MANAGING CHILDREN AND ADOLESCENTS WITH HIV TREATMENT FAILURE:

RESULTS FROM A PILOT PROJECT IN KHAYELITSHA, SOUTH AFRICA

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VIRAL LOAD < 1000 = TREATMENT SUCCESS

Background

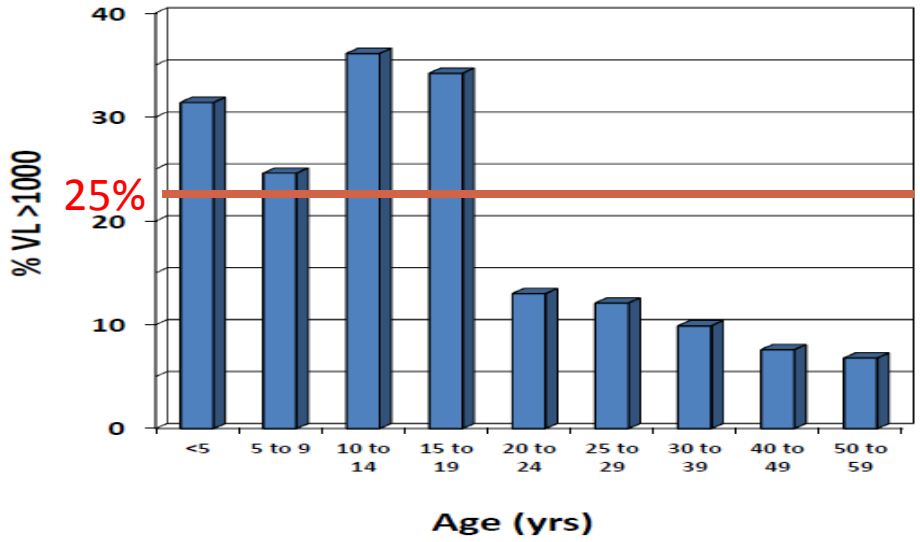
- High rates of virologic failure in children on ART:
  - IeDEA Study*: **19.3% after 3 years** of treatment in Sub Saharan Africa.
  - South African study: **38% after** a median time on ART of **31 months****
  - Ubuntu Clinic in Khayelitsha: almost **30% of children on ART were failing**.

*Virologic Failure and Second-Line Antiretroviral Therapy in Children in South Africa—The IeDEA Southern Africa Collaboration. Davies, Mary-Ann et al. JAIDS March 2011, Vol 56-Issue 3 – pp 270-278

Pediatr Infect Dis J. 2011 Jan;30(1):52-6. doi: 10.1097/INF.0b013e3181ed2af3. **Long-term outcome of children receiving antiretroviral treatment in rural South Africa: substantial virologic failure on first-line treatment. Barth RE[1], Tempelman HASmelt E, Wensing AMHoepelman AI , Geelen SP

The Extent of the Problem: >1 in 4 children fail treatment

Percent on ART with Viral Load > 1000 copies/ml by Age



- Risk is greater in children and adolescents
- Risk decreases with age among adults

Which antiretroviral drugs are children taking?

