

Diagnosis , management and challenges of ART treatment failure in children and adolescents

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NamibianHIVCliniciansMeeting
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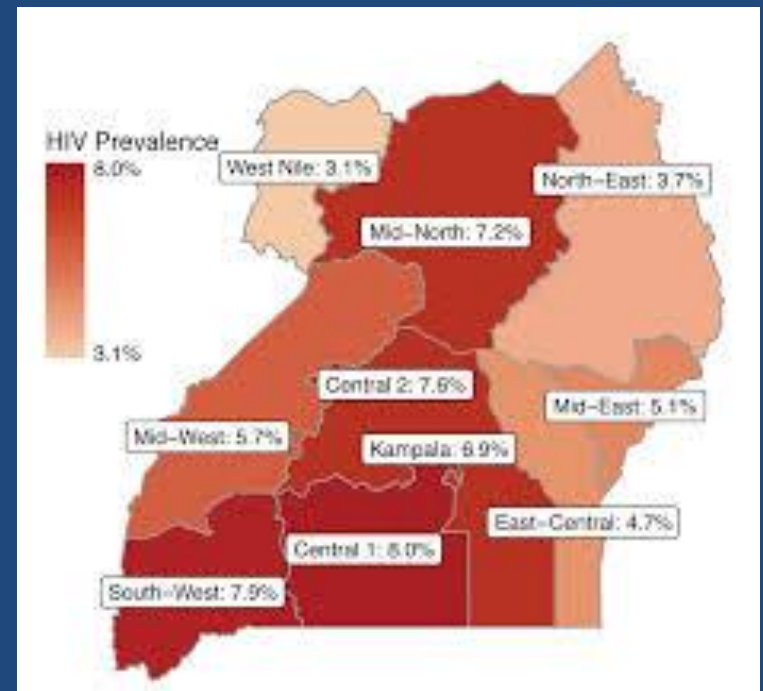


- Worldwide, about 1.8 million adolescents aged 10-19 years are living with HIV (*UNAIDS 2016*)
 - 85% of them in sub-Saharan Africa
 - and 60% of them girls



Adolescent HIV in Uganda

- 1.4 million people are living with HIV in Uganda
- 130,000 adolescents aged 10-19, majority perinatally infected
- Current HIV prevalence among adolescents is 2.8%
Uganda AIDS Control program (ACP, 2018)



Uganda HIV prevalence , WHO 2019

Baylor-Uganda COE

- The PIDC started in 1988 & ART initiated from December 2003,
- The HIV Adolescent clinic was started in August 2003,
 - and had registered over 12500 adolescents and young people by Jan 2021



There are two groups of HIV-positive adolescents living with HIV(ALHIV):

- vertical transmission
- Behavioral transmission: largely sexual and through intravenous drug use(IDU)



As these ALHIV mature and their life expectancy increases, they face several adolescent related developmental tasks :

- building a social and sexual identity,
- making educational and career choices,
- gaining autonomy from parents
- Promoting personal adherence to ART



- Availability of ART has resulted in increasing numbers of ALHIV and associated challenges of coping with the stress of being HIV positive



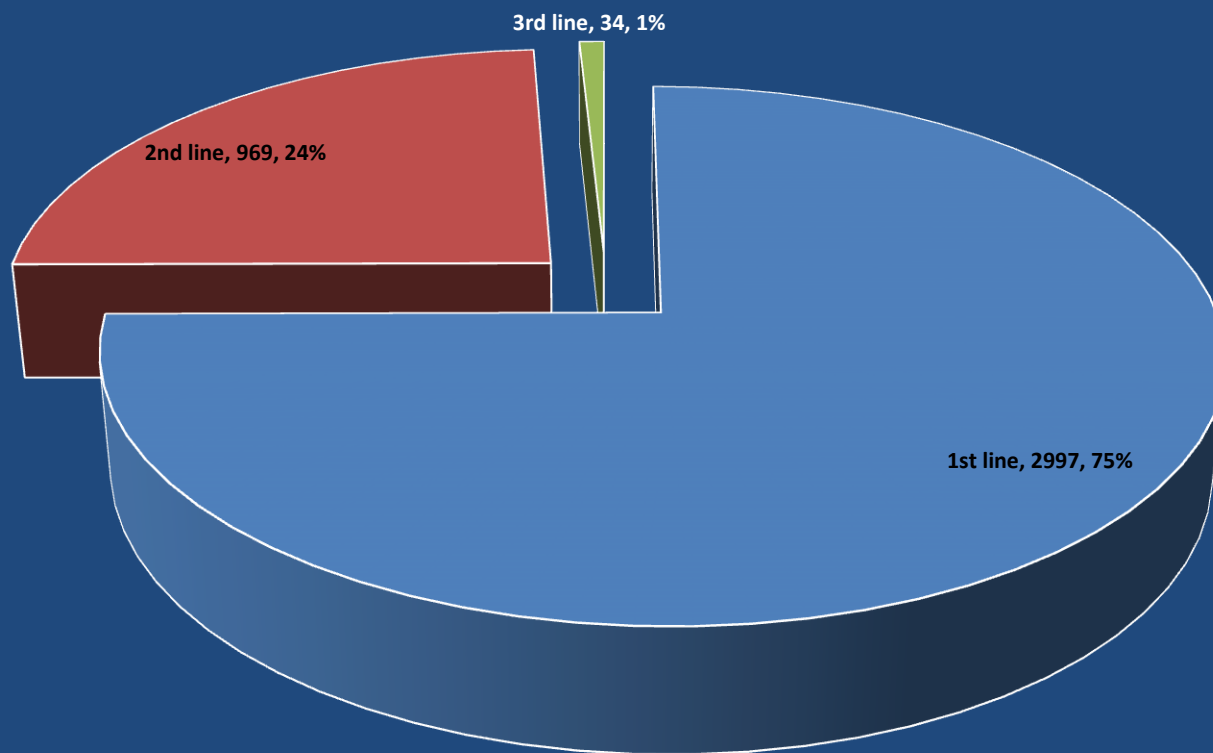
Evolution of HIV Treatment

- HIV treatment was initiated in 2004 at the PIDC
 - at 1st with meagre resources & then subsequently through the PEPFAR grant
- Currently, the **'test and treat'** strategy in place has profound implications for ALHIV (UNAIDS 2014)

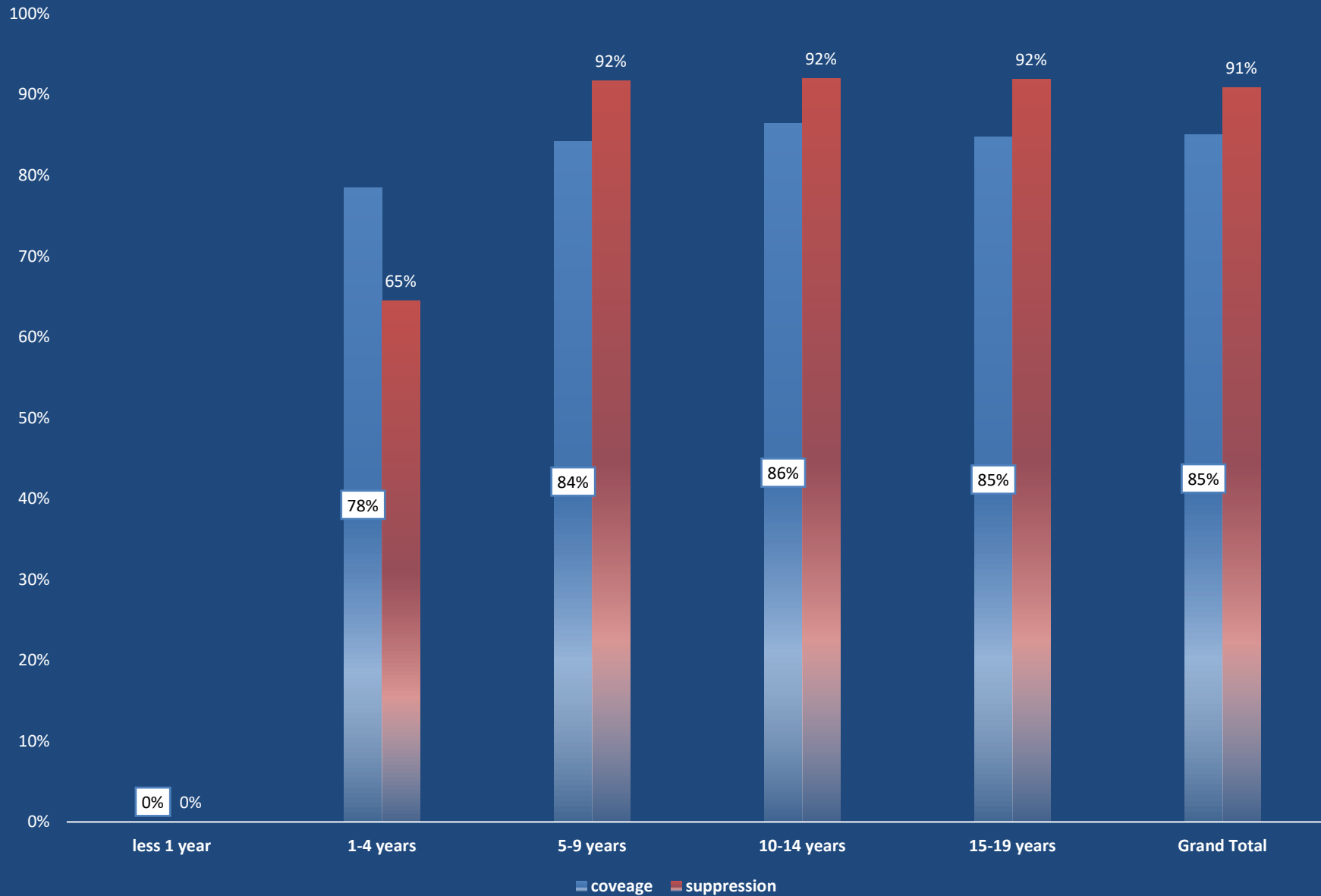


Distribution of ART among children and adolescents

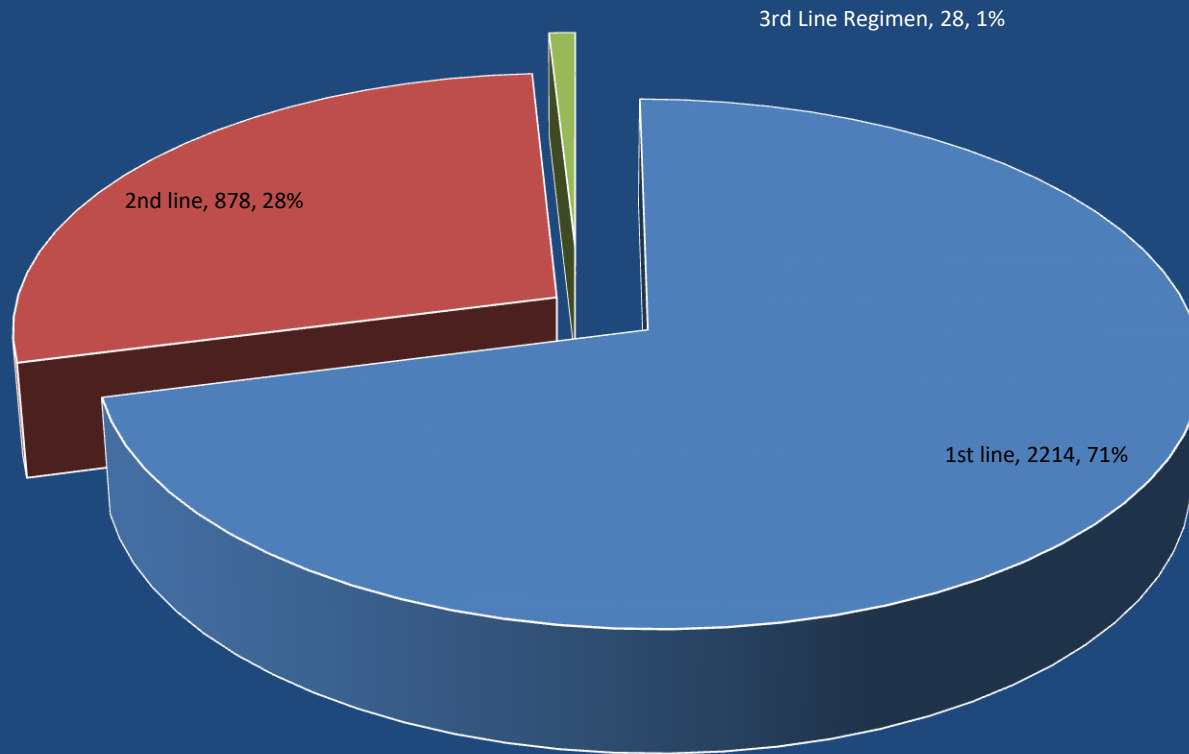
Regimen Lines 0-19 yrs



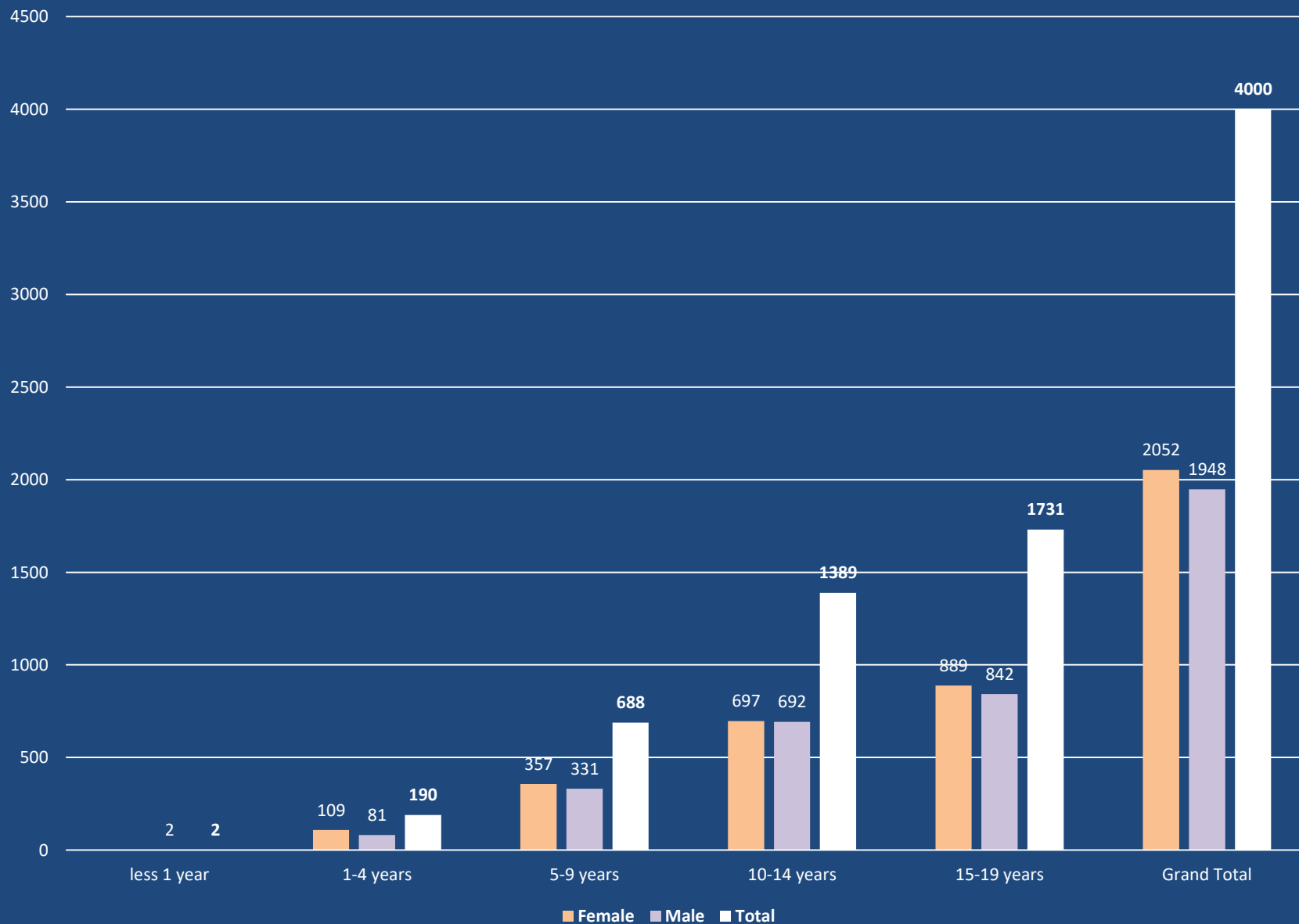
VIRAL LOAD CASCADE-6MONTHS



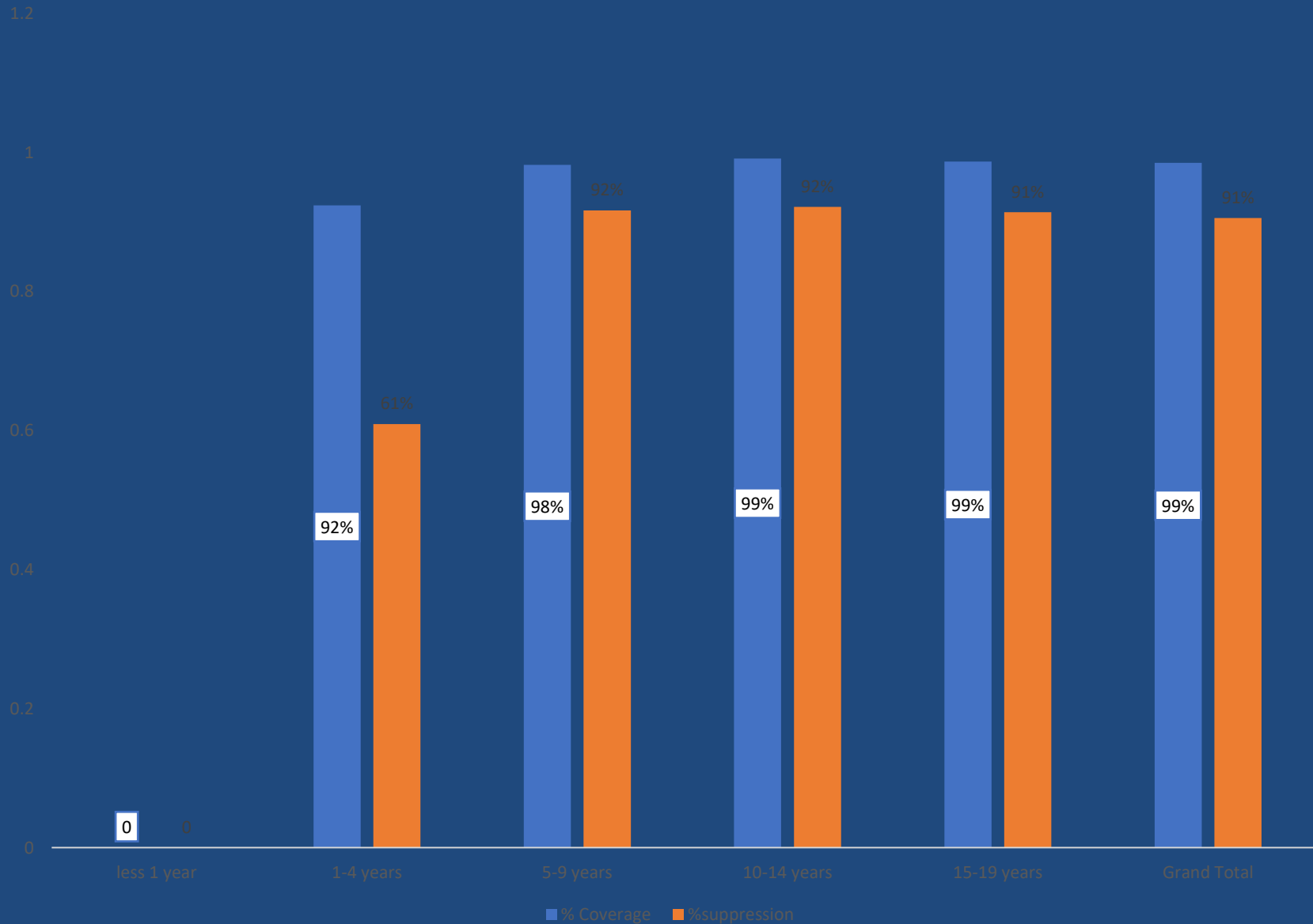
Adolescents Regimens 10-19 yrs



