Background: In resource-limited countries, access to HIV viral load (VL) has been considered a priority, providing an indicator to the "90% of 90%" of the "90-90-90" UNAIDS goal. The clinical point of view is a VL, prescribed and are VL results used by prescribers? We took advantage of the OPP-ERA project, which included the implementation of VL through open polyvalent platforms in 4 countries in West and Central Africa (Burundi, Cameroon, Ivory Coast, Guinea) to study these issues.

Methods: Access to VL and the implementation of national recommendations for monitoring virological failure were studied from the databases for the 13 OPP-ERA-laboratories from 2014 to 2019.

Results: In total, nearly 200,000 VL measurements were performed between 2014 and 2019. The median number of VLs per patient was 1.3 (IQR:1-4) depending on the country for the period 2014-2019. In the medical facilities supported by the OPP-ERA project, the proportion of patients who received at least one viral load averaged 32% in 2018 (19-42% depending on the country) with the proportion of patients who received at least one VL test performed by patients was only 1.3 during the 2017-2019 period. Overall the proportion of patients with a VL≥1000 cp/mL was 66% (19-68%) as a much smaller rate during the project 2013-2015 (8%).

Conclusion: Despite the availability of VL for a period of 6 years, the prescription and use of VL appears to remain limited as evidenced by the low number of VL measurements per patient, the virological failure management cascade and the lack of impact on the virological success rate. The reasons for the low use of VL and its results need to be further explored in order to make access to VL more beneficial to patients.

References:

Figure 1. Proportion of patients who benefited for VL measure on OPP in the facilities supported by the OPP-ERA projet (2014-2019).

Figure 2. Proportion of patients who access to VL measure in some health facilities supported by the OPP-ERA project in Burundi and Guinea in 2018 (data from Cameroun and Côte d’Ivoire not available).

Figure 3. HV viral load cascade. OPP-ERA project 2014-2016, 2026 patients with a first VL≥1000 cp/mL (based on laboratory database).

Figure 4. Cascade of virological failure management in Guinea from 2014 to 2019. (estimation based on clinical data).

Context: Since 2015, WHO recommends HIV viral load testing (VLT) as the preferred manner to monitor effects of antiretroviral therapy (ART). In resource-limited settings, access to HIV viral load (VL) is limited, allowing the use of CD4 Takes for the management of treatment-naive and treatment-experienced people. The question of view, does access to VL really have an impact on the management of virological failure? We took advantage of the OPP-ERA project, which has enabled the implementation of VL at a large scale in Burundi, Cameroon, Côte d’Ivoire and Guinea, to study these issues.

Methods: Retrospective analyses of database of 13 laboratories located in Burundi, Cameroon, Côte d’Ivoire and Guinea from 2014 to 2019. Plasma viral loads were quantified on the Genesys-16 (Biocentric, Bandol, France). Each laboratory implemented mass measurements of viral load collected among people living with HIV receiving ART followed in OPP-ERA laboratories. Other information collected data of sampling, age, gender, ART regimen (1st or 2nd line), date of ART initiation. Virological failure was defined by VL≥1000 cp/mL, National guideline recommend that patients with VL≥1000 cp/mL shall be reassessed after 3-6 months of adherence counseling treatment, and then retested in the first line regimen if VL>1000 cp/mL, or switched to 2nd line regimen if VL<1000 cp/mL. In addition to the analysis of laboratory database, the clinical management of virological failure was investigated through a retrospective analysis of all available medical records with the aim to measure VL≥1000 cp/mL, and virological failure management cascade between 2014 and 2019.

Conclusion: Despite the methodological limitations due to the use of the laboratory database, our results, with more than 230,000 VL performed in 4 countries, allow us to share general trends. The OPP-ERA project has made viral load available on a large scale in health care facilities in Burundi, Cameroon, Côte d’Ivoire and Guinea. Despite the availability of viral load for a period of 5 years, the proportion of people living with HIV, attending health care facilities of the OPP-ERA project, who have benefited from viral load measurement still needs to be improved. The OPP-ERA project has made viral load available on a large scale in health care facilities in Burundi, Cameroon, Côte d’Ivoire and Guinea. Despite the availability of viral load for a period of 6 years, the proportion of people living with HIV, attending health care facilities of the OPP-ERA project, who have benefited from viral load measurement still needs to be improved. The OPP-ERA project has made viral load available on a large scale in health care facilities in Burundi, Cameroon, Côte d’Ivoire and Guinea. Despite the availability of viral load for a period of 5 years, the proportion of people living with HIV, attending health care facilities of the OPP-ERA project, who have benefited from viral load measurement still needs to be improved.