week 7: Take sputum at 8-week clinical assessment visit and provide further intensive phase TB treatment refill for an additional week with return to the health facility for clinical assessment at 9 weeks.
        - Because lab result not yet available for Week 7 sputum: Provide further intensive phase TB treatment refill for an additional week with scheduled

appointment for return to the health facility for clinical assessment at 9 weeks.

For those in continuation phase

- At next scheduled facility visit provide sufficient continuation phase TB treatment refill to last until completion at 6 months. Have client return at 6 months for exit clinical consultation.
    - If smear was positive at diagnosis, also provide two labelled TB sputum jars and similar instruction to produce and drop samples at the end of Month 5 and return for exit clinical consultation at Month 6.

b. Patients starting DS-TB treatment

- At the TB treatment start visit, provided the patient is well, provide the full 2-months of intensive phase TB treatment and schedule a return appointment to health facility for Week 8 follow up.
    - If smear was positive at diagnosis, provide two labelled sputum jars and instructions to produce and drop two sputum samples at the 7 week mark (see details above), and return for clinical assessment at 8 weeks.
- Where the TB patient is co-infected with HIV and not on ART, start ART on the same day as TB treatment and align ART refills with TB treatment (i.e. 2 months of intensive phase TB treatment and 2 months ART refill). For patients with CD4<100, prescribe Prednisone for 4 weeks (40mg/per day for 2 weeks then 20mg/per day for 2 weeks) (https://www.ncbi.nlm.nih.gov/pubmed/30428290). Clinicians should follow-up all baseline results and telephonically recall any TB patient with a positive CrAG result to the health facility, informing the patient of COVID-19 screening procedures required on arrival.
- Counselling remains important. The first session of counselling should ideally be provided telephonically to reduce the time spent at the health facility on the day of TB start. If this is not possible, it should be provided at or near the health facility with existing TB infection control measures in place.
- Thereafter, follow approach for TB patients already on treatment above.

II. Drug-resistant TB patients

i. Summary main recommendation

Provide DR-TB treatment refills to align with a health facility visit schedule for clinical assessment at 2 weeks, 4 weeks, 8 weeks and 2 monthly thereafter.

ii. Operational details for specific populations:

a. Patients already on or starting an oral DR-TB regimen

- Whether on the short, standardized regimen or one of the longer oral regimens, DR-TB patients on linezolid require more intensive monitoring in the first 2 months due to the risk of a rapid drop in haemoglobin (Hb) levels. DR-TB patients require an Hb check (fingerprick, or full blood count if possible) at week 2, 4 and 8 and should be given DR-TB treatment refills to align with returning for clinical assessment at these time points. Clinicians should follow-up full blood count results and attempt to manage dose

adjustments telephonically when feasible, otherwise patient must be recalled for clinical assessment.

- Thereafter, irrespective of DR-TB regimen (including patients on longer regimens which continue linezolid beyond 2 months), provide 2 monthly DR-TB treatment refills aligned with clinical consultations at the health facility.
- ECG and Hb should be assessed at each clinical visit together with other monitoring parameters set out in local guidelines. The 2, 4 and 6-month clinical consultations are particularly important to assess treatment effectiveness, follow up on sputum culture results, make treatment modifications and monitor ECGs for patients receiving QT-prolonging drugs.
- If the doctor is concerned about a patient's Hb (<10 g/dL) or QT prolongation (>470ms) beyond 2 months of treatment, the clinician should review monthly (refer to local management guidelines).
- It is important for treatment monitoring and for treatment decision making that patients on DR-TB treatment give sputum samples every month until confirmed sputum culture conversion. Thereafter 2-monthly is sufficient. At each 2-monthly visit, patients should be given labelled sputum jars with instructions to produce and drop sputum samples between the 2-monthly clinical assessment visits.
- Counselling remains critical. Follow same guidance set out for patients with DS-TB at treatment start above.

b. <u>Patients on a DR-TB injectable regimen</u>

- Any patient still on a DR-TB injectable regimen should be urgently transitioned to an oral regimen as recommended by the World Health Organization (WHO) and most country guidelines. In addition to all the known disadvantages of injectables, no patient should be required during the COVID-19 pandemic to risk returning to the health facility 5-6 times a week to receive their injectable treatment.