Adolescents 0-19 Years on ART



Viral load Cascade-12 months



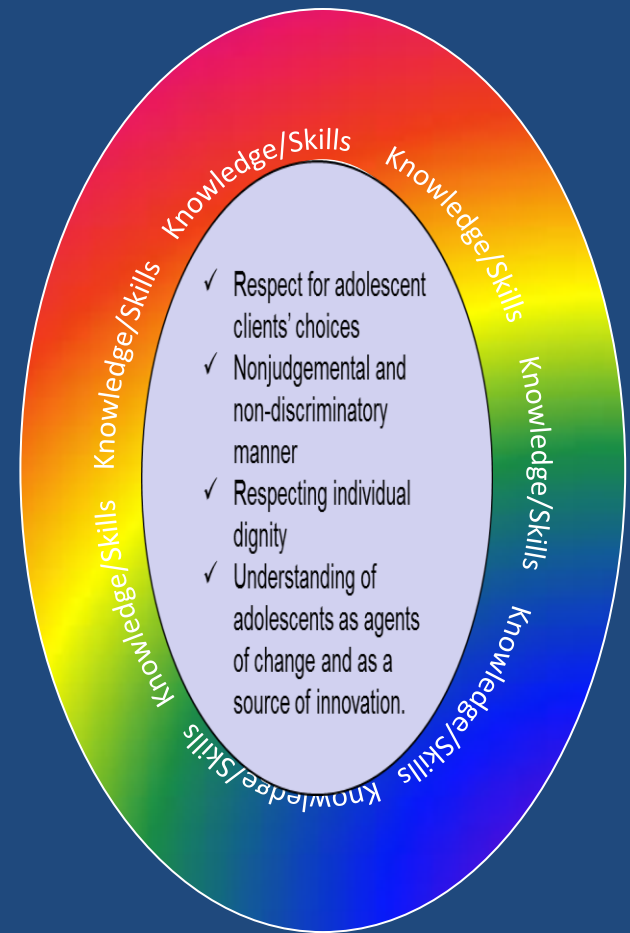
SRH challenges for ALHIV

- Early sexual activity & continued engagement in sexual relationships
- HIV transmission to their sexual partners if viral suppression cannot be achieved
- Adolescent girls unlikely to disclose their sero-status to their partners
 - Of the 420 adolescent girls and young women (AGYW) who became pregnant only 6% disclosed to their partners compared to 100% of the adolescents and young men (AYM) whose partners were pregnant (Anecdotal data PIDC 2014)



