



# Southern African HIV Clinicians Society 3rd Biennial Conference

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**Our Issues, Our Drugs,  
Our Patients**

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**Third-Line Antiretroviral Treatment (ART) in  
Children with HIV:  
Case Reports from a Paediatric Treatment Failure  
Clinic in Khayelitsha, South Africa**

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# Background:



- HIV treatment failure rates in children high in studies:
  - leDEA Study\*: 19.3% after 3 years of treatment
  - Ubuntu Clinic in Khayelitsha, South Africa failure rate almost 30%



\*Virologic Failure and Second-Line Antiretroviral Therapy in Children in South Africa—The leDEA Southern Africa Collaboration. Davies, Mary-Ann et al. JAIDS [March 2011, Volume 56 - Issue 3 - pp 270-278](#)



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# Background:



- July 2013: MSF started the Paediatric Risk of Treatment Failure clinic in Khayelitsha, South Africa
  - 0-19 year old children failing ART
  - Addresses adherence issues to promote re-suppression
- Tools used:
  - Individual counseling
  - Support groups / Adolescent “Teen” clubs
  - Home visits
- Most children have re-suppressed their viral load:
  - Of those in clinic for at least 6 months, 89/114 (74%) have re-suppressed
- 4/72 (5%) of those enrolled on protease inhibitors have shown resistance necessitating 3<sup>rd</sup> line ART



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# Methods:



3 months standard adherence counseling by nurse



Persistent VL > 1000 HIV copies/ml



Genotype shows resistance to lopinavir/ritonavir



Switch to third line regimen after adherence addressed



Ongoing adherence counseling/ Obtain VL every 3 months



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# Results:



72 patients enrolled on PI-Based regimens

44 (61%) re-suppressed with 3 months adherence support

28 (39%) not suppressed

14/28 (50%) received genotypes

14/28 (50%) no genotype obtained (lost from care, transfer, VL improved but still >400)

4/14 (28%) resistance to lopinavir/ritonavir (resistance scoring range 30-115)

4/72 patients (5%) started on 3<sup>rd</sup> line ART



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# Results (continued):



- Data of Patients on 3<sup>rd</sup> line ART:
  - Mean age 6.64 years
  - 4/4 (100%) with a history of TB
  - Mean time on 3TC monotherapy before starting 3<sup>rd</sup> line ART: 23.2 months (range 7-47 months)
  - Mean decline in CD4 count from start of 3TC monotherapy to start of 3<sup>rd</sup> Line ART: 35.5% (range 21% - 48%)



# Results (continued):



- 3<sup>rd</sup> Line Regimens based on genotype results:
  - 2/4 started on darunavir/ritonavir/raltegravir/3TC/AZT
  - 2/4 started on darunavir/ritonavir/3TC/AZT
- Viral load results:
  - 4/4 VL <400 copies/ml around 3 months after starting
  - 3/4 VL <400 copies/ml around 6 months after starting (4<sup>th</sup> patient VL 418)
- No side effects or adverse clinical developments reported
- No adherence problems reported



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# Conclusions:



- Lopinavir/ritonavir regimens are robust
  - Few patients develop resistance despite prolonged viremia
- Excellent and rapid efficacy of darunavir/r and raltegravir
- No side effects reported with 3<sup>rd</sup> line regimens.
- Thorough adherence counseling necessary for 3<sup>rd</sup> line ART initiation and maintenance.
- It is possible to identify PI-resistant children and to start them successfully on 3<sup>rd</sup> line ART at PHC level!
- Administration of 3<sup>rd</sup> line ART is complex!
  - Urgent need for less complex, more tolerable paediatric drug formulations and regimens



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# Thanks!

# Questions?

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# ZITHEMBE BELIEVE

