



Challenges for TB prevention and control in PNG

By Gigil Marme, Jerzy Kuzma, Neil Harris, Peta-Anne Zimmerman and Shannon Rutherford
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Despite the availability of preventive tuberculosis (TB) medications, TB remains a critical public health challenge in Papua New Guinea. Although PNG is no longer one of the [30 countries with a high TB/HIV burden](#) identified by WHO, a high burden of TB and multidrug-resistant TB remains. In 2011, the Department of Health introduced the [National Tuberculosis Management Protocol \(NTBMP\)](#), including TB infection prevention control (TB IPC) guidelines as a critical strategy to manage the high TB burden in the country. These TB IPC guidelines aim to interrupt the TB transmission cycle in healthcare institutions and prevent spread into the community. Though the guidelines have been promoted in the PNG health sector as a policy for over a decade, little information about the implementation of this policy is available to inform policymakers, health managers, and clinicians.

Research indicates that health facilities implementing optimum TB-IPC guidelines have effectively prevented TB transmission among susceptible individuals. For example, one successful strategy that highlights the efficacy of a TB IPC program in healthcare institutions was the implementation of a [cough officer screening \(COS\)](#) system in a hospital in Taiwan. This technique is an administrative control measure that trains nurses to promptly detect patients and guardians with coughs, and alert physicians. Through the operationalisation of the COS system, 184 – from a total of 7998 (2.3%) – “cough patients” were diagnosed with TB by the consulting physicians and were started on correct TB medications. This research suggests that without the COS system, these patients would have remained undiagnosed, endangering the lives of healthcare workers (HCWs), patients and guardians, and others in the broader community.

Despite the [effectiveness of TB IPC](#), its implementation still needs to be improved in many healthcare institutions globally, particularly in low-income countries such as PNG. Our recent [evaluation of the TB IPC guideline in district hospitals](#) in the Highlands and Momase regions – using the [WHO Infection Prevention Control Assessment Framework \(IPCAF\)](#) – reveals that about 80% of the district hospitals in the study sample have either an inadequate or only basic level of TB IPC practice. This finding is [consistent with studies in](#)

[the Highlands region](#) from a decade ago. According to WHO standards, health facilities with this status require significant improvement in TB IPC practice.

The picture that emerged from our analysis is one of relatively low priority for implementation in PNG's healthcare sector coupled with a myriad of challenges in district hospitals. For example, although [most rural hospitals have a TB IPC plan](#), no specific budget has been allocated to execute its activities. In addition, our study revealed chronic shortages of key HCWs in district hospitals, increasing workloads, and competing tasks for the limited staff. This has seriously paralysed TB-IPC activities, including patient triaging, cough education, screening, and community education.

Additionally, HCWs in district hospitals need more training on IPC practices. Currently, it appears that training opportunities that do exist are only accessible to TB program officers, leaving other key HCWs – including nurses, community health workers, and laboratory technicians – without this critical knowledge about TB IPC. Our evaluation in the Highlands and Momase regions also aligns with other [reports that show a chronic shortage of essential medical supplies](#) in rural health settings in other parts of PNG.

Worse still, about 50% (5 of 10) of the district hospitals have no designated TB wards. Our study revealed that patients diagnosed with positive and suspected TB cases were forced to be admitted with immunosuppressed patients with medical conditions in general medical wards. This phenomenon completely violates the recommended protocol of IPC standards, and endangers the health of other patients.

The recent [COVID-19 pandemic has highlighted the significance of IPC measures](#) in preventing healthcare-associated infections. However, rural health services – that [serve more than 85% of the inhabitants in PNG](#) – are [under-resourced](#) and lack good governance, leadership, and accountability at the Provincial Health Authority (PHA) level.

There is an urgent need to invest in strengthening interventions as articulated in the [National Health Plan 2021-2030](#), such as: training and capacity building for HCWs; improvement in healthcare institutions' infrastructure; consistent supply of protective technologies and drugs; maintenance of medical equipment; upgrading of rural laboratory settings; sufficient funding; adequate healthcare personnel; good governance and leadership; and availability of TB IPC guidelines at the PHA level and communicated to HCWs in rural health facilities. A robust health system and sound supporting infrastructure, including water and electricity, are essential facilitators of TB IPC practice in rural health settings.

It is imperative to note that if relevant stakeholders have not adequately supported the TB

IPC policy over the past decade, there is no guarantee that other similar public health policies, such as the [National Infection Prevention Control Policy](#), will be supported. There is, however, an opportunity to move TB IPC from the silo of national TB programs and embed it in the National Health Plan (in key result areas four and five, combating infectious diseases burden and health systems strengthening strategies).

Furthermore, TB IPC should be perceived as part of a comprehensive occupational health approach for promoting the wellbeing of HCWs as well as reducing the TB burden on the broader community.

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