Optimizing Care: Youth-friendly HIV Care

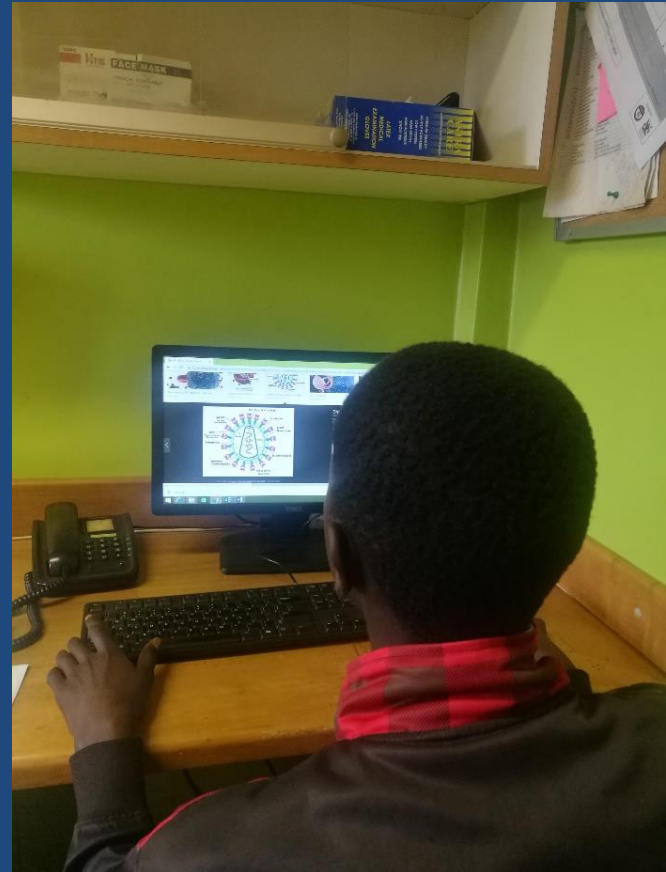
- **Providers** who are knowledgeable, nonjudgmental
- **Ensure confidentiality and provide Consent**
 - See adolescents separately from parents
 - Cohort youth to single day
- **Cater for socioeconomic issues:** poverty, schools, housing & transportation challenges
- **Empowering youth** to live with HIV
 - Coping/Mental Health
 - HIV care
 - Prevention



Competencies doughnut

Treatment Issues

- Adherence/Viral Load Suppression
- Disclosure
- Ongoing risk of transmission
- Reproductive health
- Behavioral and psychological concerns
- Transition to Adult Care



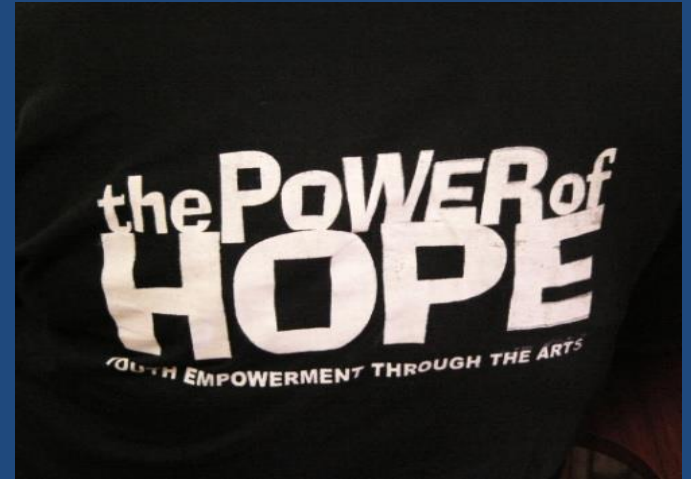
ALHIV at Baylor Uganda learning about ART

Undetectable = Untransmittable

- U=U works for long term “undetectables” able to adhere to ART and remain in care
- How big is this population?
 - In Uganda: 63% of ALHIV were Virally Suppressed (ACP 2018)
- Many vulnerable to being detectable
 - Personal and structural instability
 - Newly infected
 - Non disclosure

Age Transition challenges

- Financial independence for transport to clinic
- Self support for adherence to medication
- Transition from the paediatric clinic to adult services
 - Transition clinic 2008



Transitioning

Youth aging into / out of adolescent care

- Choose adult clinic with multidisciplinary services
- Traumatic for youth to leave trusted providers
- Uncomfortable in the presence of adult patients



• Why transition from paediatric/adolescent clinics to adult clinics?

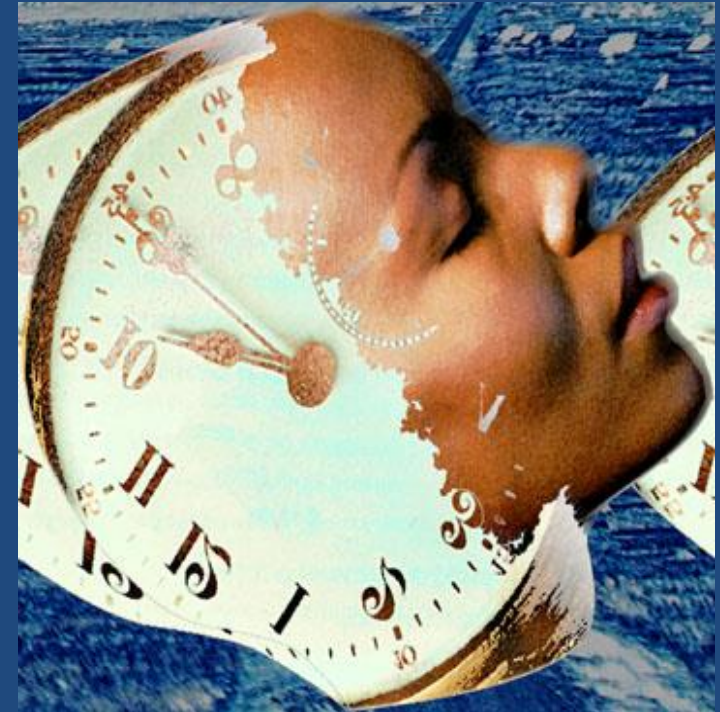
- Promotes social and emotional development
- ? Promotes positive self-concept and sense of competence
- ? Supports positive self-image and self-reliance
- ? Promotes independent living
- ? Supports long-term planning and life goals
- ? Broadens system of interpersonal and social supports



