

The 'Magic Bullet' for HIV Viral Suppression? How Fixed-dose Combination Dolutegravir Antiretrovirals are Improving Viral Suppression among Children 10–14 Years on Antiretroviral Therapy in Zambia



Authors: Adamson Paxon Ndhlovu,¹ Kalasa Mwanda,¹ Muka Chikuba-McLeod,¹ Musonda Musonda,² Luigi Ciccio,¹ Lackeby Kawanga,¹ Michael Banda,¹ Severino Mbozi¹

¹JSI Research & Training Institute, Inc. (JSI), Lusaka, Zambia

²United States Agency for International Development (USAID)/Zambia Mission, Lusaka, Zambia

Poster number: EPB207

Viral Suppression among Children Living with HIV

The critical endpoint to achieving HIV epidemic control is attainment of the third 95 cascade target—viral suppression—among people living with HIV who know their status and are on treatment (UNAIDS, 2015). Globally, viral suppression among children living with HIV (CLHIV) is at 40% compared with 67% among adults (UNAIDS, 2021). Zambia faced a similar challenge, which was compounded by limited availability of the more palatable and highly efficacious fixed-dose combination dolutegravir (DTG)-containing antiretrovirals, until pediatric ART guidelines were launched in 2020.

Transitioning to DTG-based Regimens

In November 2020, with increased availability of pediatric DTG-containing antiretrovirals in the national ART program, the USAID DISCOVER-Health Project, implemented by JSI, started initiating and transitioning 10–14-year-old CLHIV to DTG-containing regimens, in line with national HIV guidelines.

The data were entered into SmartCare in supported clinics in Copperbelt, North-western, and Central Provinces. Monthly reports of aggregated project-level data were generated from SmartCare, from which key variables

(age, viral load result on record, and ARV regimen) were summarized. A comparative analysis of viral suppression rates and uptake of DTG-containing regimen between two time periods was conducted using the International Business Machine Corporation Statistical Product and Service Solutions. Odds ratios were calculated to depict the suppression status with DTG-containing regimen uptake before and after the intervention.

Results

At baseline, in November 2020, 41% of all CLHIV ages 10–14 years were on antiretrovirals containing DTG and 82% of the 824 were virally suppressed with viral load results on file (ranging from 0 to 1.35 million copies/mL). By September 2021, 89% CLHIV were on DTG-

containing ARVs and 93% of the 971 eligible were virally suppressed with a viral load result on file (ranging from 0 to 345,983 copies/mL). With a higher proportion of CLHIV on ART accessing DTG-containing antiretrovirals, viral suppression was statistically significantly higher than at baseline.

