Scaling up of triggered viral load in rural Zimbabwe: Implications for Phasing out of d4T

Steven Van Den Broucke[1],Sandra Simons[1], Katarina Kranzer[4] Dhodho Munyaradzi[1], Carol Metcalf[2], Kzenwakwenkosi Ncube[3], Helen Bygrave[2]

[1] Médecins Sans Frontières, Belgium – Zimbabwe

[2] Médecins Sans Frontières, Belgium – South African Medical Unit

[3] Ministry of Health and Child Welfare Zimbabwe, Buhera District

[4] London School of Hygiene and Tropical Medicine, UK

Background

Viral load testing is limited in resource poor settings due to feasibility and cost. In 2011, Médecins Sans Frontières (MSF) in collaboration with the Zimbabwean Ministry of Health (MoH) scaled up access to viral load for those patients with clinical or immunological failure (CD4 drop of >30%) and those eligible to be switched from Stavudine (d4T) to Tenofovir (TDF) due to D4T side effects.

Method

We analyzed information abstracted from clinical and laboratory records and used generalized linear models (GLM) to estimate risk ratios (RRs) to identify factors associated with viraemia among ART patients having viral load testing.

Results

621 patients were included in the analysis. Median age was 44 (IQR 36-52) , median time on ART 3.2 years (IQR 1.9-4.3) years and the majority 412 (66%) were women. 407 (65.5%) had a undetectable viral load. Viral load was detectable in 33% (95% CI: 13-53%) of patients with clinical failure; 42% (95% CI: 36-48%) of patients with immunological failure; and 30% (95% CI: 24-34%) of patients with d4T side effects. Multivariate analyses found that having a detectable viral load was significantly associated with taking ART for ≥4 years (RR: 1.37; 95% CI: 1.02-1.81; p=0.03).

Conclusion

These findings confirm the importance of measuring viral load among patients with clinical or immunological signs of treatment failure before a treatment switch is made. A significant proportion of patients eligible for switch to TDF had undiagnosed viraemia reflecting either poor adherence or resistance. The consequences of switching to a TDF containing first line in such cases is unclear. Where countries may consider switching all patients to TDF without viral load these risks should be considered.