Sustaining essential healthcare in Africa during the COVID-19 pandemic

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Dear Editor,

The South African government's March 26th 21-day nationwide lockdown has prompted public and private healthcare systems to prepare for increased acute and intensive care admissions. In developing a response to an impending novel threat that globally is stretching hospital services to their limits, it is easy to lose sight of the importance of essential primary healthcare delivery to reduce the extent and severity of SARS-CoV-2 infection.

The evidence from China¹ that the shift of focus to COVID-19 leads to resource diversion and omissions in mycobacterium tuberculosis (TB) and drug resistant TB (DRTB) management is already manifesting in South Africa. In at least one province, COVID-19 plans take no account of the country's MDRTB ambulatory program. In consequence, a successful family physician-led MDRTB team that provides holistic patient and family MDRTB and HIV ambulatory care in a rural district (Figure 1) has been left out of district and facility plans, save being designated a COVID-19 isolation area to keep persons under observation.² In keeping with expectations that TB patients will be severely and adversely impacted by the COVID-19 pandemic,³ staff and patients fear increased mortality, especially where there is HIV or diabetes mellitus comorbidity. Staff are frightened of the risk to themselves and their families of working without essential adequate personal protective equipment (PPE), now in very short supply.⁴ They are worried that withdrawing a best practice model of community-based ambulatory MDRTB care will be to the detriment of patients, their families and the system, not least of all because of the limitations of the present TB hospitals, that amongst other things, are not structured to isolate MDRTB-COVID-19 patients.

Beyond these particular experiences, there is a real risk that existing healthcare vigilance will not be maintained around diseases presenting with cough or fever as symptoms. Globally, notwithstanding the seasonality of TB detection,⁵ the influence of levels of clinical activity and changes in health seeking behaviour on HIV detection⁶ require that primary healthcare staff are alert to the possibility of these conditions in the face of the COVID-19 emergency. Equally, and paradoxically, primary care case follow-up needs to intensify rather than decline both to support COVID-19 detection⁷ and to ensure that the attendant emergency public health restrictions on movement do not negatively impact on treatment adherence. Services need to be essentialised to reduce the number of routine visits where patients are controlled and reorganised to ensure patient safety through effective triaging and infection control measures.

COVID-19 Risks to a Rural South African Ambulatory MDRTB Primary Care Service

Current Patient Cohort: N=64

Treatment Phase: 4-6 month intensive 70%; Continuation 30% **Care**: Ambulatory Live at home with family 95,3%; In facility4,7%

Team Concerns

- Effective ambulatory service not in COVID-19 provincial and hospital emergency response plans
- PPE Shortages and reprioritisation away from MDR-TB, resulting in delayed diagnosis and treatment default
- Difficulty differentiating COVID-19 and TB symptoms
- Inadequate in-facility isolation for TB/COVID19 infected patients
- TB/COVID19 Intected patients
- High vulnerability for COVID19

Patient Concerns

- I am feeling well and have no medical complaint today. Can I self-quarantine or isolate at home rather than being admitted? Can you visit me at home to check on how I am doing if infected? I am asking for your assurance. I know I can infect my family, but we can take precaution if guided properly. (Patient L, 54, F, RR-DRTB, Continuation Phase)
- I am a diabetic patient on DRTB treatment with damaged lungs. I feel well, my blood sugar is controlled. I hear COVID-19 is bad for my case. I am asking what are my chances of survival if COVID-19 infect me? Can I prepare my mind to die? (Patient N, 36, M, MDRTB, Post Treatment Discharge Phase)

Figure 1: COVID-19 Risks to A Rural South African Ambulatory MDRTB Service Primary Care Service

There are many unknowns. At this point, it is difficult to differentiate deterioration of TB, seasonal influenza and SARS-CoV-2 infection in patients with cough and fever without additional laboratory investigations. It is also not clear what the course of SARS-CoV-2 infection will look like in TB and HIV undiagnosed, newly-initiated or poorly adherent patients.

At the same time there are also opportunities to better manage the epidemic through primary healthcare.⁸ All available evidence suggests that most people who become infected and moderately ill recover without the need to be hospitalised. However, this is only likely be the case in South Africa if primary healthcare providers proactively raise COVID-19 literacy, as has been done with HIV/AIDS, and simultaneously, continue to render essential services to the millions of people on treatment.

The call from the depths of the Lombardy catastrophe9 to focus and engage in the community should be taken up everywhere as both a public and a primary health-care service issue. This, not only to prevent and contain infection, but also to support therapy and post infection recovery. Without orienting services to communities through extended primary care,¹⁰ it will be difficult to respond to the windows of opportunity that arise to prevent infection, delay disease progression and reduce the need for hospitalisation and specialist care. ^{11,12}

At the time of writing, MDRTB-COVID-19 coinfection has yet to be reported and there is yet little evidence of the impact of COVID-19 on HIV and TB globally. However, we anticipate that SARS-CoV-2 will have deleterious effects on people living with these kinds of

respiratory and immunocompromising infections. As countries prioritise COVID-19, it is imperative that South Africa does not drop the ball on essential generalist primary healthcare. We urgently recommend:

- 1. On-site, best practice COVID-19 identification and management training for all primary healthcare providers.
- 2. COVID-19 screening, testing and adherence support of all HIV, TB, MDRTB and other patients with chronic diseases.
- 3. Essential primary care services guideline development and training for all primary care personnel.
- 4. Sustained and adequately staffed essential primary care services.
- 5. Uninterrupted extended provision of chronic medications to reduce frequency of nonessential service contact.
- 6. PPE for all front-line COVID-19, TB, and MDRTB primary care workers.
- 7. Intensified infection control in the collection, processing and transportation of all respiratory specimens.
- 8. Provision of effective electronic and telephonic communication technology to support staff, patients and the public.

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