

Adolescent HIV services

Recommendations from two studies

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Outline

- Evaluation of Adolescent and Youth Friendly Services in EGPAF supported regions (Arusha, Dodoma, Kilimanjaro, Manyara, Singida)
- Evaluation of caregiver engagement in addressing high viral load for adolescents living with HIV
- Results of the scale up of recommendations from the evaluations

1. Adolescent and Youth Friendly Services in Tanzania: Lessons learned in 6 regions of Tanzania



Satellite session, ICASA 2019 (Kigali)

December 3, 2019

Background: Adolescent Services

Adolescent Adherence Clubs for ALHIV: 50 sites

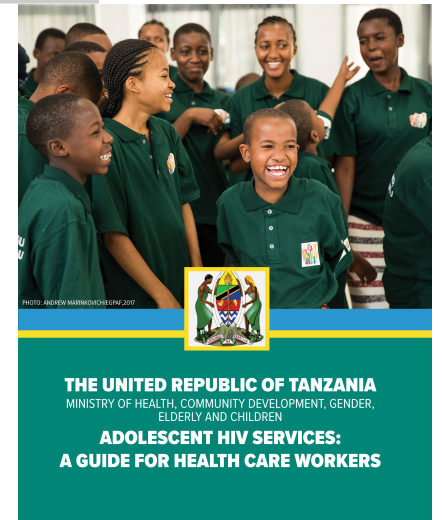
Clinical	Psychosocial Support
<ul style="list-style-type: none">Targeted health educationSaturday; ART refillsMDT Clinic staff provided stipendsEGPAF staff coordinate, monitor with council health management teams	<ul style="list-style-type: none">3 ALHIV/site trained as peer educators (PE) who provide formal health education in the club and informal in the communityFacility offers space for play and sportsPeer educators and clients attending clubs receive a meal/refreshment

❖ Adolescent Friendly Health Service (AFHS) Provider Capacity

- In 2017, 2 providers per site trained in 10 days
- In 2018, providers trained an additional 5 days with updated national guidelines

❖ Timiza Ndoto (pursue a dream)

