

## **Family stability as a predictor of treatment outcomes in HIV-infected adolescents.**

Authors: Rebecca Sher, Gwen Norton, Katherine Nickell, Paul Roux

### *Background*

Adherence to anti-retroviral therapy (ART) is lower during adolescence than during any other time of life, and adolescents have worse immunological and virological outcomes than adults and children. Because of the timing of the national ART rollout in 2004, the current generation of vertically-infected South African adolescents is the first to survive beyond childhood. However, the rollout came too late for many of their parents, and as a result many are orphans. Anecdotal evidence supports the impression of frequent household disruptions and multiple consecutive caregivers for many of these patients. While the effects of orphanhood have been extensively studied, those of family stability, in these terms, have not. We aim to investigate the impact of family stability on CD4 and virological outcomes.

### *Methods*

The study setting is the Groote Schuur Hospital Adolescent HIV clinic in Cape Town, South Africa. We enrolled 200 subjects (42% male, 58% female) aged between 10 – 19 years, all vertically-infected with HIV and on ART > 1 year. We used the method of a clinical audit to collect data pertaining to orphan status, number of consecutive caregivers since ART initiation and their relationship to the subject, and analysed this in relation to the most recent CD4 and viral load.

### *Results*

Preliminary results show that orphanhood as a whole stands at 55% in this setting. Provisional findings reveal that double orphans (26% of total subjects) have the highest rate of caregiver turnover, and are most likely to have a detectable viral load. CD4 count does not appear to be associated with orphan status or multiple caregivers. A confounding variable is that more orphans than non-orphans live in children's homes, where they tend to do very well on ART. After correcting for this variable, initial analysis affirms that orphans do indeed have higher rates of caregiver turnover and are more likely to have an unsuppressed viral load.

### *Conclusions and Recommendations*

Our data show an association between family stability and virological outcomes. We thus recommend support for interventions that assist the struggling extended family to care for HIV-infected children and adolescents on a long-term basis, as this could improve ART outcomes during the difficult time of adolescence. In particular, we recommend increased access to dedicated social workers, with experience in HIV/AIDS care and manageable case loads as an integral element of care for this chronic disease.