

Mentorship Improves the Quality of Viral Load/Early Infant Diagnosis Results Offered by Batouri District Hospital Laboratory



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The District Hospital of Batouri in the East Region of Cameroon is a reference health center for the Batouri Health District. The hospital is a priority site under the PEPFAR-funded project. It has 1205 patients on antiretroviral treatment, with an average of 306 eligible for Viral Load (VL) sample collection and 15 eligible for Early Infant HIV Diagnosis (EID) sample collection for analysis per month. As a reference center, the District Hospital in Batouri also receives and analyses VL/EID samples from other sites, including the Bertoua Regional Hospital, CHC B, CMA Batouri, Adventiste Hospital Batouri, CMA Kentzou, HD Kette etc.) for analyses. The goal of HIV treatment (3rd 95) is to achieve an undetectable viral load associated with better clinical outcomes and a lower risk of HIV transmission. This outcome solely depends on the quality of VL/EID results rendered to patients. Timely results are essential in guiding clinical decisions and improving patient care.

Challenge in VL/EID Testing Services & Results Quality Identified

On 1st December 2021, GHSS assigned a mentor to work with the laboratory staff to guide and follow up on the implementation of Quality Assurance in the laboratory with continuous onsite training. This action aimed at improving the quality of laboratory services and patient care. During the mentorship period, the mentor identified a high number of invalid results, and error codes resulting in no results after analysis at the Batouri District Hospital between Dec 2021 – April 2022. The mentor equally observed the wastage of the limited supply of cartridges due to invalid results and increased turnaround time for VL/EID results, which compromised patients' follow-up on treatment.

After a root-cause analysis, it was discovered that the Gene Expert Unit was not conducive to the analysis of

results. This is because the window louvres were broken, which permitted rain to splash on the Gene expert machine, and dust to settle on it during the dry season. There was also no air conditioning to maintain a constant temperature appropriate for the equipment and reagents and no cupboards for storing reagents and other consumables properly. It was noticed that competency assessment was not being done for staff manipulating the platform, coupled with inadequate training on sample management.

GHSS' Interventions to Resolve Challenge in VL/EID Testing Services & Results in Quality Identified

To address the issue identified, the mentor, from December 2021 to April 2022, presented the gravity of the problem and its consequences on patient care during coordinators and partners meetings and to the Director of the hospital. She followed up on the daily maintenance of the Gene Expert machine to ensure its proper functioning for analyses.

The Mentor at Batouri District Hospital also developed simplified job aids on VL/EID sample processing and analysis for the personnel to follow. Corrective actions and commendations for invalid results, error codes and no results were developed. This was accompanied by a comprehensive training of the laboratory personnel (2 personnel) by GHSS on the activities at POCT sites and VL/EID sample collection, preservation, packaging and transportation.

A competency assessment was carried out for personnel testing on the Gene Expert platform to demonstrate accurate knowledge of the analysis. At the same time, an SPI-POCT audit was conducted, and non-conformities were developed with recommendations for follow-up. GHSS also provided a phone to facilitate follow-up communication about rejected samples.

Invalids, error codes, no results and other critical results.

VL/EID Testing Services and Quality of Results Improved Upon.

The renovation of the Gene Expert



Gene Xpert Unit before renovation

Unit, amongst others, created a conducive environment for VL/EID



Gene Xpert Unit after renovation

analysis. This led to fewer invalid results and error codes recorded after that. This has enhanced the therapeutic monitoring of these patients at the Batouri District Hospital. The Turn Around Time (TAT) for the analysis of samples has also significantly reduced, with patients' confidence in the District Hospital restored and the hospital's reputation safeguarded.