

# Reaching 90:90:90

## The Promise of Differentiated Service Delivery

### Differentiated Service Delivery for Adolescents Living with HIV

Ruby Fayorsey

Clinical and Training Unit, ICAP, Columbia University

19<sup>th</sup> ICASA

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**HIV LEARNING NETWORK**  
**The CQUIN Project for Differentiated Care**



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# Outline

- Adolescents with HIV – who are they?
  - How are they doing?
- Why differentiated service delivery (DSD) for adolescents with HIV?
- Differentiated Service Delivery models for adolescents with HIV

# Adolescence: a time of change

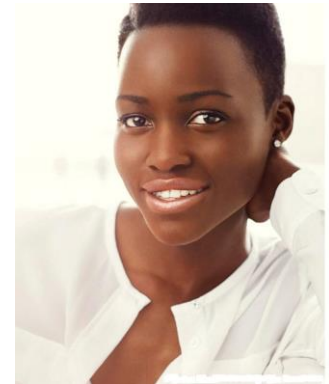


**Physical growth**

**Puberty & sexual maturation**

**Psychological and neurocognitive development**

**Separation and individuation**



# Adolescence: a period of significant physical, emotional and social development and change

## Childhood

- Dependence on parent/family/adults
- Physical and emotional growth and development
- Adult supervision and decision-making
- Education and learning
- No sex, substances (alcohol, drugs, cigarettes)
- Supervised healthcare

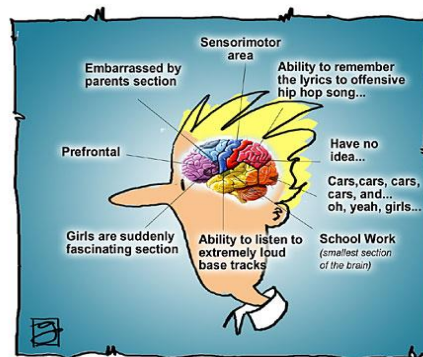
HIV INFECTION



ADOLESCENCE

## Adulthood

- Independence
- