

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

## Barriers to tuberculosis care in the Philippines

In their Series paper in The Lancet Respiratory Medicine, Dheda and colleagues<sup>1</sup> reported a discrepancy between expected and reported tuberculosis cases during the COVID-19 pandemic. We write from the Philippines, the fourth largest contributor to the number of tuberculosis cases worldwide, with 500 people affected per 100 000.<sup>2</sup> Despite plans to improve tuberculosis programmes, aggregate tuberculosis notification decreased by 78.7% following community quarantine implementation.<sup>1,3</sup> Multiple factors, including public perceptions about respiratory illnesses, limited healthcare access, and a decentralised COVID-19 response, hindered progress for tuberculosis during the pandemic in the Philippines.

The pandemic increased precautions against respiratory illnesses, yet tuberculosis incidence is predicted to increase by 130% between 2021 and 2025.<sup>2</sup> A survey by Lau and colleagues<sup>4</sup> showed that more than 60% of Filipinos avoided crowds and people with influenza-like symptoms as part of the response to COVID-19. Although compliance was high, only a third of respondents demonstrated understanding of these practices as preventive measures. Higher educational attainment and telephone ownership were related to understanding of disease prevention; however, 80% and 20% of Filipinos, respectively, lack access to these.<sup>4</sup>

The decline in case notification, together with restricted access to tuberculosis programmes, has left substantial gaps in the continuum of care. In effect, deaths due to tuberculosis are predicted to increase by 170% owing to the effects of COVID-19.<sup>2</sup> The National Tuberculosis Program (NTP) has formulated a tuberculosis adaptive plan in the context of COVID-19. Interventions include video-observed treatment, digital adherence technologies, and support from other household members for patient treatment adherence in preference to traditional, directly observed therapy in the clinic.<sup>5</sup> These interventions have delivered promising results: a 75% relative reduction in loss to follow-up after 6 months of treatment.<sup>5</sup> However, these measures are limited to two regions and are still inaccessible to most Filipinos.

Despite the establishment of a national task force, the Philippine Government's pandemic response was largely decentralised.<sup>5</sup> Early directives such as enhanced community quarantine occurred only in Luzon island. Lockdown and testing protocols varied by city. Local government units assigned their limited workforce to COVID-19



services, impacting primary health care resources available for other diseases. This shift halted tuberculosis surveillance, especially in urban centres where COVID-19 was rampant.<sup>2</sup>

We agree with the authors that the pandemic has impeded tuberculosis care, especially in countries with a high tuberculosis burden, and that a novel approach is now imperative. Support for the Philippines' first national inventory study in 2022 is crucial in quantifying under-reported tuberculosis cases. With this information, structured implementation of the NTP will improve identification, diagnosis, and treatment of tuberculosis. Overall, a centralised strategy will enhance surveillance and service delivery to reduce the burden of tuberculosis in the Philippines.

We declare no competing interests.

## Robyn Gayle K Dychiao, Michael Paolo R Capistrano, Gabrielle P Flores, \*Celina Daia D Yap cdyapmd@gmail.com

University of the Philippines Manila College of Medicine, Ermita, Manila 1000, Philippines (RGKD, MPRC, GPF, CDDY); Department of Medicine, Philippine General Hospital, Manila, Philippines (CDDY)

- Dheda K, Perumal T, Moultrie H, et al. The intersecting pandemics of tuberculosis and COVID-19: population-level and patientlevel impact, clinical presentation, and corrective interventions. Lancet Respir Med 2022; 10: 603–22.
- 2 WHO. Global tuberculosis report 2021. 2021. https://www.who.int/publications/i/ item/9789240037021 (accessed April 15, 2022).
- 3 Chiang C-Y, Islam T, Xu C, et al. The impact of COVID-19 and the restoration of tuberculosis services in the Western Pacific Region. Eur Respir J 2020; 56: 2003054.
- 4 Lau LL, Hung N, Go DJet al. Knowledge, attitudes and practices of COVID-19 among income-poor households in the Philippines: a cross-sectional study. J Glob Health 2020; 10: 011007.
- 5 National Tuberculosis Control Program, Disease Prevention and Control Bureau, Department of Health. National TB Control Program Adaptive Plan: redefining the National TB Control Program in the Philippines in the time of COVID-19 pandemic. 2020. https://doh.gov.ph/sites/default/files/ publications/NTP%20Adaptive%20Plan.pdf (accessed April 15, 2022).