III. Unwell TB patients

- Advise all TB patients who become unwell at home, to first contact the health facility by telephone to advise on whether it is necessary to come into the health facility. Where it is necessary, ensure understanding of procedures on arrival.
- Ensure appropriate triage system implemented on arrival including screening TB patients for COVID-19. Where TB patient screens negative for COVID-19 on arrival, triage directly to TB services. Where TB patient screens positive for COVID-19 provide a surgical mask, keep patient separate within COVID-19 investigative area (or at least 1.5m apart from another COVID-19 person under investigation) and inform TB services.
- Visit frequency/treatment refill length should thereafter be determined at the discretion of the clinician with consideration for no unnecessary repeat in-person health facility visits during COVID-19.

IV. Additional areas of consideration

i. <u>Children, pregnant and breastfeeding women</u>

- Management of TB should be the same as detailed above. All attempts should be made to communicate and consolidate the number of clinical visits to different healthcare facilities for various indications (e.g. antenatal and TB and HIV follow-up appointments).

ii. Patient support during COVID-19
- All TB patients who have not identified a TB supporter in the home should be encouraged to do so for the period of treatment. Home support will be critical during time of less frequent interactions with healthcare workers and periods of lockdown.
- Where resources allow, telephonic clinical follow-up and counselling can be provided at the same frequency as health facility visits mandated in existing national guidelines. For example, if TB patients were required to return for clinical check-up and/or to receive further counselling sessions at week 2 and 4, these could be conducted telephonically at the same time points.

iii. Influenza vaccine: TB patients should not be brought back to the facility specifically for the influenza vaccine. Only provide an influenza vaccine if available in the clinician's consulting room during a clinical assessment visit. The risks involved in returning to the health facility outweigh the possible benefits of the influenza vaccine.

iv. Contact tracing:
- Contact identification (names, ages, contact details) should continue to be conducted at the diagnosis/treatment start visit.
- Patients should be advised to inform all their identified contacts of their TB diagnosis and the importance of informing any healthcare worker of their contact with a known TB case should they present at a health facility unwell during the COVID-19 pandemic. This will support appropriate triage. Where possible, the TB clinician can provide the TB patient with contact notification slips that should be brought by the TB contact should he/she present unwell to a health facility during this time.
- At the exit clinical assessment review at 6 months, the clinician should review whether the patient informed their contacts and if the COVID-19 pandemic is over, initiate appropriate contact management procedures.

v. Differentiating TB from COVID-19:
- It is of utmost importance that TB patients and patients with a high risk of TB (e.g. TB contacts) are screened for COVID-19 at arrival at health facilities as they may be co-infected.
- However, patients who present with a cough of 2 weeks or more should not screen positive for COVID-19, should be provided with a mask and can proceed directly to TB services for immediate screening for other TB symptoms and history of TB exposure.
- For any person presenting already diagnosed with TB or as a TB contact who screens positive for COVID-19, provide mask and keep patient separate (or at least 1.5m apart from another COVID-19 person under investigation) within COVID-19 investigative area and inform TB services.

Guidance contributors

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Dr Francesca Conradie
Dr Conradie has been involved in clinical HIV and TB research for over 20 years. Her focus has been translating research finding into policy. This has included the use of antiretrovirals to prevent infection and the introduction of new medications for the treatment of DR-TB. She has served on the Human Research and Ethics Committee of the University of Witwatersrand for over 10 years. In addition, she was a member of the board and then the president of the South African HIV Clinicians Society from 2009 until 2018.

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Dr Jennifer Hughes
Dr Hughes has managed patients with DS-TB and DR-TB since 2008, in both rural and urban South Africa. During her seven years with MSF she was involved with local and national stakeholders in DR-TB policy development and programme implementation. She now works for the Desmond Tutu TB Centre (Stellenbosch University) on research studies involving children and pregnant women with DR-TB. Dr Hughes is a member of the National Clinical Advisory Committee and has been closely involved in the development of the 2019 national DR-TB treatment guidelines.

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Lynne Wilkinson
Ms Wilkinson is a public health specialist with an MSc in Public Health from University College London. Her specific expertise is in differentiated service delivery for both HIV and TB patients. She has set up and run HIV programmes in rural and urban South African since 2005, including MSF's flagship Khayelitsha HIV and DR-TB project. She currently provides technical guidance on differentiated service delivery to sub-Saharan African country governments, global and local partners through the International AIDS Society differentiated service delivery initiative. She is an honorary researcher at the Centre for Infectious Epidemiology and Research at the University of Cape Town and serves on the South African National Differentiated Service Delivery Technical Working Group. She also provided emergency response support to the Ebola outbreak in Sierra Leone in 2014/15, specifically managing holding centres and case management flow.