

## **Accelerating the uptake of innovations for detection and monitoring of HIV in Papua New Guinea (ACTUP-PNG)-Point-of-care HIV load and drug resistance testing of adults $\geq 15$ years**

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**Background:** PNG is working towards the Global UNAIDS Goal of #Ending AIDS. However, high rates of transmitted HIV drug resistance (DR), poor HIV viral load (VL) coverage and a centralised laboratory monitoring approach is hampering efforts to improve HIV status awareness and achieve viral suppression. ACTUP-PNG is the first initiative in PNG to provide point-of-care (POC) HIVVL testing for adults on ART ( $\geq 15$  yrs) and introduce routine HIVDR testing of newly diagnosed people.

**Methods:** ACTUP-PNG has two clinic-based laboratories at Mount Hagen and Port Moresby that provide POC HIVVL testing using the GeneXpert™ platform for adults on ART. Those with persistently high HIVVL results ( $>1,000$  copies/ml) are being offered HIV drug resistance (DR) testing. Newly diagnosed people with HIV are offered pre-ART POC HIVVL testing along with HIVDR on dried blood spots (DBS) to monitor transmitted drug resistance.

**Results:** The ACTUP-PNG program has significantly expanded HIVVL coverage in Mount Hagen and Port Moresby. As of October 2022, 3,192 adults ( $\geq 15$  yrs) on ART were provided POC HIVVL testing, of whom 59.7% are female. Of those tested, 92.9% were virally suppressed; a slight decrease from the 95.3% viral suppression rate recorded in early 2022. Triaging of adults with unsuppressed HIVVL for enhanced adherence counseling (EAC) has achieved viral suppression for 83 adults and 6 patients have had their ART changed after their 3-month follow-up. HIVDR has been identified in 15.5% (7/45) of adult DBS specimens sampled, with 2 people found to have HIV strains containing mutations to both NRTI and NNRTI antivirals.

**Conclusion:** Molecular POC HIVVL testing and EAC is providing timely access to results and achieving improved viral load suppression in PNG. ACTUP has demonstrated the value of active HIVDR surveillance and scale up of these capabilities combined with HIVVL testing will enable better treatment and care for people living with HIV.

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