ACCELERATING THE UPTAKE OF INNOVATIONS TO DETECT AND MONITOR HIV IN PAPUA NEW GUINEA (ACTUP-PNG) – POINT-OF-CARE HIV VIRAL LOAD TESTING AND HIV DRUG RESISTANCE TESTING OF ADULTS ≥15 YEARS

Authors:

<u>Schulz M²</u>, Gare J¹, Kelly-Hanku A^{1,2}, Pekon S¹, Silim S¹, Keno H¹, Gene S¹, Willie B^{1,2}, Boas P³, Ripa P⁴, Kombati Z⁴, Tai R⁴, Nano G⁵, Opina R⁵, Porau W⁶, Pomat W¹, Cunningham P^{2,7}, Kelleher A^{2,7}, Starr M⁷, Badman SG² on behalf of the ACTUP-PNG team

¹Papua New Guinea Institute of Medical Research, ² The Kirby Institute for Infection and Immunity in Society, UNSW Sydney, ³ Papua New Guinea National Department of Health, ⁴ Western Highlands Provincial Health Authority ⁵ Port Moresby General Hospital, ⁶ Central Public Health Laboratory, ⁷ St Vincent's Centre for Applied Medical Research, NSW State Reference Laboratory for HIV, St Vincent's Hospital, Sydney.

Background:

Papua New Guinea (PNG) is striving to achieve the Global UNAIDS Goal of #Ending AIDS, progressing towards measurable improvements in people knowing their HIV status, accessing life-long treatment, and viral suppression.

Significant problems include (>15%) transmitted HIV drug resistance (HIVDR), poor HIV viral load (HIVVL) coverage and delays of HIVVL results due to a centralized laboratory approach.

ACTUP-PNG is a novel initiative providing molecular point-of-care (POC) HIVVL testing for adults on ART (≥15yrs) increasing coverage and reduce result turnaround time. ACTUP-PNG has also introduced routine HIVDR testing for newly diagnosed people and those failing to achieve viral suppression.

Methods:

ACTUP-PNG established two clinic-based laboratories (Mount Hagen and Port Moresby) to provide molecular POC HIVVL testing using the GeneXpert™ platform for adults on ART. People newly diagnosed (pre-ART) with HIV or those with persistently high HIVVL results (>1,000 copies/mL) were offered testing for acquired HIV drug resistance alongside POC HIVVL.

Results:

1,646 adults (≥15yrs) on ART have been POC HIVVL tested to date, of whom 61.3% are female. 95.3% are virally suppressed with a slightly greater proportion in Port Moresby (97.9%) than in Mount Hagen (92.7%).

Of those initially virally unsuppressed and re-tested three months after enhanced adherence counseling, 74% achieved viral suppression.

HIVVL coverage expanded by > 45% in Mount Hagen in 10 months compared to the 15 months prior to ACTUP-PNG implementation. Baseline HIVVL and HIVDR

sampling has been undertaken on 116 patients not on ART across both sites, results are pending and will be presented.

Conclusion:

Molecular POC HIVVL has improved testing coverage and result turnaround. HIV enhanced adherence counseling is successful in improving HIVVL suppression. ACTUP-PNG shows that in two high burden sites, HIVVL suppression is not only possible, but PNG is progressing towards the second and third of the Global UNAIDS HIV cascade, 95-95-95.

Disclosure of Interest Statement:

ACTUP-PNG is funded by the Centre for Health Security, Australian Department of Foreign Affairs and Trade. No pharmaceutical or industry grants were received in the development of this study.