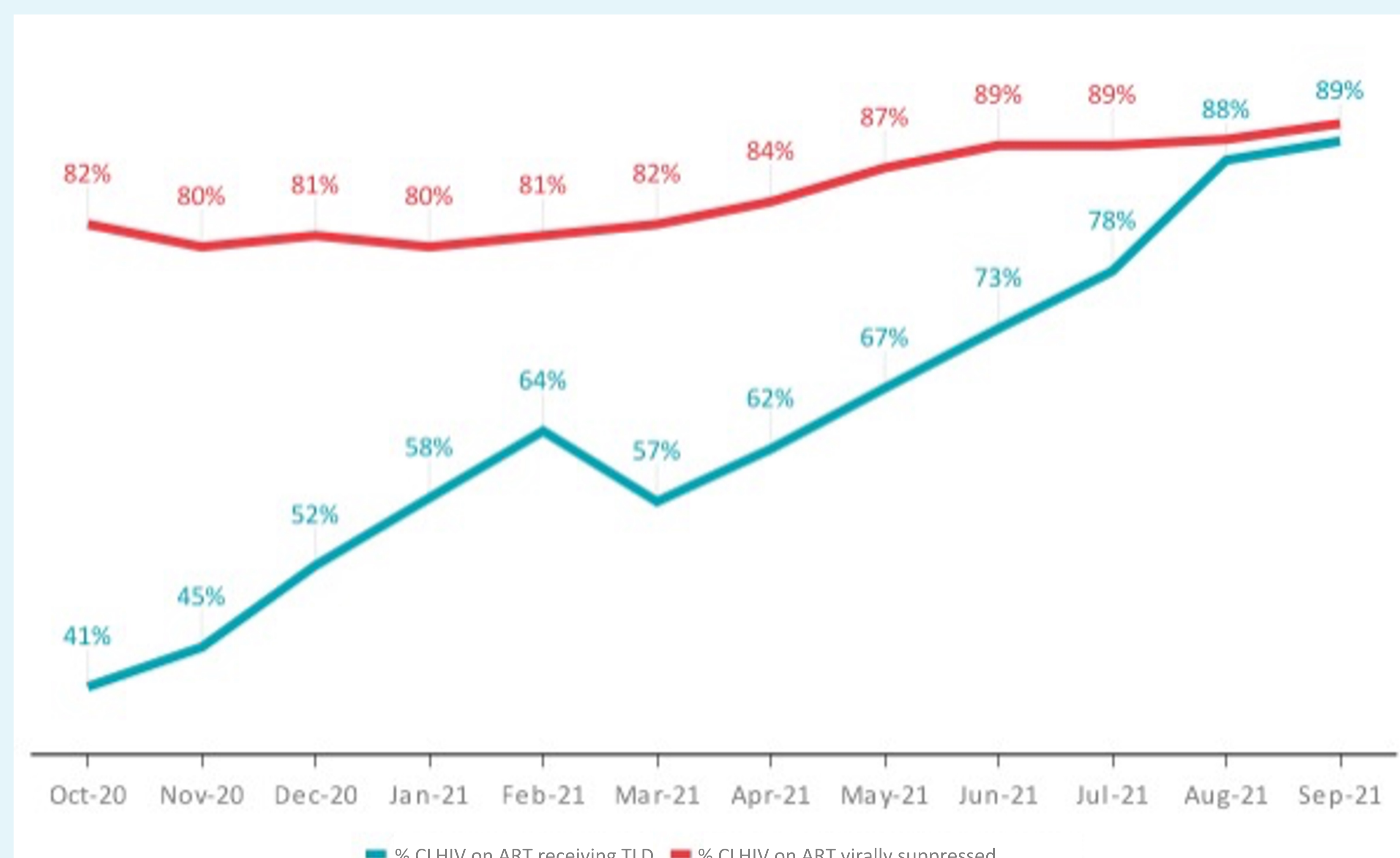
Conclusion

Expanded access to fixed-dose DTG-containing regimens is important for increasing viral suppression rates and improving individual health outcomes for CLHIV, along with overall HIV epidemic control in Zambia. With the revision of treatment guidelines to include pediatric DTG formulations in 2022, the country is slated for an improvement in viral suppression among children.

Time period	CLHIV on ART	CLHIV on DTG	Virally Suppressed	Not Virally Suppressed	Viral Load
November 2020	824	41% (n=338)	82% (n=671)	18% (n=153)	Mean=14,587 Median=27 Range=0–1.35 million
September 2021	697	89% (n=620)	93% (n=648)	7% (n=49)	Mean=3,865 Median=20 Range=0–345,983

OR 3.01, 95% CI 2.14–4.23; p=0.002

TLD scale-up and VL suppression among 10–14 years ART clients October 2020–November 2021



References

UNAIDS (2015) *Understanding Fast Track, Accelerating Action to End the AIDS Epidemic by 2030*. Available at: https://www.unaids.org/sites/default/files/media_asset/201506_JC2743_Understanding_FastTrack_en.pdf (Accessed 15 June 2022).

UNAIDS (2021) *Children being left behind*. Available at: https://www.unaids.org/en/resources/presscentre/featurestories/2021/september/20210927_children-being-left-behind (Accessed 15 June 2022).