

COSTS OF ESTABLISHING CLINIC-BASED VIRAL LOAD AND INFANT DIAGNOSTIC TESTING AND HIV DRUG RESISTANCE MONITORING IN PAPUA NEW GUINEA

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Background:

To address low coverage of HIV viral load (VL) testing and significant delay in infant diagnosis in Papua New Guinea (PNG), ACTUP-PNG was established to implement and evaluate clinic-based HIV VL and infant diagnosis complement by HIV drug resistance (DR) for people (re)-initiating treatment and people with virological failure. The aim of this study was to assess the resources needed to establish clinic-based point-of-care testing in PNG.

Methods:

A micro-costing was conducted using the procurement and financial information from the project to estimate costs of clinic-based testing implementation and DR monitoring. Costs included clinic-based laboratory establishment (e.g. refurbishment, air-conditioners), capital expenditures (e.g. closed-molecular platforms), overheads, fixed cost in training, transportation and quality control/assurance, and variable costs of consumables and cartridges. We also collected time and motion data by purpose-designed tools to estimate staff time costs of testing. We report the costs in 2022 Australian dollars (AU\$) and PNG kina (PGK) values.

Results:

The costs per test, including laboratory establishment and on-going testing, were estimated as: AU\$57 (PGK134) for VL testing using GeneXpert®; AU\$71 (PGK169) for VL testing in children (age <10) using m-PIMA®; AU\$57 (PGK135) for infant diagnosis using GeneXpert® and; AU\$417 (PGK985) for HIV DR testing. The purpose of visit, type of testing, and staff time in care delivery were collected from 299 people with HIV. On average, one patient visit took 2.2 hours of various staff time with AU\$18 (PGK42) labour cost. Visit time ranged from 15 minutes for a visit of antiretroviral therapy (ART) refill (AU\$2, PGK5) up to 4.3 hours for ART re-initiation of people loss to follow-up (AU\$43, PGK101).

Conclusion:

The costs analysis provides an important foundation of assessing health system requirements for establishing and on-going clinic-based HIV testing and DR monitoring in PNG and evaluating the economic value of interventions to combat HIV.

Disclosure of Interest Statement:

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