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LETTER

Responding to COVID-19: adjusting TB services in a low-burden setting

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Dear Editor,

As humanity attempts to navigate the impact of COVID-19 there are significant changes to our lives all across the world. Efforts to manage another longstanding pandemic, tuberculosis (TB), have also been impacted. Similar to our colleagues in New York City,[1] the Victorian Tuberculosis Program (VTP) and related clinical services, have been monitoring the local impacts and making adjustments to practice while striving to maintain an effective public health response. Here, we describe how the social and programmatic changes brought on by COVID-19 have been experienced in practice.

The VTP is a centralised programme with responsibility for TB public health services for the state of Victoria, Australia. The VTP operates predominantly in community settings or tertiary hospitals in partnership with treating services, and is a nurse-driven programme, emphasising tailored self-administered treatment and ownership of health decisions. Clinical

practices are much like those described by Burzynski et al.[1] (see Table). Victoria is a low-prevalence setting (7.9 per 100,000),[2] with rates driven by migration—for 68% of people diagnosed English is not their first language.[3]

Telehealth features heavily in TB program operations. Staff have worked core hours, from a central location, with flexible options to work from home or community hubs to optimise case management. Because of COVID-19, these options are now mandated with rostered access to the office. This has led to reduced collegial inquires, peer support, and the loss of impromptu secondary consultations that occur in a shared office. Deliberate efforts are now made to sustain these interpersonal relationships. Clinical practice has evolved to protect staff and patients from SARS-CoV-2 infection and to comply with public health policy. Our previous tentative steps into the use of telehealth have been accelerated with rapid upskilling and resourcing. Nursing staff find themselves seeking education on technology platforms, both learning with or coaching TB specialists and patients. The increased use of telehealth has also seen an increased demand for appropriate interpreting services, and there is a shortage of provisions for some languages. The effect of this on informed participation in healthcare is a matter of concern. Telehealth has taken a toll on human and economic resources.[4] Despite these challenges growing interest and experiential learning promise the integration of telehealth in the provision of TB care.

Medication supply and treatment access are central to TB care. COVID-19 funding to tertiary hospitals, resulting in pharmacies being able to post out TB medication to patients to reduce hospital traffic, has promoted a shared responsibility for the delivery of medication. This has allowed nursing staff to redirect their energy, on the proviso that medication is sent early enough to account for delays in delivery due to increased demand on services. Nursing staff otherwise have to act as couriers.

Preparation for a greater demand for negative pressure rooms for COVID-19 has seen a rise in home-based isolation and management of lower-risk infectious TB patients. TB nurses making home visits are required to assess and implement appropriate personal protective equipment measures to reduce the risk of both TB and COVID-19 transmission. The risk of SARS-CoV-2 transmission is assessed before the visit and on arrival. Staff report that the simple act of delivering medication, or providing a brief home visit, is being received with gratitude by those affected by TB and reducing their anxiety as ‘normal business’ is undertaken. As public health restrictions ease, the value of this practice will need to be weighed against the risk of SARS-CoV-2 community transmission.

The physical distancing requirements for COVID-19 have seen a widening and deepening impact on housing,[5] job security,[6] mental health,[7] alcohol and drug use[8] and family violence.[9] These may be partially mitigated by Commonwealth and State government intervention, including a 6-month moratorium on evictions and rent increases and tax relief for landlords who discount rents; rental assistance remains claimable via the Federal social security system.The Australian social security service is historically targeted and heavily means-tested. At this time, its use of general revenue[10] (rather than a social insurance model), and bipartisan agreement has allowed for remarkable agility with a relaxation of claim processes, reduced participatory obligations, the removal of assets testing and (notably for those in isolation) no requirement to present in person for identification confirmation. Increased public health literacy and comprehension provides an opportunity to make these arrangements lasting in the context of TB isolation and income loss.

Residency requirements remain in place to access social security services, resulting in international workers, students, and the undocumented being left in an isolation limbo; obliged to living on savings and charitable provision while waiting to discover when study, work or flights will resume. Border closure creates two distinct pathways for TB in Australia—reduced notification secondary to paused migration and worsening health outcomes due to increased vulnerability for those in isolation limbo.

General practitioners (GP) play an important role in the diagnosis of TB and managing latent tuberculosis infection (LTBI) in the community.[11] Cultivating this resource through education and partnership has provided a referral point for TB contacts and uncomplicated LTBI management contributing to a reduction in testing delays and hospital traffic. Extending this cohort of GP has been interrupted, as have other new initiatives such as active case finding in stonemasons with high-intensity exposure to silica.[12] Many patients identify their GP as the preferred source of health information about LTBI,[13] and are electing to stay away from hospitals. With GP practices already working in the TB space, a consequence of the COVID-19 pandemic might be more responsive LTBI care as public health restrictions are lifted.