- WHO recommended first line:
  - ABC or AZT + 3TC + LPV/r

OR

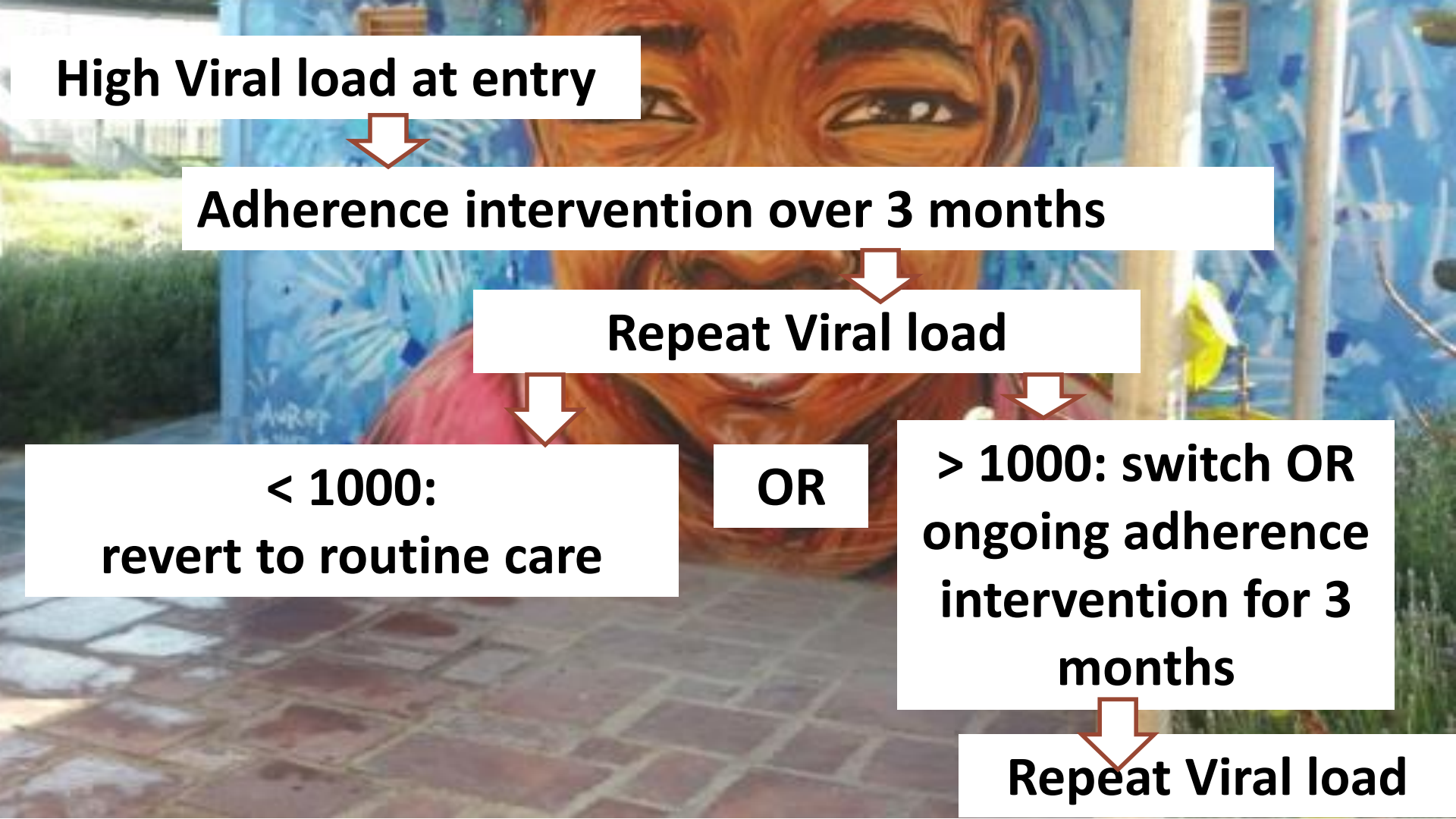
PI (Protease Inhibitor)

  - ABC or AZT + 3TC + NVP/EFV

NNRTI (non nucleoside reverse transcriptase inhibitor)

Khayelitsha: Urban Township Cape Town

Paediatric Risk of Treatment Failure Clinic
Children up to age 19


High Viral load at entry
Adherence intervention over 3 months
Repeat Viral load
< 1000:
revert to routine care
OR
> 1000: switch OR
ongoing adherence
intervention for 3
months
Repeat Viral load

. . . and other lies we tell ourselves.

Results

Indicator	Result
Number of patients enrolled	133
Median age at ART start date	3.3 years (IQR 0.6-7.1)
Median age at enrollment in program	10 years (IQR 4.6-13.9)
Median time on ART	4 years (IQR 2.6-7.7)
Median VL at enrollment	14591 (2803- 59331)
How many on ART at enrollment	129 (97%)
How many not on ART at enrollment	4 (3%)
How many failing NNRTI on enrollment	41 (31%)
How many failing PI on enrollment	83 (62%)

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Pediatric Treatment Failure: Results (Continued)

Indicator	Result	
How many with current TB at enrollment:	3 (2%)	
How many with current co-morbidities at enrollment:	20 (15%)	
Caretaker at enrollment:	Parent: 91 (68%) Grandparents: 18 (14%)	Aunt/Uncle: 16 (12%) Other: 8 (6%)
HIV status of caretaker:	Positive: 94 (71%) Unknown: 15 (11%)	Negative: 24 (18%)
Disclosure status at enrollment:	None: 54 (41%) Full: 58 (44%)	Partial 6 (5%)

