



COMPLIANCE TO GUIDELINES FOR ROUTINE VIRAL LOAD TESTING IN RESOURCE LIMITED SETTINGS

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BACKGROUND

In order to achieve the final 90 of the UNAIDS 90-90-90 targets, it is critical that timely viral load (VL) testing is offered to all patients on ART.

The WHO guidelines recommend VL every 12 months for all patients on ART:

- Patients with VL < 1,000 copies/ml continue first line ART and VL is repeated after 12 months.
- Patients with VL ≥ 1000 copies/ml should receive intensive counselling in order to address adherence concerns, and repeat VL after 6 months.
- Patients with a second (after 6 months) confirmed VL ≥ 1000 copies/ml should be promptly switched to 2nd line ART.

It is estimated that about 15% of all patients taking first line ART in resource limited settings do not achieve viral suppression.

However early evaluations of the implementation of routine VL monitoring suggest leakages along the WHO suggested algorithm (1, 2), compromising the target of achieving viral suppression in 90% of the patients on ART. Between 14% and 27% of the patients with a first VL ≥ 1,000 copies/ml don't receive adherence counseling, and 28%-30% don't have a repeated VL test; in a survey conducted in Swaziland only 14% of the patients with confirmed viral failure were switched to second line ART (1).

We aimed to evaluate the compliance to the WHO guidelines in implementing VL testing and managing patients according to guidelines in a large urban clinic in Uganda.

METHODS

Setting

VL monitoring was introduced in Uganda at the end of 2014. The Infectious Diseases Institute (IDI), Makerere University was one of the first sites to have access to VL testing. All viral load tests are performed centrally at the Ministry of Health Central Public Health Laboratory.

The IDI clinic, located within Mulago National Referral Hospital is a center of excellence for HIV care and treatment. Following the availability of VL tests in Uganda, plans were made to test all patients on ART on their first visit following VL implementation (i.e. within 6 months), and therefore to continue monitoring patients on ART according to the WHO algorithm (see Figure 1).

In order to ensure optimal coverage of VL monitoring, the following activities were carried out: development of Standard Operating Procedures, staff training, supervision by a physician, and daily quality assurance checks by a quality officer.

Patients

This analysis included all patients at the Infectious Diseases Institute in Kampala on 1st line ART in December 2014 (date of VL monitoring implementation).

- Patients not yet due for a repeat VL at database closure were excluded from the analysis. (patients with VL ≥ 1,000 copies/ml who did not have 6 of follow up and patients with VL < 1,000 copies/ml 12 months of follow up)

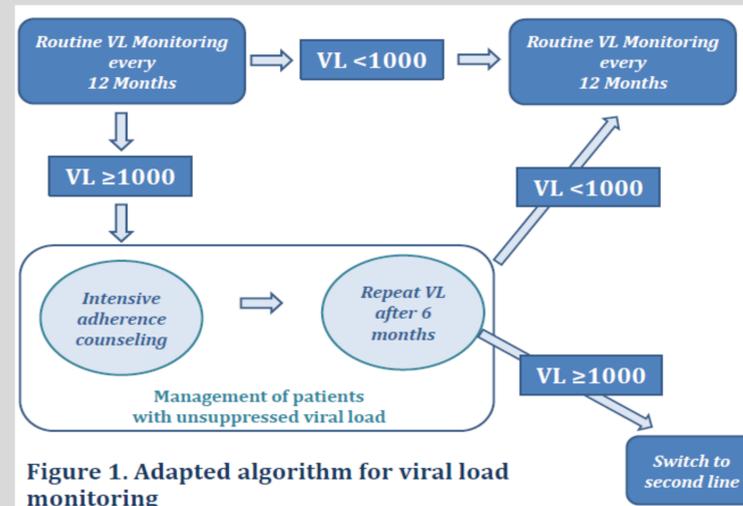


Figure 1. Adapted algorithm for viral load monitoring

Data analysis

We described the “cascade” of VL management by reporting:

1. The proportion who received at least one VL test.
2. Among those with VL < 1,000 copies/ml we evaluated proportion with a VL performed within 15 months (12 months per guidelines + 3-month window for patients on 3-month prescriptions), late (>15 months), and never.
3. For those with VL ≥ 1,000 copies/ml we evaluated the proportion with a VL repeated within 7 months (6 months per guidelines + 1-month window for patients on 1-month prescription), late (>7 months), and never.
4. For those with 2 VL ≥ 1000 copies/ml we evaluated the proportion promptly switched to 2nd line, defined as within 3 months, late (>3 months) and not switched.