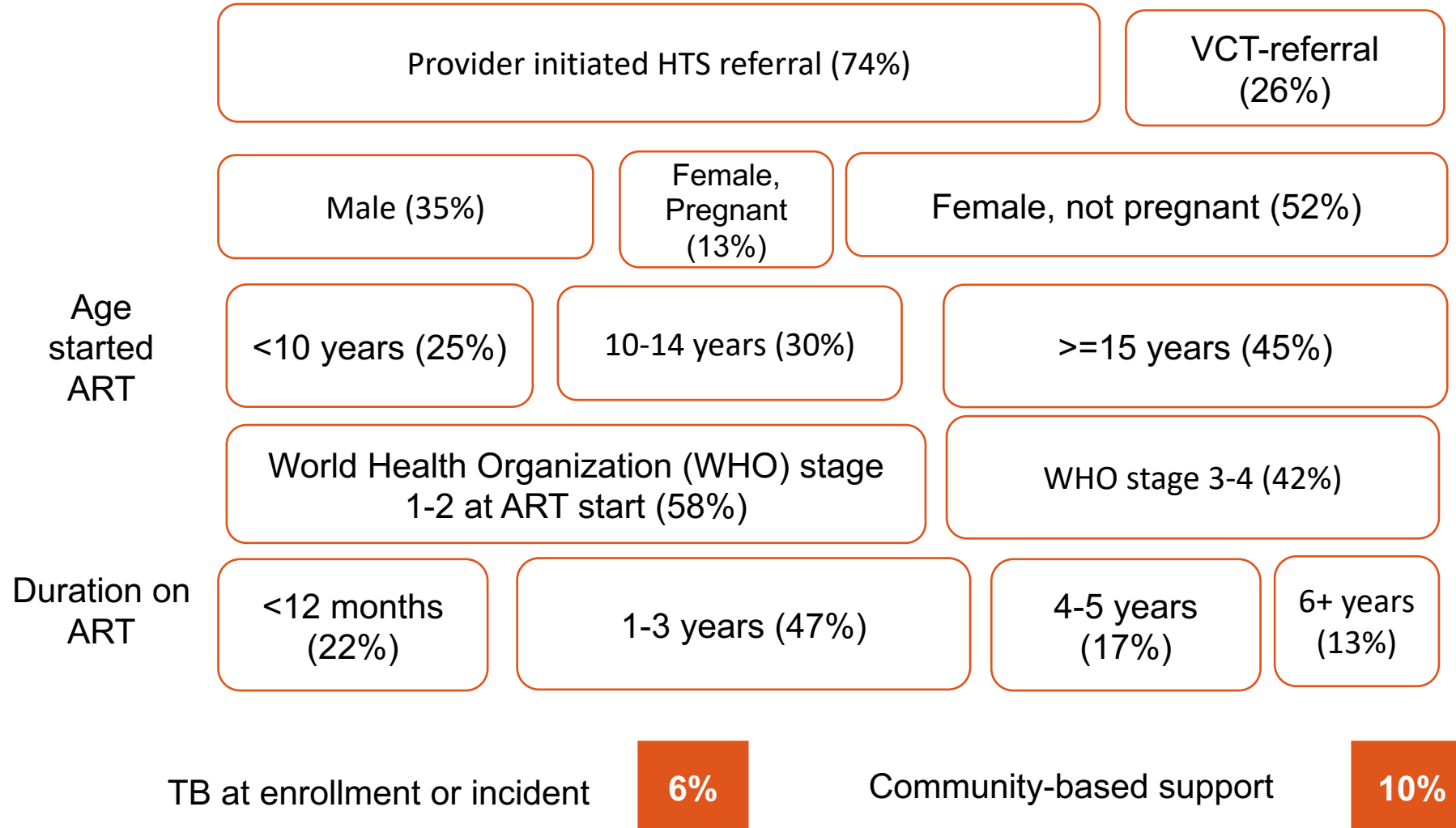
- Differentiated service delivery for ALHIV with high viral load (>1,000 copies/ml)
- One day workshop for ALHIV and their caregivers to discuss challenges of having high viral load, make adherence plans for treatment support at home and school



Evaluation Methods

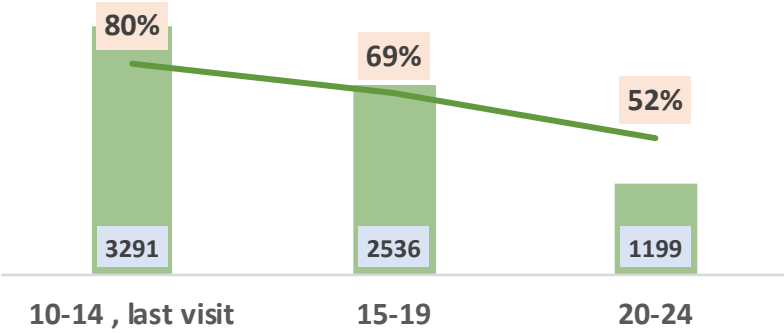
- Analysis included children and adolescents initiated on ART from 2010-2017, aged 10-19 years old from October 2016–September 2018
- Dataset closed September 2018
- Primary question explored whether adolescent adherence to club attendance was associated with retention in care and viral suppression
- Data presented as proportions and adjusted odds ratios

RESULTS: Adolescent Population Characteristics

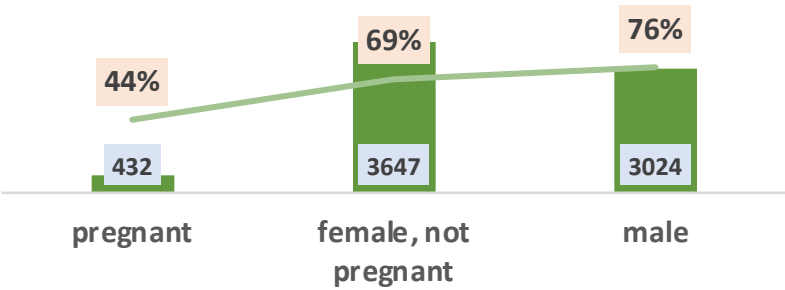


RESULTS: Who Attends Adolescent Clubs?

