

SLMTA, Resolving VL Backlog and Boosting Viral Load Testing Amidst the COVID 19 Pandemic: The Case of the Laquintinie Virology Laboratory, Douala – Cameroon

By Mispa Zuh, Merrill E. Ngyah, Sylvanus T. Fon, and Patrick A. Njukeng



Background

The Laquintinie virology lab is the only viral load reference lab in the littoral region Cameroon and receives over 4000 viral load samples monthly. With a history of long Turnaround Time TAT (2 to 4 months) which is 4 to 8 times longer than that required nationally, this did not only leave the laboratory clients dissatisfied but also jeopardized the clinical relevance of the results. VL results given 2 to 4 months after sample collection are no longer representative of the patients' situation and hence will mislead clinical decisions. Using an aspect of SLMTA – monitoring of quality indicators, January 2020 reviews indicated a 12-month continuous red on TAT, February 2020 TAT hitting highest of 4 months plus and highest backlog of samples ever, March 2020 with the pandemic of Covid-19 in Cameroon, this situation was envisaged to get worse, hence prompted a root cause analysis to find lasting solutions.

Root cause analysis

A review of records and brainstorming by GHSS and quality team pointed to the following as contributing factors to the long TAT: 1) Prolong equipment down time. 2) Prolong stock out of reagents and consumables. 3) Limited staff and staff related issues

Corrective Action: Strategies to attempt a solution

1) Established a policy to use service notes to notify referring facilities on service interruption and service resumption. 2) Requested for additional staff from the hospital administration:

Challenges encountered during implementation of corrective actions

- The COVID19 pandemic: The lab was selected among the reference laboratories to run COVID 19 Test in Cameroon. Given the urgency and emergency of this activity, the lab was overwhelmed and viral load testing was put on hold for over a month. This led to high backlog of viral load samples.
- 3/7 staff got infected with COVID19. This greatly reduced the staff strength.

Re-Strategizing

GHSS and Partners have been looking for ways to see that VL testing resumes in the laboratory. In early May 2020, GHSS had a meeting with the lab management to chart the way forward despite the challenges. The following were decided and implemented:

- a. The testing staffs was divided into 2 groups (one for COVID 19 testing to work at night and the other for VL testing to work during the day).
- b. Testing platforms were reassigned (OPERA for COVID 19 testing and Abbott for VL testing).
- c. A Staff room was created in the store room that was recently remodeled by GHSS away from COVID19 sample reception area to minimize the risk of staff getting contaminated.
- d. Followed up with the administration on the earlier request for additional staff in the lab.
- e. Viral load testing to resume on 4th May 2020.

Results

1) Seven staff were recruited and sent to the lab, which almost doubled the staff strength. 2) Despite 2 weeks break-down of the Abbott amplification machine, the lab managed to bring the VL sample backlog to less than 1000, the lowest ever in 2 years with a TAT of 2 to 4 weeks. 3) A service note was sent out to notify health facilities of a partial service interruption; the lab was to receive only emergency samples (the criteria was spelt out in the service note). This allowed the lab to clear and stabilize the backlog situation. A service resumption note was equally sent out on 16th June 2020. The lab now uses service interruption and resumption notes to notify facilities. 4) For over a year now, despite continuous ongoing COVID 19 testing and activities, viral load sample backlog has remained below 1000 and the TAT had been constant (2 – 4wks).

Conclusion

The lab staff together with GHSS-Mentor leverage on SLMTA implementation to resolve VL sample backlog and testing issues at Laquintinie virology laboratory through; 1) repurposing of equipment, 2) implementing an effective duty roster and proper work scheduling, 3) effective communication with hospital management, and 4) proper/effective communication of service interruption to clients and health facilities. Despite the fact that the lab does not have control over the service contracts for equipment maintenance and the availability of reagents and consumables to provide uninterrupted services, the continuous monitoring of the TAT, backlog situation, implementation of the strategies and improved communication with their clients, has played and will continue to play a big role to guide better clinical decisions and improve on the management of PLWHIV.