



SUPPORTING PAPUA NEW GUINEA'S FIGHT AGAINST MULTI-DRUG RESISTANT TUBERCULOSIS IN WESTERN PROVINCE

AUSTRALIA IS PARTNERING WITH THE GOVERNMENT OF PAPUA NEW GUINEA TO STRENGTHEN THE RESPONSE TO MULTI-DRUG RESISTANT TUBERCULOSIS IN WESTERN PROVINCE. THIS HAS ACHIEVED NOTABLE SUCCESS IN ESTABLISHING AND IMPLEMENTING A HIGH QUALITY EARLY DETECTION AND TREATMENT PROGRAM TO CONTAIN AND REDUCE THE SPREAD OF THE DISEASE.

The Western Province TB Program supports over 100 TB specific staff, including clinicians, support staff, grant managers and technical advisers. The program is being led by the Western Provincial Health Office, Daru General Hospital and the National Department of Health.

Australia is the lead donor supporting these efforts and is part of a consortium of partners – including the Burnet Institute, World Health Organization, World Bank, and World Vision – providing technical expertise and resources.

As part of this, Australia's support aims to:

- Improve TB services at Daru General Hospital;
- Expand TB services to the community and improving TB awareness; and
- Strengthen the performance and governance of the underlying health system.

The initial focus of TB initiatives has been on Daru Island, which has been identified as an MDR-TB burden and transmission hotspot.

Building on the successes of the previous years, the TB program is now providing a model of service with a comprehensive package of care. This is being used as a guide in other regions in the country.



Direct observation of multidrug resistant TB patient taking medication at a community treatment centre.

BETTER PATIENT OUTCOMES

The TB program in Daru is making substantial progress in improving outcomes for the affected population. This is evidenced by dramatic improvements in patient retention: in 2014 35% of patients did not complete treatment while in 2017 this declined to less than 2%.

This is an extraordinary achievement given many patients wish to leave the island to return to families along the Fly River and the coast or to inland villages for income generation activities and to reconnect with families. Many patients also find it difficult to tolerate the medications and often feel it is safe to stop taking the medication as soon as they feel well instead of ensuring they continue for the recommended length of time.

Furthermore, the quality of treatment has improved with 83% of patients being 'cured' of TB, in line with global averages for similar countries.



Use of GeneXpert instrument to diagnose and detect the DNA specific to *M. tuberculosis* complex and resistance to rifampicin.

INNOVATIVE APPROACHES

Over the last four years, there have been significant improvements in case detection, preventative therapies, diagnostic techniques, and the introduction and supply of new drugs and new community-based models of care.

Community-wide screening for TB

Essential to treatment success and reducing the spread of TB is finding and treating TB cases early. Australia is supporting this through the Systematic Screening Initiative.

This initiative focuses on active case finding. In Daru, a community-wide screening program is being conducted by a team using a newly procured truck fitted with an x-ray container. This enables them to bring diagnostic services to all parts of the island, improving the percentage of the population screened for TB.

Active case finding is also being carried out across the province. Family members and friends of newly diagnosed patients are visited by health workers and screened for symptoms of TB. The team often finds new cases before the person is aware they have the disease.

Preventative therapy for high-risk groups

Preventative therapy has also been introduced. It is most effective when used with children less than five years of age and people living with HIV. The use of preventative therapy has been shown to reduce TB transmission and prevent deaths from TB.

Strengthening diagnostics

Diagnostic innovations have reduced the time taken to confirm diagnosis through the use of rapid diagnostics (less than 2 hours). Clinics are now linked to the GxAlert system which sends SMS and email notifications to the treating health workers.

Improved models of care

A strong community-based model of care has been established for patients who have commenced treatment and are stable on their medication. This approach has greatly reduced the inpatient burden on Daru General Hospital.

There are five community based treatment centres on the island where patients receive their daily supervised medications. To improve adherence and nutrition, patients are also provided a cooked lunch, monthly food vouchers and counselling.

Shorter, more effective drug regimens

The most up-to-date TB drugs currently available in the world are being used in Daru. The length of the treatment period for MDR-TB patients has in many cases been reduced from two years to under 12 months with the introduction of a short course regimen.

OVERALL IMPACT

The TB program on Daru Island has become the 'centre of excellence' and the model of care being used to guide and inform other Provinces throughout the country. Partners and stakeholders are providing training and support to healthcare workers to build local capacity and technical skills and knowledge.

The progress that has been made on Daru Island over the past five years is a true testament to the collaborative efforts of everyone involved. The commitment of healthcare workers, the resources invested and the patients themselves, have made a significant impact on the burden of drug-resistant TB on Daru Island.