



Early View

Correspondence

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The impact of COVID-19 and the restoration of tuberculosis services in the Western Pacific Region (revised)

Chen-Yuan Chiang,^{1*} Tauhid Islam,² Caihong Xu,³ Thilaka Chinnayah,⁴ Anna Marie Celina Garfin,⁵ Kalpeshsinh Rahevar,² Mario Raviglione⁶

1. International Union Against Tuberculosis and Lung Disease, Paris, France
2. End TB and Leprosy Unit, Division of Programmes for Disease Control, WHO Regional Office for the Western Pacific, Manila, Philippines
3. National Center for Tuberculosis Control and Prevention, Chinese Center for Disease Control and Prevention, Beijing, China
4. Tuberculosis and Leprosy Control Sector, Disease Control Division, Ministry of Health, Malaysia
5. Department of Health, Disease Prevention and Control Bureau, Philippines
6. Centre for Multidisciplinary Research in Health Science (MACH), University of Milan, Italy

* Correspondence: Chen-Yuan Chiang, 68, boulevard Saint-Michel, 75006 Paris, France. Tel: (+886) 933 723 426. Email: cychiang@theunion.org

Dear Editor

We read with great interest the papers by Tadolini et al, Stochino et al and Min Ong et al, which reported issues related to COVID-19 and tuberculosis (TB).¹⁻³ The response to COVID-19, especially the lockdown of the entire society, is likely to cause severe disruption of TB programmes.⁴⁻⁷ Reduced TB case notifications have been reported from the top three high TB burden countries worldwide, raising concerns of un-interrupted TB transmission and

increased TB mortality, thus posing the threat of derailing achievements made so far.⁴⁻⁷

Furthermore, the process of post-lockdown restoration of TB services matters.⁷ A slow restoration course may continue decreasing TB case finding as compared to a more rapid restoration time.

To share the experience of national response to the impact of COVID-19 on TB, the Western Pacific Regional Office of the World Health Organization organized an online meeting of the Technical Advisory Group on TB and National TB Programme (NTP) Managers of the Region on 23-24 June 2020. There were more than 90 participants from 17 countries. Experiences in different countries were presented and strategies to address challenges of TB prevention and care in the era of COVID-19 were discussed.

In China, non-medical interventions, including cancellation of public transportation, prohibition of public gathering and requirement to citizens to stay at home, have successfully brought COVID-19 under control.⁸⁻¹⁰ However, these interventions have been associated with more than 20% reduction in national TB case detection in February 2020 compared with February 2019. A national survey on the impact of COVID-19 on TB found that restriction of traffic has created barriers for patients to access health care, difficulties for health providers in tracing presumptive TB cases, difficulties in sputum transportation, difficulties in ensuring TB patients' adherence to treatment, and challenges in visiting patients' household for contact tracing. Staff from national TB programme, TB laboratories, and TB wards have been re-assigned to the fight against COVID-19. Concern of COVID-19 transmission has reduced willingness of patients to visit health facilities. In response, online diagnosis and prescription of anti-TB medicines were introduced, independent TB wards were established to meet the need of TB patients, electronic means of treatment support was applied, health education to mitigate panic of the public on COVID-19 was

strengthened, procedures for testing for both COVID-19 and TB were developed, and personal protective equipment (PPE) for community health workers was provided.

In Malaysia, border control, restriction of movement, social distancing, and self-protection through PPE have resulted in a flattened COVID-19 incidence curve. However, these interventions have also caused a 9% reduction of TB case detection in January – May 2020 compared with that in 2019. To restore TB services, several new practices have been introduced, including online fast lane appointment for clinical visits, TB screening among COVID-19 cases, drive-through and drop box for sputum collection and enhancing mobile CXR tools to avoid overcrowding in health facilities. Furthermore, physical distancing and use of PPE was advocated. Treatment support has been changed from facility-based to community-based to reduce patient' visits to health facilities. Continuous monitoring of NTP and frequent reminders to implementers helped improve TB case detection and management.

In the Philippines, community quarantine began in Metro Manila on 15 March 2020, and subsequently was implemented in most parts of the country. Consequently, active TB case finding was discontinued; visits of symptomatic individuals to health facilities was restricted; priority of health services was shifted to COVID-19; GeneXpert platforms in selected TB culture laboratories were re-assigned to COVID-19 screening; and TB contact tracing was limited. The effect was an immediate decrease of 78.7% in aggregate weekly TB notification following community quarantine. To ensure continuity of TB services, the Program issued a memorandum that one month supply of drugs should be given to patients and new standards will be issued through the NTP adaptive plan. Screening for TB was subjected to mandated social distancing and infection control procedures. Algorithm of handling specimens for TB testing in the community with ongoing transmission of COVID-19 was

developed. Home based TB treatment by using digital adherence technologies has been introduced.

After the presentations of China, Malaysia, and the Philippines, participants were divided into three groups to discuss the impact of COVID-19, the opportunities and priorities for TB programmes. Response to COVID-19 has resulted in disruption of TB services and decreased detection of both active TB and latent TB infection in several countries.⁴ Priority actions for rapid restoration of TB services from group discussions are summarized in Table 1. While COVID-19 has imposed great challenges to NTPs, it has also created opportunities to develop innovative strategies to ensure continuity of TB services and ultimately to strengthen TB care, prevention and control.

Table 1. Priority for rapid restoration of tuberculosis care and prevention during the COVID-19 pandemic

Domains	Actions of priority
Case finding	<ol style="list-style-type: none"> <li data-bbox="379 427 1155 461">1. Development of new standards of clinical consultations <li data-bbox="379 506 1270 618">2. Establishment of affordable on-line consultations for individuals with presumptive tuberculosis (TB) <li data-bbox="379 663 1203 775">3. Strengthening of specimen transportation using innovative approaches <li data-bbox="379 819 1219 931">4. Development of algorithm for dual TB and COVID-19 testing among individuals with respiratory symptoms <li data-bbox="379 976 1219 1088">5. Application of digital platform and connectivity solutions for rapid delivery of test results <li data-bbox="379 1133 1270 1317">6. Strengthening of contact examinations during community quarantine for detection of active TB and management of latent TB infection
Treatment	<ol style="list-style-type: none"> <li data-bbox="379 1458 1251 1648">1. Innovative approach for enrollment of bacteriologically confirmed TB cases on anti-TB treatment to prevent initial loss to follow-up <li data-bbox="379 1693 1219 1883">2. Strengthening of community-based TB treatment services to reduce health facility visits and prevent interruption of treatment <li data-bbox="379 1928 1203 1962">3. Scaling-up of digital adherence interventions, such as video

directly observed therapy (VOT), short message services, and innovative use of mobile applications.

4. Establishment of digital mechanisms for the management of adverse reactions especially for patients with rifampicin-resistant TB.

- Resources
1. Multi-sectorial approaches for restoration and enhancement of budget and human resources for TB prevention and care
 2. Mobilization of community health workers, civil society organizations, and community-based organizations to strengthen response to both TB and COVID-19
 3. Innovative approaches for training of health workers and health education of the community on TB and COVID-19 through digital platforms.
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