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Text messaging and peer mentorship interventions to improve adherence and achieve viral load suppression among Adolescents living with HIV in the Centre region of Cameroon

Alice K^{1,4}, Felix A², Francisca M², Alain F³, Franck A⁴, Marcelin N¹

¹Department of Public Health and Hygiene, Faculty of Health Sciences, University of Buea, Cameroon; , Buea,, Cameroon,

²Department of Public Health, Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1,, Yaounde, Cameroon,

³Cameroonian network of positive youths, Yaounde, Cameroon,

⁴Department for the Control of Disease, Epidemics and Pandemics, Ministry of Public Health, , Yaounde, Cameroon

Abstract

Background: In 2018, of the 2.1 million HIV infected adolescents worldwide, majority (66%) live in Africa and the most prevalent in Africa. Adherence to antiretroviral treatment (ART) is among adolescents living with HIV (ALWHIV) a major barrier to achieving optimal treatment outcomes. In Cameroon, although some studies have identified factors associated with poor adherence. No study had investigated interventions that can improve adherence and achieve viral load suppression. We evaluated the effectiveness of daily text messaging and peers mentorship interventions in improving adherence and achieving viral load suppression among ALWHIV.

Methods: We conducted a randomized control trial with an intervention group and a control group from July 2018 to February 2019. We recruited adolescents aged more 15 years and with disclosed status in the Mother-Child Centre of the Chantal BIYA Foundation, Yaounde. The first arm in the intervention group received daily SMS and the second arm received weekly home visits by their peers in whom viral load was already suppressed; while the control group received only standard care in the health facility, we collected data on adherence rate, line of treatment and viral load result. This trial was registered in the Pan-African Clinical Trials Registry PACTR201904582515723 at (www.pactr.org).

Results: Overall, of the 184 adolescents included only 150 adolescents were recruited. ART adherence among adolescents in the mentorship and SMS group improved respectively 4.14 and 5.84 times when compared to those received standard care [Odds ratio (OR)=4.1; 95% confidence interval(CI): 1.6–10.9], [OR=5.8; 95%CI: 2.3–14.9]. Adolescents in the mentorship care and SMS group were respectively about 14.68 and 15,64 times more likely to achieve viral load suppressed compared to those in standard care [OR=14.7; 95%CI: 4.8–44.6], [OR=15.6; 95%CI: 4.2–57.7]. However, there were no significant differences in the change of treatment regimen from first to second line drugs in the SMS and standard care groups during the course of 6 month follow-up.

Conclusion: It was found in this study that ART adherence and achievement of suppression viral load among adolescents in the mentorship and SMS group improved respectively when compared to those received standard care. However, it is urgent to use this effectiveness approach when developing national guidelines and service delivery for adolescents living with HIV.