Transitioning

- As HIV-infected adolescents grow into adulthood, it becomes necessary for them to transfer to adult care settings and take responsibility for their own health and disease management.
- This may not also be possible in most of our settings , for structural , financial and spatial reasons.

Bakeera-Kitaka et al 2020

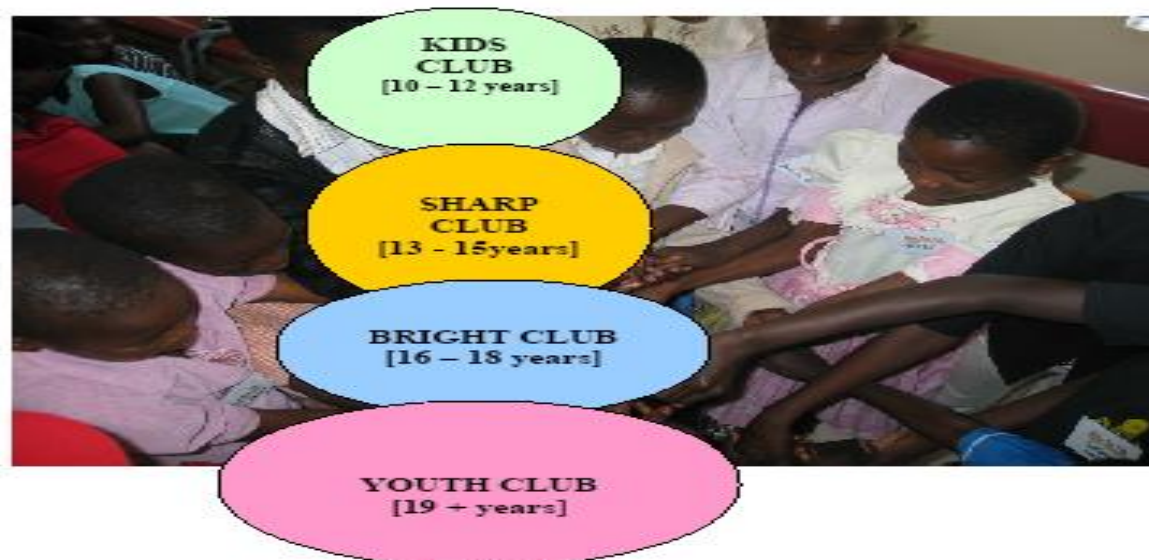


The Transition 02 team on their way to Totnes to get advice on Reskilling, Transport, Oil Dependency and overcoming post petroleum Stress Disorder

Disclosure of HIV status and Enrolment into MULAGO TEEN CLUB



Assigned to age- specific club



Disclosure challenges for YPLHIV at Transition Clinic at IDI

Siu, Bakeera-Kitaka et al 2008



AIDS Care

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HIV serostatus disclosure and lived experiences of adolescents at the Transition Clinic of the Infectious Diseases Clinic in Kampala, Uganda: a qualitative study

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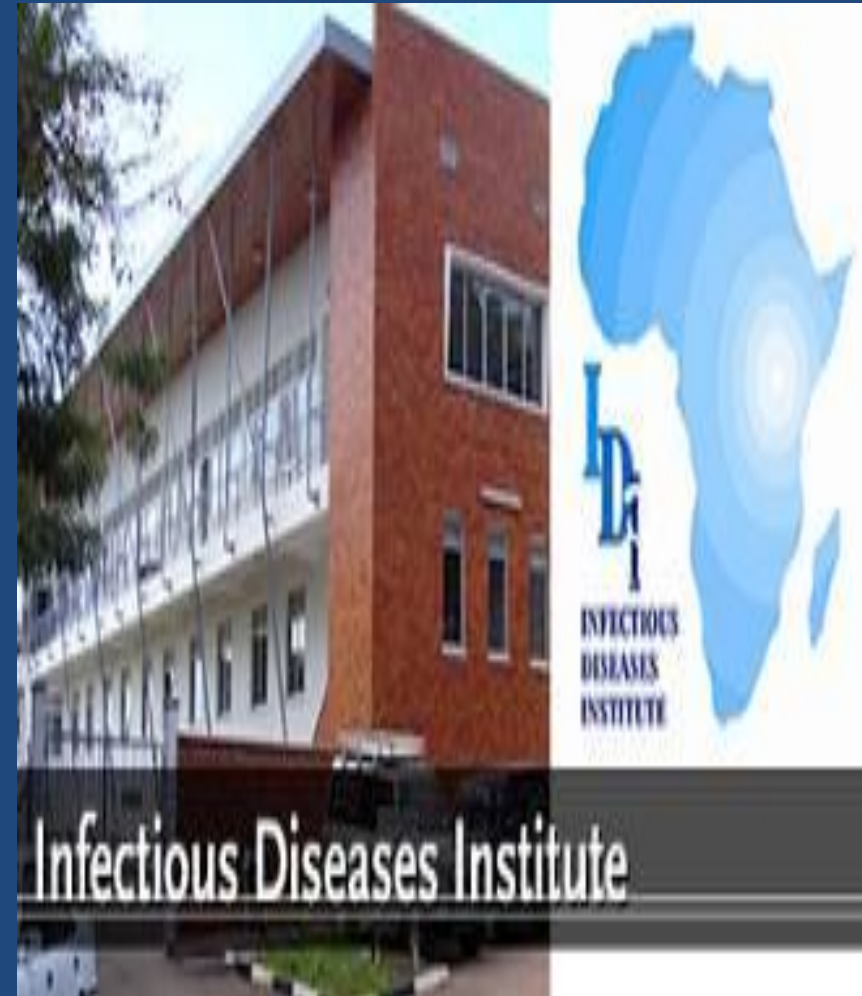
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Available online: 14 Nov 2011