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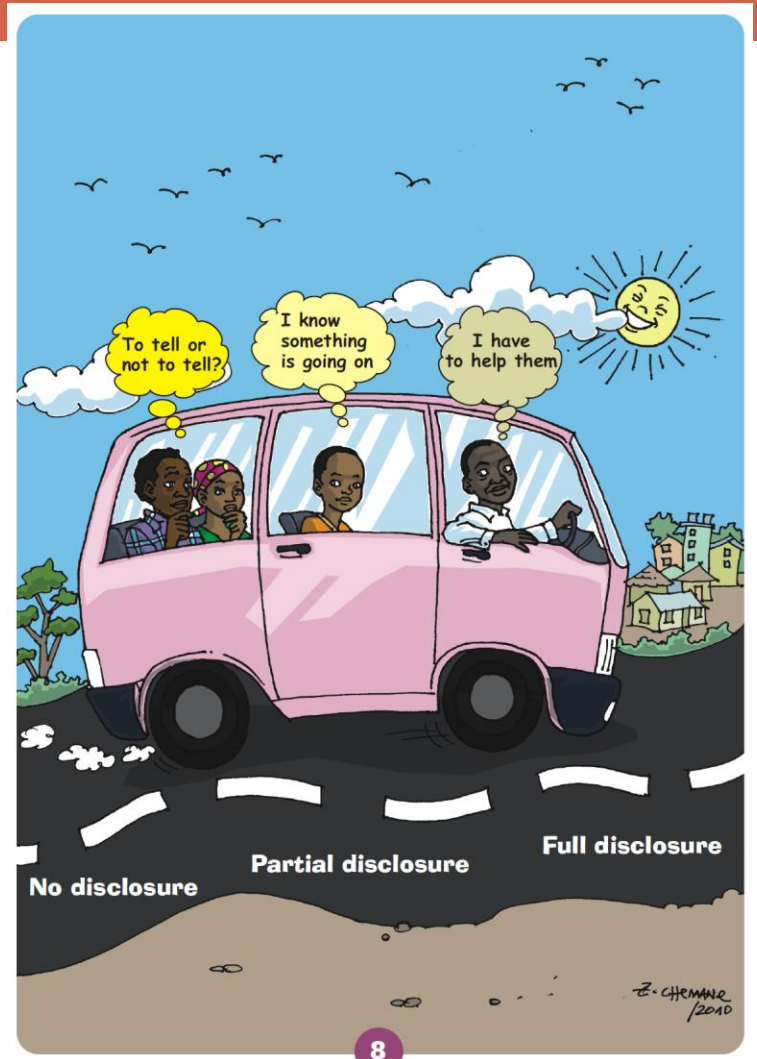
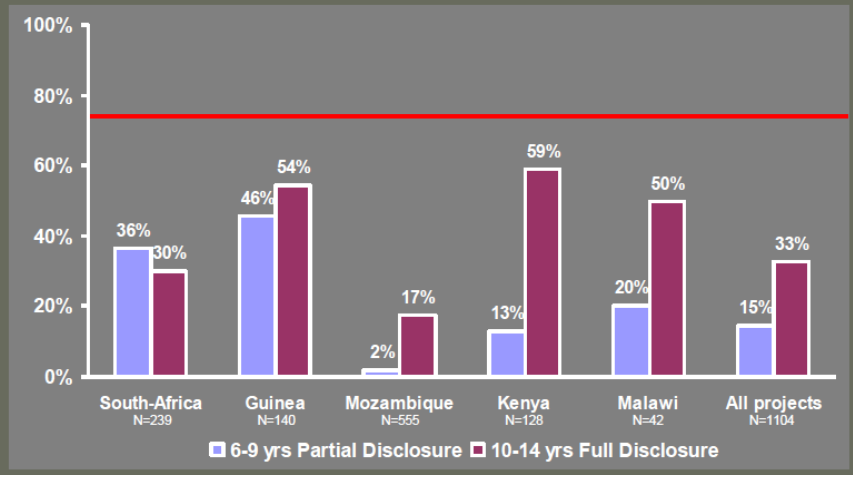


Disclosure rates remain below the expected



PI (n=68)

NNRTI (n=34)

VL after 3 mths
Adherence Support
46 (67%) < 1000

VL after 3 mths
Adherence Support
22 (33%) > 1000

VL after 3 mths
Adherence Support
18 (53%) < 1000

VL after 3 mths
Adherence Support
16 (47%) > 1000

VL after 6mths
34 (85%) < 1000
(n=40)

VL after 6mths
9 (60%) < 1000
(n=15)

VL after 6mths
14 (87%) < 1000
(n=16)

Switched to PI
VL after 6 mths
8 (66%) < 1000
(n=12)

78% <1000 at 6 months (n=55)

75% <1000 at 6 months (n=28)