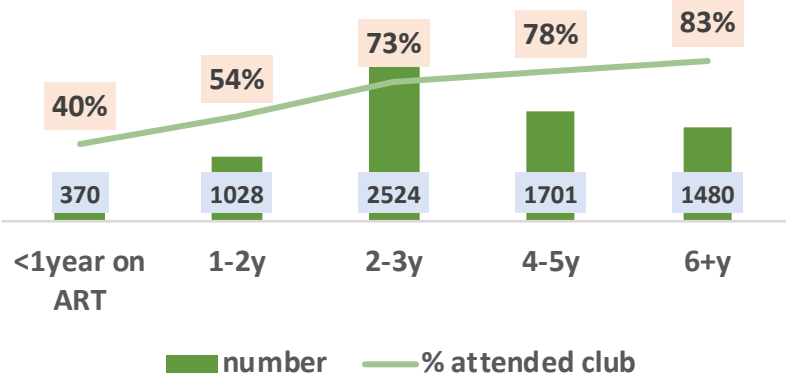
Club attendance by age at last visit



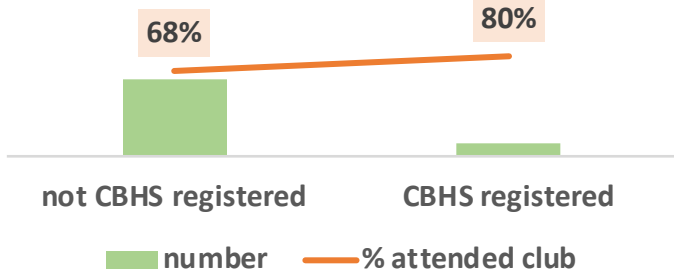
Club attendance by sex, pregnancy status at enrollment



Club attendance by duration on ART



Club attendance by community-based health service registration status



RESULTS: Adolescent Club Attendance and Early Retention

Early retention (6 months after ART initiation)	Total N	Clients retained after 6 months (%)	95% CI
Did not attend club during first 6 months on ART	5,757	4,354 (76%)	(74%, 77%)
Attended club during 1 st 6 months on ART*	2,079	1,896 (91%)	(90%, 92%)

*After adjusting for year starting ART, age at start of ART, sex, ART regimen, registration in home-based care, and type of facility, **the likelihood of early retention was almost 3 times higher among those attending clubs (AOR 2.9; 95% CI: 2.5, 3.4, p<.0001)**

RESULTS: Stratified Analysis: Age Group

Adolescent age	Total club / no club	Retained among club attenders N (%)	95% CI
10-14 years	3,291 / 808	3,027 (92%)	(91%, 93%)
≥15 years	3,812 / 2,328	3,246 (85%)	(84%, 86%)
Odds of retention in club vs non-club attenders, stratified by age		P-value	95% CI
10-14 years	6.1	<.0001	(5.0, 7.4)
≥15 years	3.3	<.0001	(2.9, 3.8)

Do clubs affect retention differently according to age group?

- ✓ **Yes, younger adolescents who attend clubs are twice as likely to be retained compared to older adolescents who attend clubs**

RESULTS: Stratified analysis: Sex, pregnancy status

Sex / Pregnancy Status	Attend club / no club	Retained among club attenders N (%)	95% CI
Female, pregnant	432 / 545	347 (80%)	(76%, 84%)
Female, not pregnant	3,647 / 1,634	3,206 (88%)	(87%, 89%)
Male	3,024 / 957	2,720 (90%)	(89%, 91%)
Odds of retention in club attenders vs non-club attenders, stratified by sex/pregnancy status		P-value	95% CI
Female, pregnant	2.3	<.0001	(1.8, 3.0)
Female, not pregnant	4.3	<.0001	(3.7, 4.9)
Male	4.8	<.0001	(4.0, 5.8)

Do clubs affect retention differently by sex/pregnancy status?