RESULTS

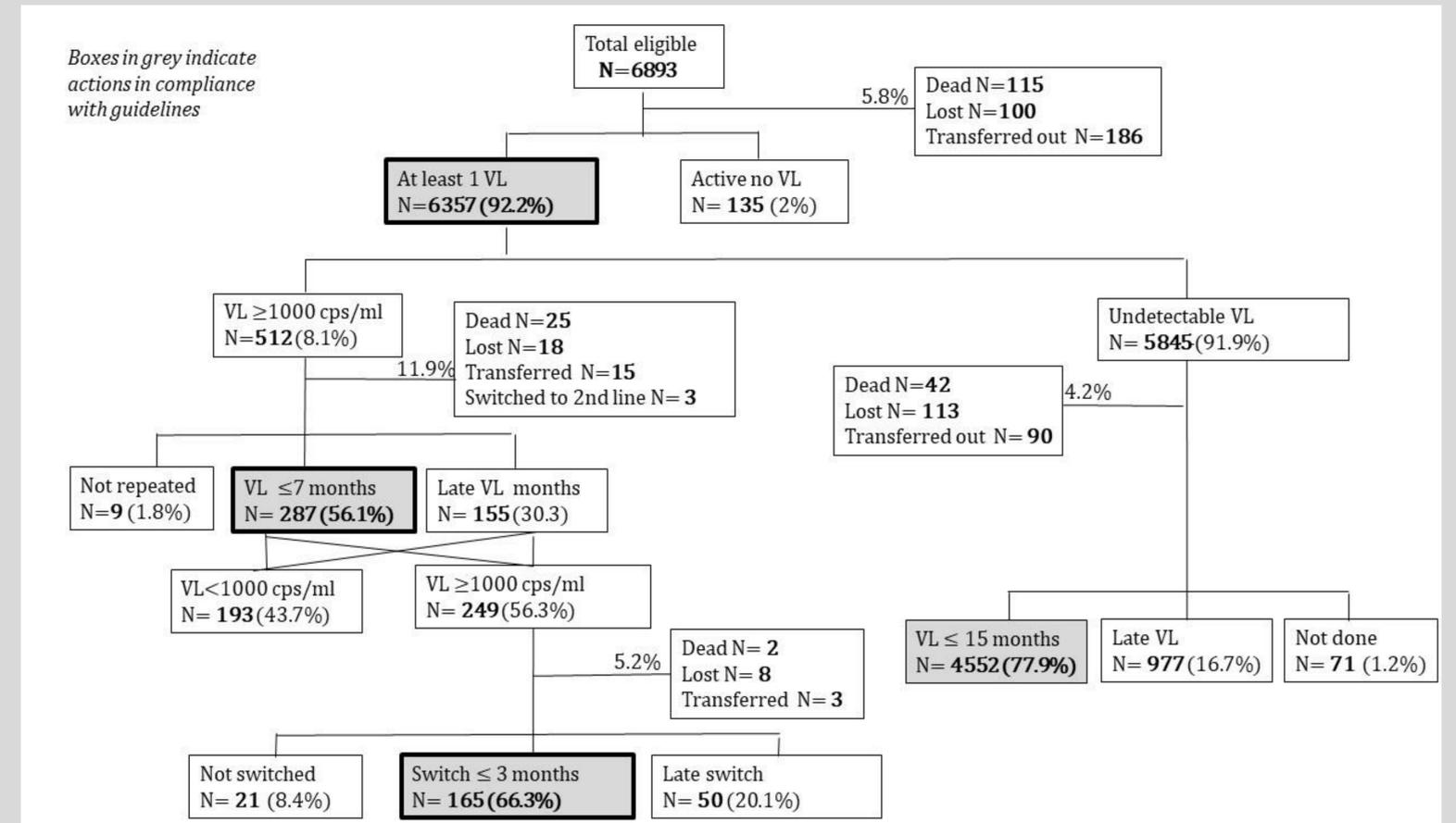
Among 9,599 registered patients, 71.8% were eligible for analysis.

Table 1: Characteristics of study population

Variable	N=6893
Gender, female N (%)	61%
Median age, years N (%)	36 (IQR: 30-42)
Median CD4 count, cell/μL	166 (IQR: 68-293)
Median time on ART, months	41 (IQR: 17-87) months
VL ≥ 1000 copies/ml *, N (%)	512 (8.1%)

* 6357 patients; VL: viral load

Figure 2: Management of virological monitoring in patients on ART and compliance with the WHO guidelines



CONCLUSIONS

- We found a high rate of viral suppression (92%) in a population where the majority of the patients had been on long term ART with no routine viral load monitoring, suggesting prior high levels of adherence.
- The proportion of patients for which no action was taken, following a VL ≥ 1000 copies/ml at the different steps, was low, probably due to the activities carried out in order to ensure high coverage of VL testing.
- However compliance to timing of repeated VL in any category (VL < 1000 copies/ml and ≥ 1000 copies/ml) was suboptimal, with frequent delays in repeating VL measurements.
- In order to optimize the use of VL testing in resource limited settings, we recommend that programs train staff, provide supervision, and monitor compliance with the ART monitoring guidelines.

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