

Accelerating the uptake of innovative approaches for the detection and monitoring of HIV in infants and children (<15 years) in Papua New Guinea

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Background: Papua New Guinea (PNG) has the highest HIV prevalence in the Pacific (>2% ANC prevalence). Due to significant loss to follow up, estimating vertical transmission of HIV is difficult; national HIV testing shows ~25% of HIV-exposed infants tested are infected. There is limited data available to assess HIV viral load (VL) among children with HIV in PNG. ACTUP-PNG is the first initiative in PNG to provide molecular point-of-care (POC) Early Infant Diagnosis (EID) for HIV-exposed infants (6 weeks - 18 months) and POC HIVVL testing for infants and children (6 weeks – 15 years).

Methods: ACTUP-PNG has established two clinic-based laboratories at sites in Mount Hagen and Port Moresby to provide molecular POC testing using the GeneXpert™ platform for HIVVL (HIV-1 Viral Load) testing for children (10 – 15 years) and EID (HIV-1 qual). For HIV-exposed infants between 6 weeks and 18 months and from November 2022 the m-PIMA™ analyser for HIVVL testing of HIV-positive infants from 6 weeks to children 10 years will be introduced.

Results: Six hundred and eighty seven (687) HIV-exposed infants were tested for HIV across the two sites with 10.8% (n=74) infants testing HIV-positive (HIV detected). Proportionally more infants have been diagnosed with HIV in Mount Hagen (12.2%) than in Port Moresby (9.6%). Of the 208 HIV-positive children on ART provided with HIVVL testing only 70.9% are virally suppressed.

Conclusion: Molecular POC testing is possible in PNG and offers improved access to timely HIV testing and monitoring. Addressing vertical transmission of HIV and HIVVL suppression among children must be made an urgent health priority in PNG if it is to eliminate the vertical transmission of HIV as well as meet the third UNAIDS target of 95% viral suppression among children and #End Paediatric AIDS.

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