- ✓ **Yes, male and non-pregnant female adolescents who attend clubs are twice as likely to be retained compared to pregnant adolescents who attend clubs**

Peer Club Attendance And Viral Suppression

Adherence Club Attendance	Total	Number (%) virally suppressed (<1000 c/mL)	95% CI
Never attended clubs	1,179	867 (74%)	(71%, 76%)
Attended clubs*	4,681	3,018 (65%)	(63%, 66%)

* After adjusting for duration on ART, current age and sex, **the likelihood of being virally suppressed was unrelated to club attendance (AOR 1.0; 95% CI: 0.8, 1.1, p=.52)**

- Unexpectedly, we found that those attending clubs had lower rates of viral suppression compared to those not attending clubs.
- This was explained by other variables -- duration on ART, current age and sex – accounting for the observed effect of club attendance on viral non-suppression.
- **Once these confounding variables were included in the analysis, the negative association between club attendance and viral suppression disappeared.**

Unexpected: Learning From Programming

1. 16% of adolescent females on ART enter as pregnant
 - ❖ Pregnant adolescent girls are less likely to attend the AAC
 - ❖ Clubs were not as strongly associated with retention among those starting ART during pregnancy
2. More than one-third (35%) of adolescents starting ART from 2014-2017 had WHO stage 3/4 and 6% of adolescents enroll with TB or are diagnosed with TB during follow-up ART care
 - ❖ Both groups with signs of advanced HIV disease (AHD) were more likely to attend AAC vs. those without advanced disease
 - ❖ Benefits of club attendance on retention were similar for both AHD vs. non-AHD and TB/HIV vs. no-TB/HIV adolescents.
3. Enrollment in a community-based support service was low (10%), but was independently associated with AAC attendance and high retention.

Learning From Evaluation Findings

- ❖ Continue to provide site support and mentor adolescent friendly providers to implement learning from trainings
- ❖ Continue to improve Adolescent Adherence Club approach, including peer components
 - More focus on understanding ART, adherence planning, and treatment support
 - Quarterly special high viremia workshop engaging their caregiver/treatment supporters
- ❖ EGPAF re-designed ANC/PMTCT programs to include a program specifically focused on youth (15-24 years) and is piloting a model to better support young pregnant and breastfeeding moms
- ❖ Looking into how to accommodate ALHIV needs within our TB work and advanced HIV disease programs

2. ACHIEVING VIRAL SUPPRESSION AMONG NON-SUPPRESSED ADOLESCENTS ON ART IN TANZANIA: EFFECTS OF A TARGETED INTERVENTION

Published in ICASA 2019 as poster presentation
Intervention - Timiza Ndoto

ACHIEVING VIRAL SUPPRESSION AMONG NON-SUPPRESSED ADOLESCENTS ON ART IN TANZANIA: EFFECTS OF A TARGETED INTERVENTION

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Background

- Many adolescents on ART are not virally suppressed for multiple reasons, including poor adherence and being on sub-optimal regimens
- This review aims to determine the effect of the intervention, Timiza Ndoto (Swahili for Achieving Dreams), which targeted non-virally suppressed adolescents in EGPAF supported regions

Methods

- We implemented the intervention for adolescents 10-19 years of age who had a high viral load (VL; ≥ 1000 cp/ml) in 27 high-volume facilities at end of April 2019.
- May-June 2019, participants were invited to attend a full one-day workshop with their guardians for intensive group adherence action-planning.
- Each family unit developed and implemented a personalized three-month plan to address barriers to ART adherence and planned for the transition to optimal regimens.
- We evaluated the effects of the Timiza Ndoto (TN) intervention at site level, compared to the standard of care (SOC) sites on viral response outcomes: secondary (follow-up) suppression < 1000 cp/ml and/or log drop ≥ 0.5 cp/ml. Inclusion criteria were adolescents age 10-19 years with a high viral load (≥ 1000 cp/ml) as of 31 March 2019 and a follow-up viral load from July-December 2019.
- The odds of TN exposure and changing to an optimal ARV regimen (dolutegravir/DTG) being associated with becoming virally suppressed after a high viral load were estimated using logistic regression (Stata 14).

