Background

- Routine viral load monitoring is critical in measuring treatment efficacy and achieving the UNAIDS 90-90-90 goals.
- There are an estimated 190,000 HIV-infected children in Kenya with 53% on ART.
- Routine viral load monitoring was rolled out in Kenya in 2013.
- We investigated potential risk factors associated with failure to reach virologic suppression in a pediatric patient population in Kenya.

Methods

- Nested case-control study.
- Cohort of HIV-infected children < 15 years old on ART who underwent routine VL testing June 2014—May 2015.
- Random sample of 299 children: 1 case (VL $\geq 1000$ cp/ml) per 2 controls (VL <1000 cp/ml).
- Family AIDS Care and Education Services (FACES)-supported government clinics in western Kenya.
- Retrospective review of clinical records.
- Logistic regression analysis was used to analyze data.

Results

- 63% (748/1190) of all children undergoing routine VL testing were virologically suppressed.
- Majority (72%) of children in the study were between 3 and 10 years old at time of VL testing.
- WHO stage, CD4 and time since ART initiation were not associated with failure to suppress.
- Children with a history of tuberculosis (TB) were more likely to suppress than those without TB (aOR=0.4, 95% CI: 0.2-0.9).
- 63% (748/1190) of all children undergoing routine VL testing were virologically suppressed.

Conclusion

- Approximately 1 in 3 children undergoing routine VL testing failed to suppress.
- Traditional risk factors for pediatric treatment failure such as CD4 and clinical stage were not shown to have a significant effect on VL.
- Children on second line show higher rates of treatment failure and may require separate focus.

Acknowledgments

We would like to thank the Ministry of Health, Kenya; PEPFAR Kenya—U.S. Centers for Disease Control and Prevention; Children’s Investment Fund Foundation—Accelerating Children’s HIV/AIDS Treatment Initiative; Research Care and Training Program Family Care and Education Services (RCTP, FACES), our clients and their families.

Can children with HIV reach the 90-90-90 goals? Viral suppression in a pediatric patient population in western Kenya

Presented at the AIDS 2016 CONFERENCE DURBAN INTERNATIONAL CONFERENCE CENTRE 18th - 22nd Jun 2016

This publication was made possible by support from the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) through cooperative agreement UG12PR05145 from the U.S. Centers for Disease Control and Prevention (CDC), Division of Global HIV/TB (DGHT).

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