Impact of COVID-19 on TB care: experiences of a treatment centre in Nigeria

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Dear Editor,

COVID-19 has spread to virtually all the countries of the world, and is a major threat to global health with more than 11million confirmed cases and over 500,000 deaths.[1] It was not until late February that Nigeria recorded the first case of COVID-19.[2] Since then, there has been a rapid rise in the number of cases, with close to 30,000 confirmed cases and over 600 deaths.[3] The Federal Government declared a lockdown from 30 March until 1 June to contain the spread of the virus.

The pandemic has defined life in many countries, causing disruption to economic, as well as social life, and the ability and internal resilience of Nigeria to cope is a matter of concern. Nigeria (and indeed most African countries) is still battling with the age long disease of TB – it has the highest burden of TB in Africa and the sixth globally.[4] Case detection for TB is abysmally low, accounting for more than two thirds of undetected cases worldwide. Worryingly, the COVID-19 pandemic has the potential to slow down and eliminate previous gains in TB control. It is expected that the similarities in the symptoms between the two diseases is a double-edged sword that will either facilitate or hinder screening and detection of both diseases. Although the diagnosis and treatment of TB are free and readily available, this article is intended to give an early view

into the impact of COVID-19 on TB care in Nigeria. It provides a retrospective review of TB case notification and detection at a TB Clinic (Obafemi Awolowo University Teaching Hospitals Complex, Ile Ife, Nigeria) with a comparison of the first 5 months of 2019 and of 2020, with particular emphasis on the most recent months. The presumptive and treatment registers for TB under these periods were evaluated. The TB presumptive register is an indication of the number of individuals screened for TB and contains the lists of those with symptoms and signs of TB who are being evaluated using sputum testing. The treatment register details those with a confirmed diagnosis of TB who have commenced treatment at the centre. We sought to determine the differences, if any, in the number of presumptive cases, the number detected and treatment outcomes, such as death and loss to follow-up (LTFU) rates, between January and 28 May 2019 and January and 28 May 2020. As shown in the accompanying Figure, in 2019, the number of presumptive cases between 1 January and 28 May 2019 was 430, while there were 200 presumptive cases between 1 April and 28 May 2019. However, in 2020, a total of 280 presumptive cases were registered between 1 January and 28 May 2020, and only 20 presumptive cases were registered between April and 28 May 2020. This represents a reduction of 35% and 34% in the number of presumptive TB and active TB cases detected respectively compared with the same period in 2019. However, the period between April and May 2020 has so far accounted for only 7% and 13.6% of the number of presumptive cases and TB cases detected respectively. This is quite low compared with the figures of 46% and 50.7% obtained over the same period in 2019. No deaths were recorded during the period. However, there were two cases of LTFU between April and 28 May 2020.

This initial assessment of COVID-19 on TB treatment has brought to the fore some of the major impacts of the pandemic. In 2020, there has been a marked reduction in the number of presumptive cases and TB case detection in comparison to 2019. There were no deaths reported, however, there were occasional reports of the failure to fulfil follow-up appointments. COVID-19 has restricted access to diagnostic assessment, as indicated by the declining number of presumptive cases, and to uninterrupted treatment. The greater the number of symptomatic individuals tested, the greater the number of TB cases that would likely be detected. This reduction could be a result of the lockdown.[2] Reduced access to transport during lockdown could limit accessibility to the test and treatment centre. Again, because of the associated stigma with COVID-19, patients may be averse to visiting health care facilities unless absolutely necessary.[5]
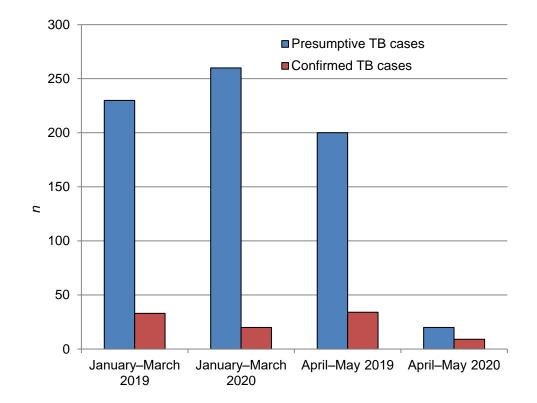
Although this initial assessment did not show any increase in death rates, Nigeria's Minister of Health reported that TB was one of the identified risk factors for severe COVID-19 and death. The case fatality rate in the Global Tuberculosis Network for TB and COVID-19 co-infection was 10.6%.[6] Individuals with active TB are more susceptible to SARS-CoV-2 infection, and COVID-19 disease progression may be more rapid and severe in individuals with TB.[7] Mortality is common in people aged >65years and those with more than two comorbidities.[6] For those who are eventually diagnosed at this time, the possibility of there being a significant diagnostic delay cannot be ruled out. During a relatively peaceful time, more than 60% of TB patients suffered delays due to failures in health care,[8] and this is likely to be worse in the current circumstances (although this was not evaluated in this study).

In view of the large-scale impact of TB on COVID-19 and vice versa, it is important to conduct an appraisal of the current methods and strategies. An important means of mitigating against these impacts is education and awareness, which should be continuous and done in local languages (as far as possible) to increase coverage. The issue of ramping up testing for COVID-19 cannot be understated. Patients with TB or presumptive diagnosis should also have priority access to testing. The proposed plan by the government of Nigeria to use GeneXpert technology (Cepheid, Sunnyvale, CA, USA) to aid diagnosis of COVID-19 should be well thought through. As novel as this may sound, equipment and cartridges must be available to ensure that this does not impair the timeliness of TB diagnosis. Anti-TB treatment appears to have limited or no protection against COVID-19 infection because COVID-19 can occur even during treatment of TB, as shown by Tadolini et al.[9] However, it is vital to encourage patients to continue to adhere to their anti-TB medication. When a drug(s) treatment is confirmed for COVID-19, the interactions between the approved treatments with anti-TB drugs should be studied. In order to enhance treatment adherence, community directly observed treatment (DOT) or some form of remote video DOT may be deployed.

Although this is an initial assessment based on a single centre, it provides real-life evidence in a setting where there is high (and rising) incidence of both diseases. The information from this study will build into a serial and long-term study, which will be used to reshape TB control strategies. In conclusion, these are challenging times that also present opportunities for countries to revamp and upgrade their health facilities. While our attention and focus should be geared

towards rapid control and eradication of COVID-19, steps must also be taken to ensure TB care does not suffer in Nigeria or in Africa in general.

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Figure. Frequency distribution of presumptive and confirmed TB cases between January–May 2019 and January–May 2020 (the country was in lockdown between 30 March and 1 June 2020)