RESULTS: Baseline characteristics

- We identified 888 adolescents with high viral load by March 2019 and 36% (n=323) came from the 27 TN intervention sites and 64% (n=565) from the 138 SOC sites. Of those, 49% were female (n=158) in the TN sites and 47% were female (n=268) in SOC sites
- Those enrolled at TN sites were on ART for longer (77 months) compared to those enrolled at SOC sites (69 months; p=.004; Table 1).

Table 1. Baseline characteristics as of March 2019, by TN and SOC sites

Variables	Adolescents attending TN site (n=323)	Adolescents attending SOC site (n=565)	P-value
Median (inter-quartile range)			
Months from HIV diagnosis to ART initiation	10 (<1, 42)	17 (<1. 48)	0.376
Months on ART	<u>77 (53, 95)</u>	<u>69 (51, 89)</u>	<u>0.004</u>
Months on current regimen	5 (3, 6)	5 (3, 36)	0.049
Age ART initiation, years	10 (7, 13)	10 (7, 12)	0.482
Current age, years	16 (14, 19)	15 (13, 18)	0.014

RESULTS: Transitioning and viral load suppression

- Almost three-quarters (72%) of those at the intervention sites were changed to optimal DTG-based regimen compared to only 42% at standard care sites (p<.0001; Table 2a).
- A favorable viral response (those suppressed or with reduced viral load by a clinically important criterion [≥ 0.5 log drop]) was 82% at intervention sites compared to 72% of adolescents at standard care sites (p<.0001; Table 2a).

Table 2a. Secondary viral suppression and ARV regimen change by December 2019, by TN and SOC sites

Current ARV regimen	TN sites (N)	SOC Sites	
Changed to DTG regimen	72% (234)	42% (237)	
Other 2nd line	9% (28)	14% (79)	
Other 1st line	19% (61)	44% (249)	
Viral load at follow-up			<.0001
<50 c/ml	156 (48%)	196 (35%)	
50-999 c/ml	64 (20%)	94 (17%)	
≥ 1000 c/ml, log drop $\geq .5$	45 (14%)	114 (20%)	
≥ 1000 c/ml, log drop <.5	58 (18%)	161 (28%)	

