Dolutegravir Markedly Improves 6- and 12-Month Viral Suppression in Children ≤5 Years, South Africa

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BACKGROUND

- Dolutegravir (DTG)-based regimens (DBR) are currently the preferred first-line antiretroviral therapy (ART) for young children
- Real-world data on outcomes remain limited
- In South Africa, paediatric (dispersible) DTG was introduced from mid-2023
- We evaluated virologic outcomes at 6 and 12 months after DBR initiation and after switch to DBR

METHODS

- **Population**: children born mid-2018 to mid-2024, with data provision mid-2025
- **Setting**: Western Cape province, South Africa
- **Exposure groups**:
  (A) ART initiation: DTG-based regimens vs lopinavir/ritonavir (LPV/r)-based regimens
  (B) Switch to DBR: VL at switch <1000 vs ≥1000 copies/ml (within 6 months before to 2 weeks after switching)
- **Inclusion criteria**:
  (1) ART initiation or switch to DBR at age 0 to ≤5 years
  (2) Viral load (VL) result available at 6 months (3 to <9) or 12 months (9 to <18) after ART initiation or switch to DBR
- **Outcome**: viral suppression (VS) i.e. VL<1000 copies/ml
- **Analyses**: modified Poisson regression for VS (adjusted risk ratios, aRR, with 95% confidence intervals, CI), adjusted for sex and age at ART start/switch

RESULTS

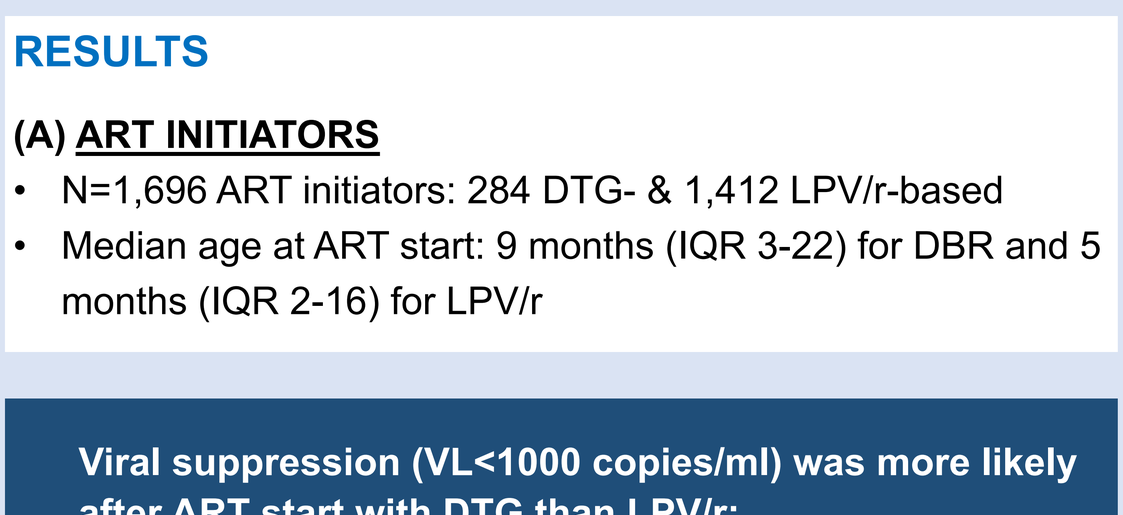
(A) ART INITIATORS

- N=1,696 ART initiators: 284 DTG- & 1,412 LPV/r-based
- Median age at ART start: 9 months (IQR 3-22) for DBR and 5 months (IQR 2-16) for LPV/r

Viral suppression (VL<1000 copies/ml) was more likely after ART start with DTG than LPV/r:

- at 6 months: 70% vs 52% (aRR 1.3, 95% CI 1.2–1.4)

- at 12 months: 69% vs 53% (aRR 1.3, 95% CI 1.1–1.4)



RESULTS

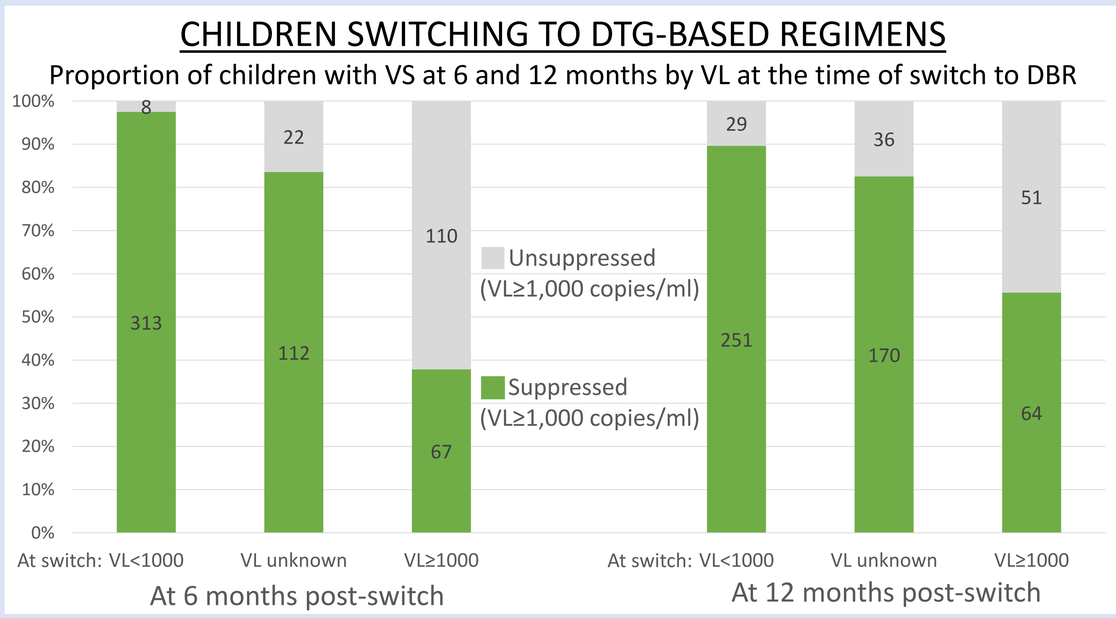
(B) SWITCH TO DTG-BASED REGIMENS

- N= 959 children switched to DBR
- Median time since ART initiation: 29 months (IQR 16-43)
- Median age at switch: 41 months (IQR 27-55)
- VS overall: 78% at 6 months and 81% at 12 months
- VS at 12 months after switch was achieved in 56% with VL≥ 1000 at switch, and 83% with VL unknown at switch

Children with VL<1000 at switch to DBR were more likely to have VS after switching than those with VL≥1000 copies/ml at switch:

- at 6 months: 98% vs 38% (aRR 0.4, 95% CI 0.3–0.5)

- at 12 months: 90% vs 56% (aRR 0.6, 95% CI 0.5–0.7)



CONCLUSIONS

- Young children initiating DBR were more likely to achieve viral suppression than those starting LPV/r-based ART
- Among children who switched to DBR, VS after switch was more likely for those already suppressed (VL<1000) at switch
- Among children with VL≥1000 at switch, more than half achieved VS after switch to DBR, although outcomes were more favourable among those with VS or VL unknown at switch

WHY THIS MATTERS

- Provides real-world evidence supporting DBR as first-line ART in young children
- Supports prompt switching to DBR irrespective of VL, but with close monitoring and adherence support for those unsuppressed at switch

ADDITIONAL INFORMATION

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