

Acceptability of point-of-care paediatric viral load testing for children under 10 years in Papua New Guinea

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Background: HIV viral load (VL) testing is needed to assess an individual's own HIV treatment success, but also assess a country's progress against the UNAIDS 95-95-95 targets, where 95% of people on HIV treatment are virally suppressed by 2030. Until 2021 HIV VL testing in Papua New Guinea (PNG) was extremely limited, having achieved <5% coverage using the centralized testing model. In late 2022, ACTUP-PNG pioneered in PNG point-of-care (POC) VL testing for children aged between 6 weeks and 10 years, using Abbott's m-PIMA™ analyser. This study qualitatively examined the acceptability of the intervention which requires 300uL blood, significantly less than the 3mL required for current POC testing.

Methods: Qualitative interviews were conducted with caregivers of children under 10 years old and key informants including health workers, laboratory staff, policy and programmatic advisors and other key opinion leaders. Data was digitally recorded, transcribed and translated into English for analysis. All data was first deductively coded and analysed using the Sekhon, Cartwright and Francis (2017) acceptability framework and then inductively analysed to identify further themes.

Results: Early analysis found strong enthusiasm for the introduction of testing and treatment for under 10s (affective attitude and perceived effectiveness), an operational understanding about the program (intervention coherence and self-efficacy), and keen interest among caregivers to participate in the intervention as indicated by high test coverage and willingness to wait for test results (low burden and opportunity costs, high self-efficacy, and ethicality).

Conclusion: Findings of our study suggest high prospective and concurrent acceptability of infant HIV VL testing, which might translate to stronger uptake and understanding of viral suppression among young people and significantly advance PNG's progress against UNAIDS 95-95-95 testing and treatment targets. Findings also highlight some opportunities and challenges presented by such testing regimes in resource-limited settings.

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