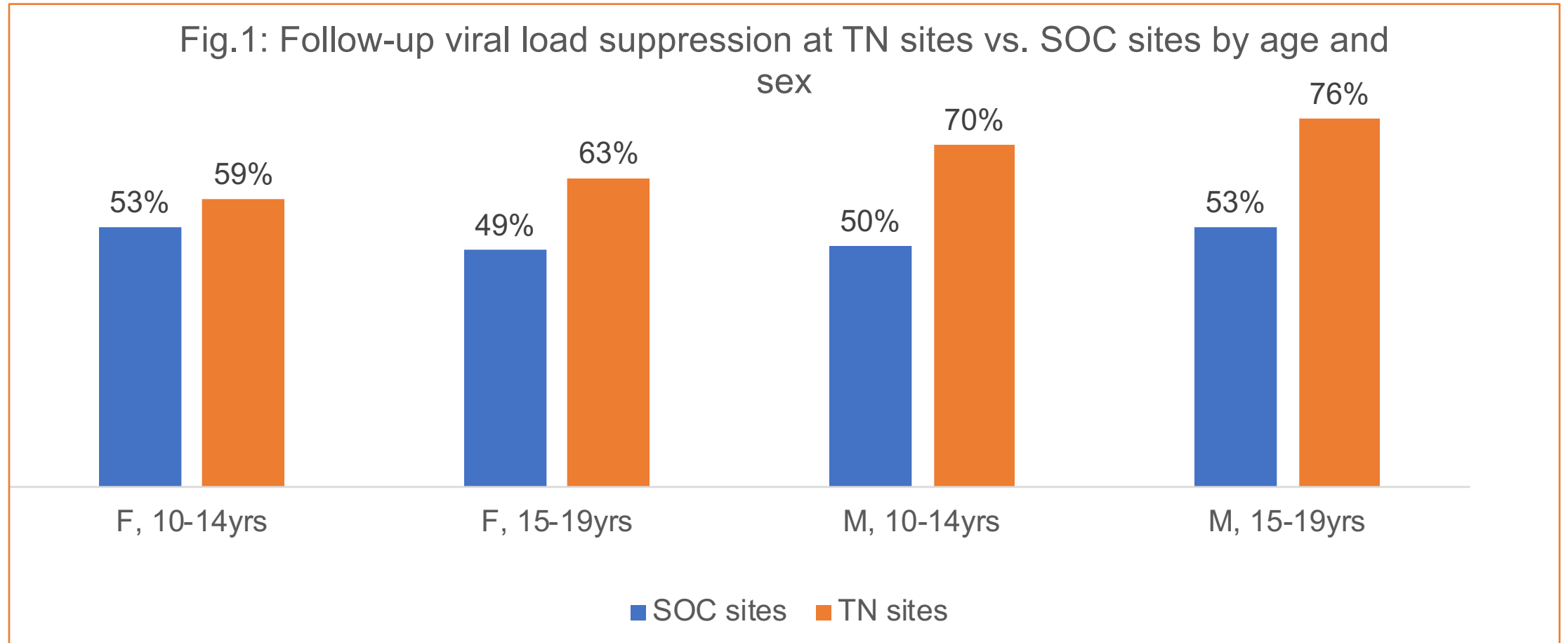
RESULTS: Adjusted Likelihood

- Secondary viral suppression (<1000 cp/ml) was 68% (95% CI: 63,73) among adolescents attending intervention sites and 52% (95% CI: 47,56) at SOC sites (p<.001).
- Transitioning to DTG was independently associated with a more than two-fold increased likelihood of achieving secondary viral suppression (OR 2.25; 95% CI: 1.40,3.61; Table 2b).

Table 2b: Adjusted likelihood of secondary viral load suppression <1000c/ml

Variable	Adjusted Odds Ratio (95% CI)	P-value
TN site (vs. SOC)	1.68 (1.22, 2.30)	0.001
Current ARV regimen		
Changed to DTG regimen	2.25 (1.40, 3.61)	0.001
Other 2nd line	0.62 (0.42, 0.90)	0.013
Other 1st line	1.00 (ref)	

RESULTS: Viral load comparison



⇒ There was a gender disparity in viral suppression with more impact shown in males in all age groups.

Learning

- The TN intervention fast-tracked transitioning and switching of adolescents with high viral load to optimal regimens
- Optimal regimens, coupled with engaging guardians in directed and individualized action-planning that tackles barriers to adherence in group settings, contribute to more secondary viral suppression as noted in TN sites
- The project is scaling up the intervention to SOC sites every quarter, integrating TN with routine clinical visits

