Implementation of SAMBA: Routine Point-of-Care Semi-Quantitative HIV Viral Load: Outcomes from a decentralised HIV program in Malawi

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Background

Viral load (VL) testing is key for timely provision of intensive adherence counselling or switching treatment regimen of suspect failures. From August 2013, Médecins sans frontières implemented gradually a semi-quantitative (1000 copies threshold) VL test with SAMBA-1, a nearly point-of-care (POC) system in 4 decentralised sites and 1 hospital of Chiradzulu district (Malawi). The protocol recommends 2 follow-up tests before changing ART regimen for those remaining with high VL.

Objective

The objective is to review the VL cascade and identify challenges with VL monitoring and specifically to describe the sequence of VL tests performed in the five sites between August 2013 and December 2015 amongst first line ART-patients.

Results

Over the study period, 13,675 patients had a VL test, among which 1,611 (12%) had a high VL. VL coverage ranged from 60 to 81% depending on timing of POC implementation. Among patients with high VL, 1,146 (71%) had follow-up tests.

Median time between tests was 3.2 months [IQR 2.8-4.6] and clinical review was same day for over 80% of tests in decentralised sites. Among the 1,146, 354 (31%) suppressed at 2nd test and 94 suppressed at 3rd test giving an overall suppression of 39% A total of 381 patients remained with high VL at 3rd test and 259 (68.0%) were switched to 2nd line regimen in a median time of 1.0 month [IQR 0-3]. Second VL test was missing for 465 patients and third one for 317. Among these, over 80% were still followed on 31/12/2015.

Conclusions

Good treatment adherence and VL coverage were observed. Use of POC VL demonstrated short turn-around time for clinical review. Follow-up remains a major challenge which can be addressed by active monitoring and evaluation of the VL cascade and increasing VL literacy amongst healthcare workers and PLHIV.

VL monitoring with POC device is feasible in decentralized setting. However VL follow up testing of suspect failures remains a challenge.