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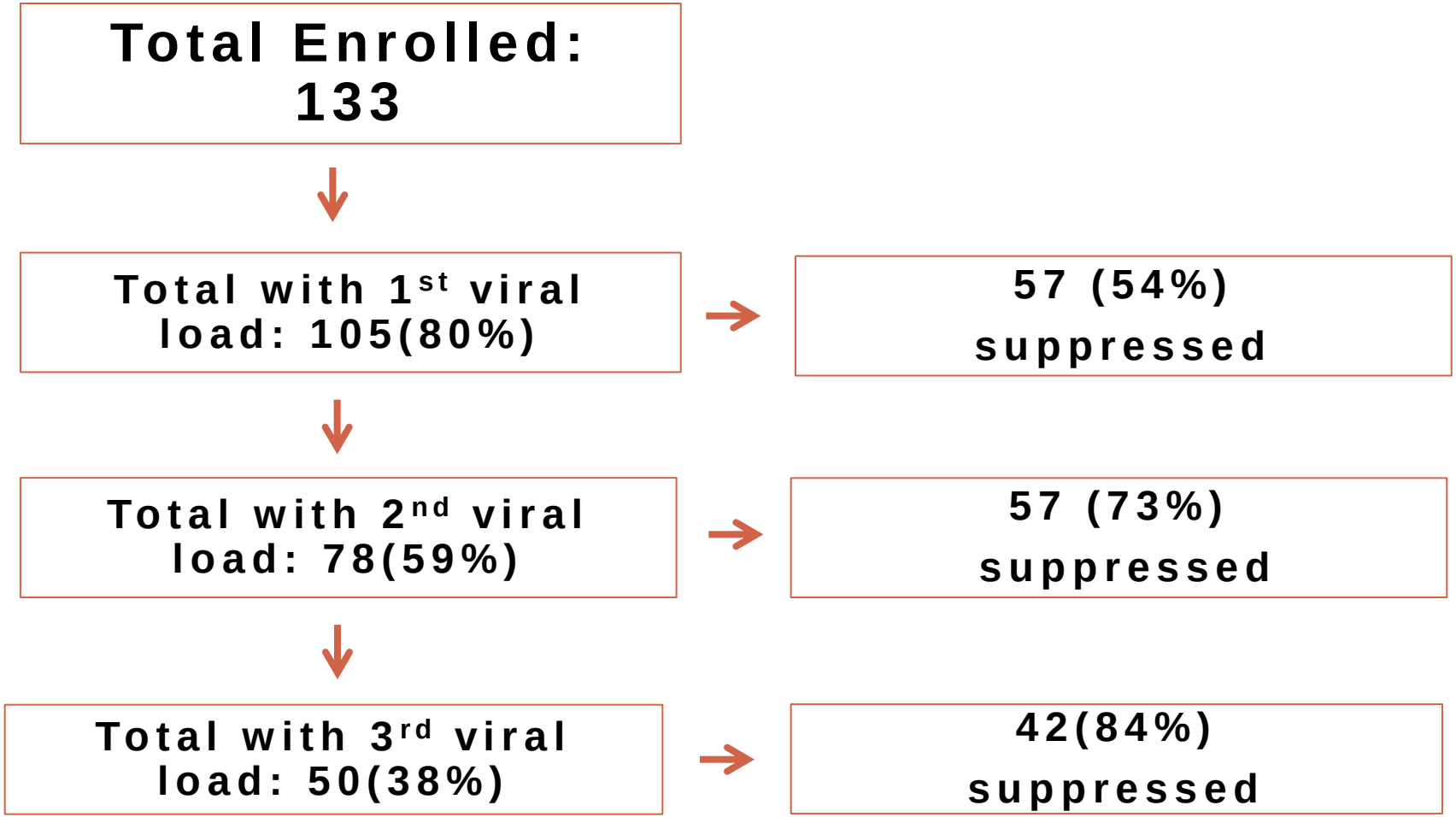
Total Enrolled: 133
Total with 1st viral load: 105(80%)
57 (54%) suppressed
Total with 2nd viral load: 78(59%)
57 (73%) suppressed
Total with 3rd viral load: 50(38%)
42(84%) suppressed

Genotyping

- 34 genotypes performed in patients failing despite good reported adherence:
  - 14 on failing PI regimen
  - 20 on failing NNRTI regimen
- 43% (6/14) resistant to PI
- 100% (20/20) resistant to NNRTI

Conclusions

- **Simple adherence support interventions** led to **high rates of viral resuppression.**
- Most patients failing a **NNRTI showed resistance** and required **switching** to a PI-based regimen.
- Most patients on a **PI-based regimen suppressed with adherence support,** showing the benefits of first line PI based regimens.
- **Disclosure rates at enrolment were low**, indicating the need for improved disclosure programs.
- Median age at ART start was **>3years old: this is too late !**

Diagnosing and treating more kids remains a priority

- In 2014, of the 3.2 million in need of antiretroviral therapy, only 23% had access to treatment.

What should our programmes be offering?

- **Enhanced Adherence Counselling!**
- **Disclosure counselling** with tools available
- Organise **pediatric refill day** according to disclosure status – automatic caretaker support group; adolescent peer support group; family adherence clubs.
- Is a **home visit** possible?

SPEND A LITTLE MORE TIME


TABLE MOUNTAIN
OFFICIAL NEW 7 WONDER OF NATURE