Scale up to all facilities

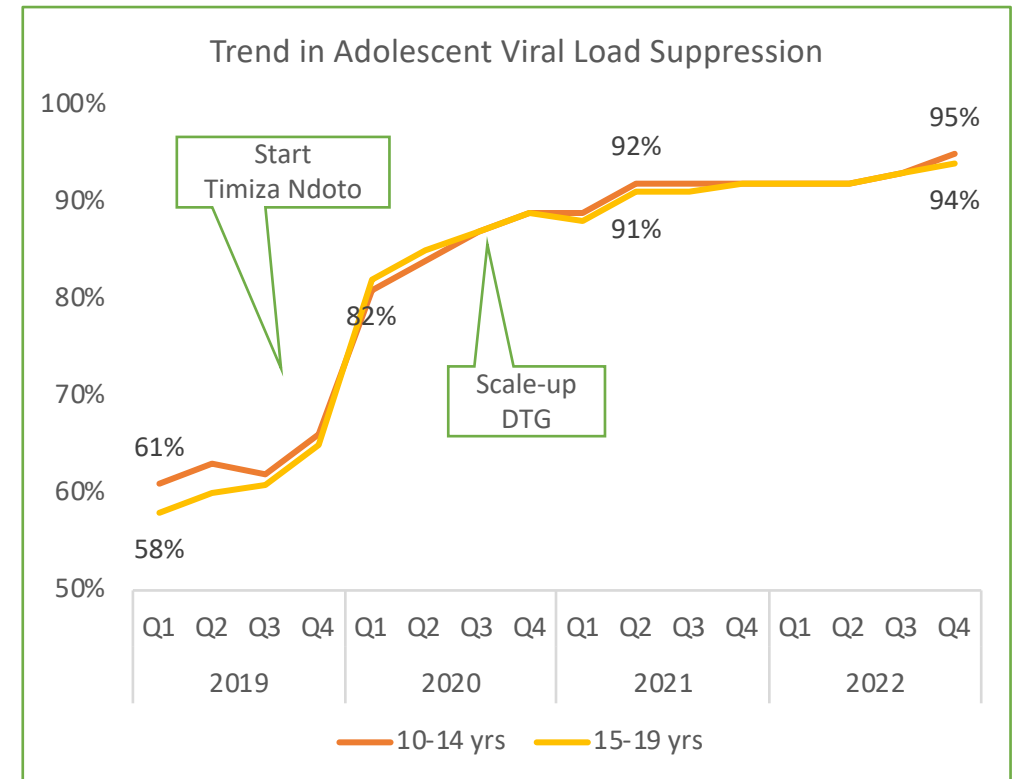
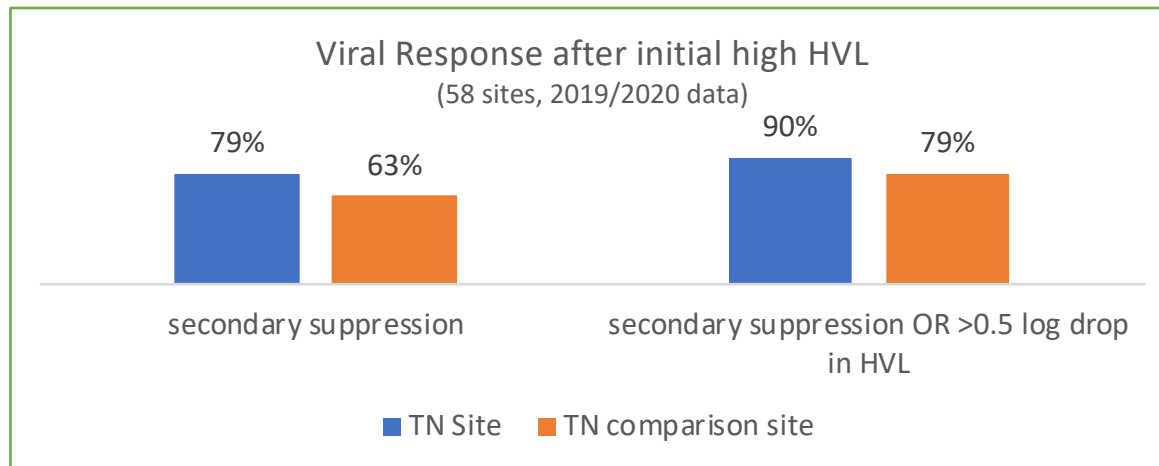
- FY20 FY21 expanded to all facilities
- Integrated to routine unstable clinic
- Including accelerated EAC for all unstable adolescents
- Effect included
 - Fast tracked transitioning to optimal regimen
 - Improved Viral load coverage
 - Viral suppression
 - MMD

Timiza ndoto
High Viremia Clinic

- Clinic for **adolescents 10-19yrs** with high viral load and their **treatment supporters**
- Addressing barriers to adherence and supports planning for a future (*Timiza ndoto* ~ achieving dreams)

Timiza Ndoto pilot findings at 58 sites:

- Overall, TN sites have a higher VL suppression rate, also contributed by the peer-led adolescent clubs
- Secondary VL suppression after EAC improved more than in comparison sites
- Started as pilot for adolescents with high VL, now integrated into routine services as part of enhanced adherence counseling



Recommendations

Increase attention and resources to specific Adolescent service delivery models

- Scale up models that engage caregivers and treatment supporters

Establish Multi-disciplinary Teams

- Championing adolescent services
- Strengthen quality of care activities: **Screen Treat Optimize Prevent** - STOP AIDS initiative,

Expand community support to social services at community level



**Elizabeth Glaser
Pediatric AIDS Foundation**
Fighting for an AIDS-free generation

Thank You / Asanteni

Special thanks to:

