# Retention and viral suppression outcomes of patients enrolled in family ART adherence clubs in Cape Town, South Africa

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## Background

- Differentiated models of care are important for children as well as adults
- Since 2011, HIV positive children (stable on antiretroviral therapy (ART) and their caregivers (stable, or not on ART) were enrolled into family ART adherence clubs (FCs) – a group model of ART delivery which manages patients as a family unit
- FCs are led by a lay healthcare worker and meet 5 times a year for ART refills and child disclosure support
- Viral loads are assessed by a nurse at least once a year with patients requiring more frequent clinical follow-up referred back to routine care

## Methods

- Retrospective cohort analysis of children and caregivers on ART enrolled in FCs between March 2011-December 2014
- We digitised FC registers and linked patients to city-wide laboratory and service access data to validate retention and virologic outcomes
- Using cross-sectional and Kaplan-Meier methods, we estimated the outcomes: retention, loss to follow-up (LTFU) and transfers (TFO). We also assessed viral load completion and suppression (<1000 copies/mL) and time to first viral rebound (≥1000 copies/mL)
- LTFU was defined as no FC or clinic contact from January-June 2015

## Results

- 163 children and 84 caregivers on ART were included in this analysis, contributing 735 person-years of follow-up (median 3.7 years; 88% in FC) (Table 1)
- Overall; among the children, 10 (6.1%) patients TFO and 30 (18.4%) were LTFU and among the caregivers, 1 (1.2%) patient died, 2 (2.4%) TFO and 9 (10.7%) were LTFU

***Table 1**: Description of patients enrolled into family clubs at enrolment*

| | Children (N=163) | Caregivers (N=84) |
|---|---|---|
| **Median Age (IQR), years** | 8.7 (6.3 – 11.1) | 37.7 (33.5 – 41.8) |
| **Females, n (%)** | 74 (45.4) | 80 (95.0) |
| **Duration on ART (years), n (%)** | | |
| **< 2** | 14 (8.6) | 10 (12.2) |
| **2 – 5** | 98 (60.1) | 50 (59.5) |
| **≥ 6** | 50 (30.9) | 22 (26.8) |
| **median (IQR)** | 5.0 (3.1 – 6.4) | 4.5 (2.8 – 6.1) |
| **Year of family club enrolment** | | |
| **2011** | 121 (74.2) | 48 (57.1) |
| **2012** | 25 (15.3) | 15 (17.9) |
| **≥ 2013** | 17 (10.4) | 21 (25) |

- Cumulatively, retention was >85% and viral rebound <20% at 36 months among both the children and caregivers (Figure 1)

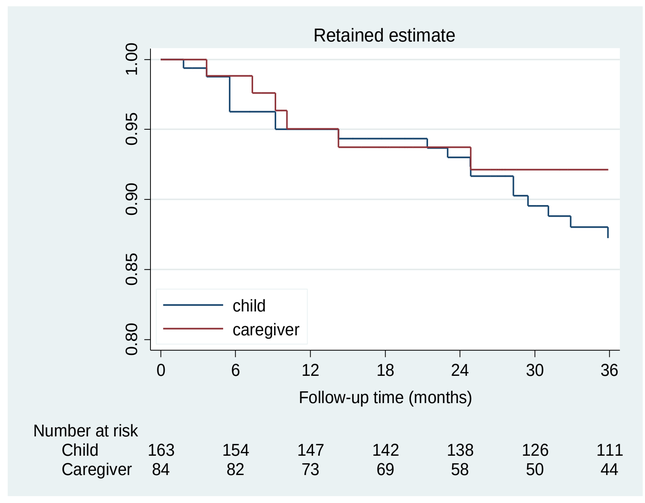


***Figure 1**: Kaplan-Meier plots of retention and viral rebound over the first 36 months in a family club by type of patient (child or caregiver)*

***Figure 2**: Family club session led by a lay healthcare worker and children who are family club members standing at the door of the session room*

- Viral load assessments were performed on >95% of children and >80% of adults over the 36 months (Table 2)
- Over 85% of children and caregivers were virally suppressed at each testing point over the 36 months

***Table 2:** Description of viral load testing and results for patients enrolled in family clubs*

| Duration of follow-up | 12 | 24 | 36 |
|---|---|---|---|
| | **Children** | | |
| **Patients followed (N)** | 147 | 138 | 111 |
| **Viral loads done, n (%)** | 140 (95.2) | 133 (96.4) | 109 (98.2) |
| **Viral load <1000 copies/mL, n (%)** | 129 (92.1) | 121 (91.0) | 94 (86.2) |
| | **Caregivers** | | |
| **Patients followed (N)** | 73 | 58 | 44 |
| **Viral loads done, n (%)** | 60 (82.2) | 54 (93.1) | 39 (88.6) |
| **Viral load <1000 copies/mL, n (%)** | 57 (95.0) | 47 (87.0) | 37 (94.9) |

## Conclusion

- The FC model supported high rates of retention and viral suppression while ensuring simplified, family-centred HIV care and ART refill access for children and caregivers
- These findings provide evidence that differentiated ART delivery models can also safely be provided to stable children and can be utilised to support family-centred management

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