Commentary

Tuberculosis in Australia’s Top End First Nations highlights health and life expectancy gaps: a call to arms

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The incidence of TB is decreasing, but still, almost 25% of the world’s population are infected [1]. TB has largely been eradicated in many wealthy nations and has a disproportionate prevalence in developing nations [1]. The World Health Organisation describes TB as ‘a disease of poverty and economic distress, vulnerability, marginalisation, stigma and discrimination’. Hence, it is not surprising that globally, First Nations people are inordinately affected by TB. Australian First Nations are no exception. Rates of TB infection for First Nations Australians are 5-6 times higher than for the Australian-born, non-Indigenous population.

In this journal edition, Meumann and colleagues describe a retrospective observational study conducted over a 31-year period (1989-2020) in Australia’s Top End (doi: 10.1016/j.lanwpc.2021.100229) [2]. The Top End is located in the northern region of the Northern Territory (NT), which includes Darwin, the capital city, Arnhem Land and other parts, where the highest rates of TB in the country occur. The authors combined public health surveillance data with genomic sequencing of TB to investigate trends in both incidence and transmission.

Their findings confirm that vulnerable populations continue to be worst affected and shed light on how TB is being transmitted. Forty-eight percent of cases were born overseas, with two-thirds of these from developing countries in Southeast Asia known to have high TB incidence (Indonesia, Timor-Leste, the Philippines and Vietnam). Cases included asylum seekers and illegal fishers and crew. These overseas-born cases largely represent a vulnerable group of culturally and linguistically diverse people, whose proficiency in English and disease-specific health knowledge may be limited [3]. Whilst only 7% of cases were Australian born and non-Indigenous, 44% of cases were Australian First Nations. Mortality was significantly higher in Australian First Nations than overseas-born cases (12.5% vs 3.1%, respectively), the median age of death for First Nations people with TB was significantly younger than in both Australian-born non-Indigenous cases and overseas-born cases (49, 63 and 77 years, respectively), and almost 80% of all paediatric cases were First Nations children.

Australia reached its target of pre-elimination of TB in non-Indigenous Australians (<1 per 100,000) more than 10-years ago, but Meumann and colleagues modelled that TB pre-elimination in the Top End would not be reached until ~2066 for First Nations (based on the 5% per year incidence reduction over the past 30 years). Genome sequencing confirmed that TB control measures should be focused on specific geographical regions to reach the goal earlier. Twenty-eight putative transmission clusters were identified. Of these clusters, 86% were for First Nations cases, and most of these were from specific remote areas. Further analyses suggested that both reactivation from latency and recent transmission with progression contributed to TB incidence. They rightly suggest that ‘TB control resources should continue to be directed to TB hotspot regions, focusing on timely and complete case detection, contact tracing, and latent TB treatment’.

The example of TB in Australia’s Top End highlights the need for immediate action. The large gaps in health and life expectancy between First Nations and other Australians have been well publicised within Australia and have attracted international attention [4]. The health gap remains a key Federal priority, and the government aims to close the gap by 2032. However, Australia is
not on track to reach most targets related to closing the gap [5]. The Top End TB example highlights the need to address multiple factors prevalent amongst First Nations people that contribute to poor outcomes of TB and other diseases. These factors include overcrowding, homelessness, smoking, malnutrition, and diabetes. Efforts to curb smoking is particularly pertinent as smoking’ increases the risk of contracting TB, increases the risk of recurrent TB and impairs the response to treatment of the disease’ [6]. Smoking rates amongst Australian First Nations remain unacceptably high at almost 40% [5].

Importantly, Meumann and colleagues state that normalisation of cough (i.e., chronic cough is considered normal) and under-recognition of TB by clinicians contribute to delayed diagnosis. Chronic cough is an important symptom of TB. Both cough normalisation in Aboriginal children and under-detection of chronic cough was highlighted in recent studies in remote Western Australia: both clinicians [7] and Aboriginal families [8] normalised chronic wet cough, resulting in under-detection of disease by clinicians [7]. Therefore, efforts to improve timely TB detection and management, and reduce transmission, should include the facilitation of timely health-seeking for chronic cough by First Nations people and optimal management of chronic cough by clinicians. Such efforts would require the provision of culturally secure health information for communities and further training of clinicians in the management of chronic cough.

Strategies and initiatives to combat disease should be developed in partnership with First Nations people and local service providers to ensure an increased likelihood of sustained and successful knowledge translation [5]. Such an approach has resulted in significant improvements in timely health care seeking by families and respiratory health outcomes elsewhere in remote parts of Australia [10].

In summary, TB contributes to the large disparity in health outcomes between First Nations and other Australians. Resolving the disparity is possible but would take a comprehensive and culturally secure approach.

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Literature search and manuscript writing were conducted by PL and AS.

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