



Letter to the Editor

Implementing effective TB prevention and treatment programmes in the COVID-19 era in Zimbabwe. A call for innovative differentiated service delivery models



A B S T R A C T

The arrival of COVID-19 has disrupted health service provision globally. In this note, the authors discuss the impact of the COVID-19 pandemic on the provision of tuberculosis (TB) services in Zimbabwe. TB is endemic in the country and disruption of services may potentially have serious consequences for patients with existing and undiagnosed TB. In this letter, the authors discuss the need for innovative strategies that ensure TB prevention and treatment services in a manner which reduces COVID-19 risk to patients and healthcare workers.

Dear Editor

The Coronavirus disease 2019 (COVID-19) is a respiratory illness caused by the novel coronavirus SARS-CoV-2. The disease can be as mild as a common cold or as severe as pneumonia [1]. The common transmission routes of the coronavirus include direct transmission (cough, sneeze, and droplet inhalation) and contact transmission (contact with oral, nasal, and eye mucous membranes) [2]. Contaminated air or environmental surfaces are possible sources of infection [2]. The standard of care for COVID-19 is symptomatic therapy with antipyretics, hydration for mild cases and provision of ventilatory support if a patient develops respiratory distress. At the time of writing, there is no proven cure for COVID-19, which has been declared a pandemic, and global efforts are in progress to find a vaccine [3]. COVID-19 exhibits symptoms similar to tuberculosis (TB) [4], one of the major causes of mortality worldwide. According to the World Health Organisation (WHO), every year, about 10 million people fall ill with TB and approximately 1.5 million people die from the disease [5]. TB is highly endemic and a major public health problem in Zimbabwe, with an estimated incidence of 210 per 100,000 population in 2018 [6].

The gains realized over the years in the fight against TB and other public health issues are under threat due to the COVID-19 pandemic [7–10]. These threats to the TB response in the COVID-19 era have been well established elsewhere [10]. They include movement restrictions due to the implemented lockdowns [11–13], diversion of human and diagnostic resources from TB services [10], misdiagnosis of TB in areas where COVID-19 testing is not available [14] and TB stigmatization as some of the symptoms of TB and COVID-19 are similar. All these threats to the gains observed in TB control in Zimbabwe require swift strategic measures to mitigate their effects, and to manage the COVID-19 pandemic while implementing effective TB prevention and treatment programs [10].

Since COVID-19 and TB infections present with similar symptoms, an extensive range of differential diagnosis should be considered, including TB at first clinical presentation. Significantly, general preventive measures for all respiratory tract infections should be implemented for safety and the prevention of more transmissions in health facilities and to health-care workers. The overlap and commonalities for surveillance,

screening, diagnosis, care, and management can be exploited [15] and increase the rate of TB treatment initiation. The management of patients with respiratory symptoms should encompass combined testing for both infections, increasing the number of people tested for TB. Also, in combining the response to the two diseases, there is a great opportunity to leverage the infrastructure [16], extensive experience, and knowledge of TB researchers and healthcare workers on infection control.

Health promotion interventions are important to manage TB in the context of COVID-19, since most factors that lead to TB propagation are modifiable through health promotion. To prevent stigma and discrimination towards people affected or suffering from COVID-19, the government has to embark on a massive community engagement initiatives. This can be done in conjunction with civic groups, media organizations, and community leaders. Communities can be empowered through education and awareness campaigns on COVID-19 and TB. This empowerment can encourage individuals to seek medical attention without fear of discrimination at health centres.

The healthcare system in this country was sub optimal pre-COVID-19 and the pandemic has worsened the situation. There is a need for political commitment to strengthen the healthcare system to adequately address gaps in the long term [10]. While TB programs may initially use locally derived, simple risk stratification methods to focus interventions like active case finding and preventive treatment of family members at high risk of infection to increase their impact and cost-effectiveness [17], the scaling up of TB prevention and control initiatives involves monetary, material resources, as well as investments in the workforce to fight the disease together with patients [18,19].

During this COVID-19 pandemic the country should redefine the minimum package of HIV care and strengthen differentiated service delivery (DSD) models to include TB prevention therapy (TPT). DSD is a client-centric approach that streamlines TB services that address the needs of patients and minimizes the burden on health care facilities. TB patients will benefit from five common models of DSD for effective TPT. Firstly, health facilities must remain open and offer fast track refills of anti-TB medications. Secondly, since the distribution of TB medication to patients may prove to be difficult, health facilities ought to consider a two-tiered approach: make delivery of medications to patients

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communities or arrange specific days where patients can come to collect their medication. Thirdly, to minimize frequent travelling by patients to healthcare facilities to collect their medication, patients can be given a one time six-month dosage of anti-TB medication [19]. A recently concluded clinical trial has revealed that four months of treatment for TB works as well as a six-month regimen [20]. This will create more treatment success and less cost. Fourthly, health worker managed groups could be created at healthcare centres or in communities to encourage treatment adherence, medication refills and teen support, with healthcare workers providing information on dosage, frequency of medication, and possible adverse reactions to the medications. Fifthly, TB infected managed groups, such as community anti-TB treatment groups that facilitate refills, may be utilized. For each model, there is a need to facilitate documentation and identification of best practices and taking these to scale. Widespread implementation of DSD for TPT is inexpensive, with potential to prevent advancement to clinical disease, decreasing TB-associated mortalities, morbidities, including hospitalizations and eventually decreasing TB transmissions and, thus, unburdening healthcare systems.

Finally, the COVID-19 pandemic has strained the country's healthcare and affected the TB care continuum. The country can benefit from adopting innovative strategies such as incorporation of TPT in DSD models. Widespread implementation of DSD for TPT is inexpensive, with the potential to prevent advancement to clinical disease, decreasing TB-associated mortalities and morbidities, including hospitalizations, and eventually decreasing TB transmissions and, thus, unburdening healthcare systems.

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