The full impact of COVID-19 on the TB pandemic remains unclear. Emerging evidence demonstrates worsening prognosis for patients with TB[4,14] and supports the need for additional research on the impact of COVID-19.[14] It is essential that vigilance is maintained and that the important work of TB programs is not ceased or neglected under the pressure of the urgent. Modelling in high TB burden settings indicates there may be a loss of 5–8 years of progress on TB.[15] However, the need to maintain quality, patient-centred care is leading to creativite

solutions which have the potential to provide long-term benefits. Victoria is in the fortunate position of being pre-TB elimination and able to make active use of telehealth. Greater awareness of the social, emotional, and economic impacts of isolation, disease morbidity and mortality due to COVID-19, may provide opportunities for agile TB programs to capitalise and make progress in eliminating TB.

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Essential service	Status during COVID-19 pandemic New York City[1]	Victoria, Australia	Risks and vulnerabilities	Mitigation and opportunities
Clinical services*				
Clinic operations	Closed three of four clinics	Clinics continue to operate in major hospitals; telehealth utilised and patients are triaged for complexity; side effects, MDR-TB, comorbidities, recent conversion and symptomatic	Delayed assessment Adverse reactions missed Managing comorbidities	Liaison between allocated VTP nurse and treating team
Patient prioritisation	Clinic appointments are limited to confirmed and probable TB cases newly discharged from the hospital, and recently identified contacts	Program appointments are limited to confirmed TB cases recently converted and symptomatic for active disease	Errors in assuming that low-priority patients have no urgent treatment issues	
Clinic appointments	Volume of in-person appointments is reduced. Telemedicine is offered for non-urgent appointments. Home visits are conducted for patients who are unable to travel to the clinic	Volume of in-person appointments is reduced. Telehealth is offered for non-urgent appointments. Home visits are conducted for patients as above. Health service telehealth capacity varies across providers	Communication can be compromised by a lack of resources (e.g., interpreter demand, limited non-verbal communication, technology). Inequity in healthcare access reflecting varying telehealth capacity	Improvement in telehealth utilisation for rural and remote Victorians More experience with and therefore greater understanding of which patients are suitable for telehealth Improved telehealth infurstructure Victoria wide as hardware becomes available and experience with the various platforms and approaches increases
Case management				

Patient interviews	Interviews are conducted over the phone rather than in-person	Patient assessments are conducted via telehealth platform, including telephone, rather than in-person	Delay in testing contacts risks a possible increase in active TB disease and treatment completion	Operational agreement to use EMR features to track all contacts for follow up in 12 months. Documentation protocols provide opportunities for future research
Chart reviews	Patient clinical information is obtained from electronic medical records system, if available, or by calling the infection control nurses	Patient clinical information is obtained from EMR system, if available, or by direct liaison with hospital staff		
Home assessments	Suspended	Triaged and screened for COVID-19 infection risk at booking and on arrival	Opportunity to identify additional contacts and socio-economic and environmental conditions that could impact on treatment outcomes or engage opportunistic screening is lost	COVID-19 provisions in claiming social security benefits can be exploited for those with TB. Experience of same is an opportunity to advocate for its extension
Contact investigation				
TB testing in homes	Suspended. Contacts are asked to go to their private providers for testing or referred to the Health Department clinic	Triaged and screened for COVID-19 infection risk		
TB testing in congregate settings	Suspended	Assessment is undertaken in the context of physical distancing and closures. Telehealth used for information sessions. Increased IGRA use	Opportunity to identify additional contacts. Possible that screening is break-of-contact only	TB transmission in congregate settings in the context of COVID-19 is less likely given physical distancing

DOT	In-person DOT is suspended. Patients are offered DOT through live or recorded video	For those assessed as benefiting from DOT, or on Public Health Orders to undertake DOT, partnerships with community services (e.g., methadone providers, medical staff in crisis accommodation) are formed and telehealth accessed as needed	Less face-to-face contact may result in delayed awareness of adherence concerns	Expansion of partnerships in care beyond COVID-19
Health Promotion				
Education		Interrupted		
Awareness campaigns		Suspended		

*Clinical services are provided by specialists in major hospitals across the state. VTP nurses liaise at clinics, in person, before COVID-19, via telehealth post COVID-19.

COVID-19 = coronavirus disease 2019; MDR-TB = multidrug-resistant TB: VTP = Victorian Tuberculosis Program; TB = tuberculosis; EMR = electronic medical record; IGRA = interferon-gamma release assay; DOT = directly observed therapy.