The main aim of ART is to decrease viral load (VL) to an undetectable level.

Undetectable VL:
- Reduces progression to AIDS
- Improves long-term health
- Lowers the risk of transmitting HIV

The OPP ERA project is implemented in Burundi, Cameroon, Côte d’Ivoire and Guinea since March 2013 in 7 laboratories. It aims to improve the monitoring of people living with HIV (PLWH) through an increased access to VL testing, with the implementation of open polyvalent platforms (OPP), an innovative system of molecular biology techniques for laboratories.

Stata 11.0 was used for analysis.

The Kaplan Meir method was used to estimate the duration and probability to achieve VL undetectability. This probability was compared between groups.

Undetectable threshold was fixed at 1000 copies/ml. All labs are equipped with the same OPP and use the same reagent (Generic HIV®, Biocentric, Bandol, France). The analyses were restricted to PLWH with first VL detectable at enrollment in OPP-ERA and having benefited from at least two VLT.

The Kaplan Meir method was used to estimate the duration and probability to achieve VL undetectability. This probability was compared between groups.

Stata 11.0 was used for analysis.

Methodology:
- Databases of six OPP-ERA’s laboratories located in Guinea, Cameroon, Burundi and Ivory Coast were merged.
- Each database includes repeated measures of VL collected during the first 20 months of the project among PLWH receiving ART followed in OPP-ERA’s laboratories.
- Undetectable threshold was fixed at 1000 copies/ml. All labs are equipped with the same OPP and use the same reagent (Generic HIV®, Biocentric, Bandol, France). The analyses were restricted to PLWH with first VL detectable at enrollment in OPP-ERA and having benefited from at least two VLT.
- The Kaplan Meir method was used to estimate the duration and probability to achieve VL undetectability. This probability was compared between groups.
- Stata 11.0 was used for analysis.

Objectives:
- The aim of the study is to estimate the probability to achieve viral load undetectability among ART patients who had first detectable viral load at enrollment within the OPP-ERA project.

Results:
- Characteristics of PLWH receiving ART with first viral load measurement detectable at enrollment in OPP-ERA and followed from August 2014 to March 2016
- Overall Kaplan-Meir estimates of over-time probability of viral load undetectability among PLWH receiving ART followed in the OPP-ERA project

Background:
- To confirm treatment success: undetectability of viral load
- To identify whether and when treatment switch is required
- To support treatment adherence
- Shortening the time to achieve an undetectability VL has positive implications in decreasing the risk of HIV morbidity, mortality, transmission and ART resistance.

Conclusion:
- The time to achieve VL undetectability is longer than expected in these patients benefitting from ART since several years.
- Patients who initiated ART during the OPPERA project achieve viral load undetectability more rapidly, which suggests that an earlier access to viral load testing allows for a closer virological monitoring in order to reinforce rapid adherence to ART and to avoid occurrence of ART resistance.
- To avoid treatment failure, at least one viral load testing shall be conducted annually among each patient on ART.

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