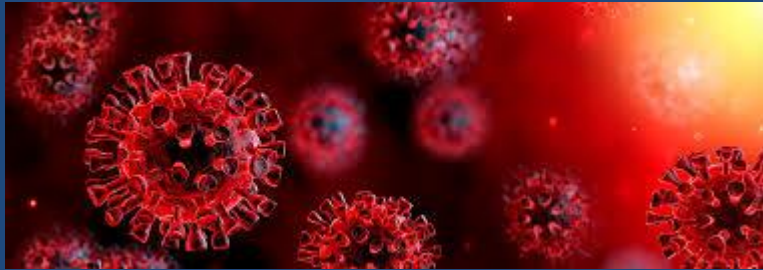


- Disclosure for adolescent girls was more difficult
- Fear of stigma and discrimination
- Protecting loved ones from distressing information



- Disclosure to peers was significantly related to:
 - being older, being a paternal orphan, contributing to family income, regular visits to the HIV clinic, and greater social support through peers

What about SARS-CoV-2?



- SARS-CoV-2 is the virus that causes coronavirus disease 2019 (COVID-19)
- Since the beginning of the pandemic there has been a lot of disruption in caring for children and adolescents living with HIV

UGANDA UPDATE

- In Uganda, by September 9th 2021 at 16:00hours :
 - 96,067 confirmed cases of COVID-19 with 3,821 deaths
- 112 new cases)

Who is most affected?

- Everyone
- But those living in poor countries or poor and rural areas

Key issues

- Repeated lockdowns
- Multiple waves
- Electronic review of clients
- Reduced face to face client contacts because of infection control and prevention



Case presentation

- M.N a 25 Y/F initiated on D4T/3TC/NVP on 19/10/2004 and enrolled at Baylor Uganda on 19/9/2006.
- Both parents deceased; her father passed on in 2003 while the mother in 2006 due to AIDs.

Cont.

- She was living alone , & worked as a project assistant at a solar company.
- She was in a relationship and sexually active but separated with her partner in Sept 2020.
- She was the only one with HIV amongst her siblings and had disclosure challenges.

PAST MEDICAL AND ART history

- She was transitioned to AZT/3TC/NVP on 13/1/2009 and then to TDF/3TC/EFV on 11/1/2019 as per MoH guidelines.
- She reported no major SEs on ART and she had no known history of major opportunistic infections, no h/o depressive illness.
- Her major challenges included inconsistent adherence and a rising VL

Viral load trends

Date	Result
29/11/2013	20
25/11/2014	158
24/11/2015	0
25/11/2016	0
29/09/2017	61
05/10/2018	0
20/09/2019	884
10/9/2020	1790

Follow up

- She had 3 repeated intensive adherence counseling sessions(IACs)
- Switched to Tenofovir,Lamuvudine and Dolutegravir
- Repeat VL after 3 months was not detectable
- Plan was to support her adherence

Case 2

- RK, a 7 month old infant ,newly diagnosed to have PTB , severe acute malnutrition and paediatric HIV.
- Started on ABV;3TC,and LPV/R
- Mother was in a polygamous relationship and has not disclosed to her partner
- Was not able to adhere to the therapy because of the need to place the LPV/r in a fridge;also said the medication was bitter

Switch to ABC/3TC/DTG

- With the current availability of DTG 10mg scored tablets, baby switched to DTG
- Improved adherence and follow up at the TB Unit as well as the Malnutrition Treatment Unit.

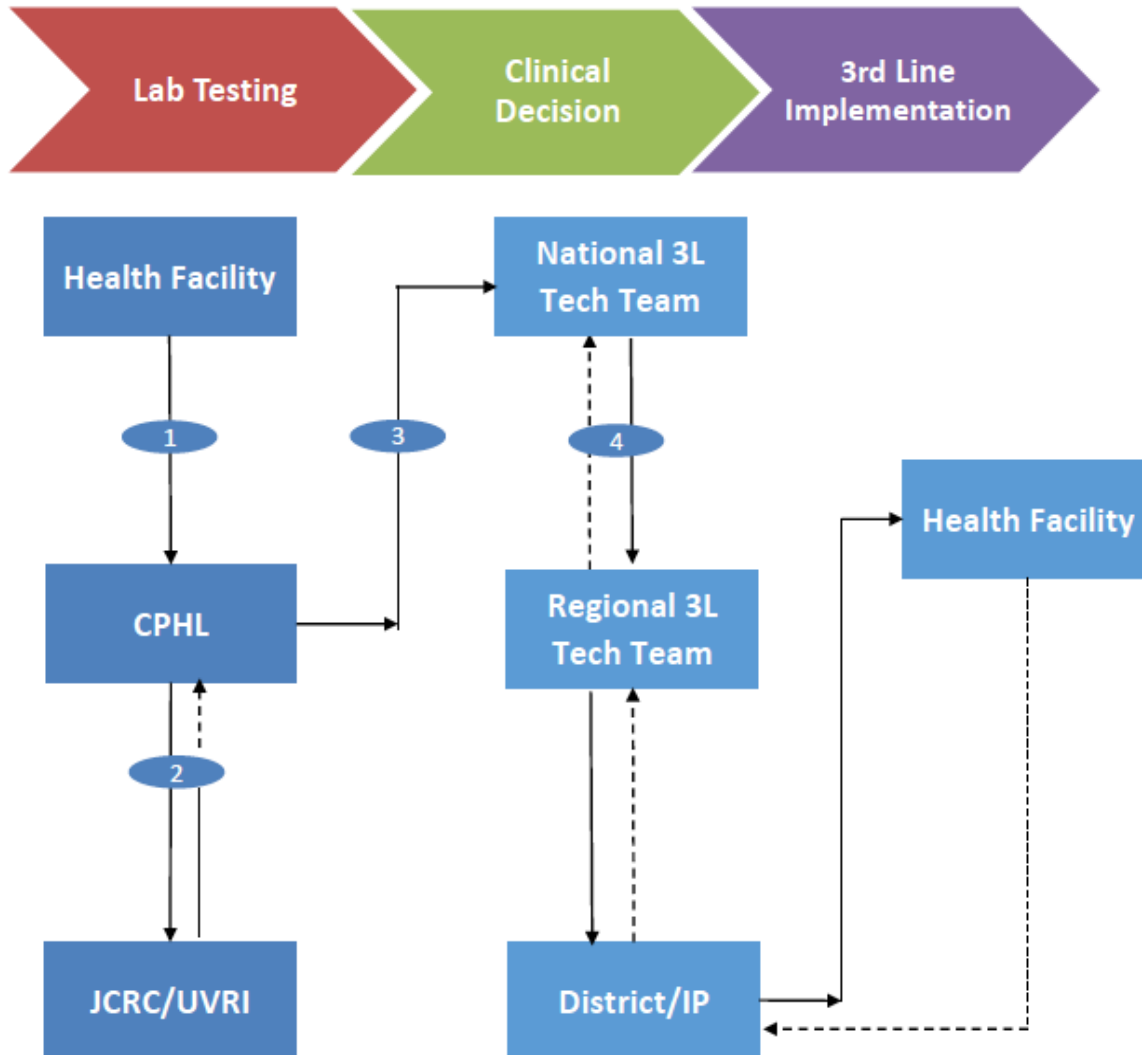


National HIV C&T guidelines- 2nd & 3rd line treatment guidelines

Population	Failing first line regimens	Recommended second line regimen	Alternative second line regimen	Third line regimens ^{1,2}
Adults and adolescents ≥ 30Kg, including pregnant and breastfeeding women	TDF + 3TC+EFV TDF+3TC+NVP	AZT+3TC+DTG	AZT+3TC+ATV/r	All 3rd line regimens to be guided by resistance testing <i>NOTE: For details on the third-line ART, please see the third- line ART implementation guides.</i>
	TDF+3TC+DTG	AZT+3TC+ATV/r	AZT+3TC+LPV/r	
	AZT+3TC+NVP AZT+3TC+EFV ABC/3TC/NVP ABC+ 3TC+ EFV	TDF+3TC+DTG	TDF+3TC+ATV/r	
	AZT+3TC+DTG ABC+3TC+DTG	TDF+3TC+ATV/r	TDF+3TC+LPV/r	
Children ≥ 20Kg - <30Kg	ABC+3TC+EFV ABC+3TC+NVP	AZT+3TC+DTG	AZT+3TC+LPV/r	
	ABC+3TC+LPV/r	AZT+3TC+DTG	AZT+3TC+DRV/r	
	ABC+3TC+DTG	AZT+3TC+LPV/r	AZT+3TC+DRV/r	
	AZT+3TC+EFV AZT+3TC+NVP	TAF or ABC+3TC+DTG	TAF or ABC+3TC+LPV/r	
	AZT+3TC+LPV/r	TAF or ABC+3TC+DTG	TAF or ABC+3TC+DRV/r	
	AZT+3TC+DTG	TAF or ABC+3TC+LPV/r	TAF or ABC+3TC+DRV/r	
Children <20Kg	ABC+3TC+EFV ABC+3TC+NVP	AZT+3TC+DTG	AZT+3TC+LPV/r	
	ABC+3TC+LPV/r	AZT+3TC+DTG	AZT+3TC+DRV/r	
	ABC+3TC+DTG or RAL	AZT+3TC+LPV/r	AZT+3TC+DRV/r	
	AZT+3TC+EFV AZT+3TC+NVP	ABC+3TC+DTG	ABC+3TC+LPV/r	
	AZT+3TC+LPV/r	ABC+3TC+DTG	ABC+3TC+DRV/r	
	AZT+3TC+DTG	ABC+3TC+LPV/r	ABC+3TC+DRV/r	



National 3rd line ART care flow



Steps

1. DBS or plasma samples transported for 2nd VL by sample transport mechanism
Venous blood should be used for both plasma and DBS samples.
2. If 2nd VL > 1000, sample sent to JCRC/UVRI for resistance testing, and results sent back to CPHL
3. Resistance testing report sent to National 3L Technical Committee - makes treatment switch recommendation
4. National 3L Technical committee communicates to RRH 3rd Line committee
5. RRH 3rd Line Committee communicates to the district/IP about the decision made
6. Switch decision is implemented at the facility

NOTE: With time, the switch decisions will be made by the RRH technical teams after capacity of the teams is built.

Summary

- **CALHIV living in resource limited settings are the population that will be living with HIV for the longest span of their lives**
- **It is important to develop targeted interventions including optimizing their ART**
- **And providing ART even during the COVID-19 pandemic**

Acknowledgements

- Department of Paediatrics and Child-health, Makerere University College of Health Sciences
- Management and staff of Baylor Uganda (PIDC), IDI, KEMRI
- Adolescents and Care givers
- INTEREST MEETING 2021



**We welcome you to the INTEREST MEETING 2022 in
KAMPALA, UGANDA**



The Uganda Crested Crane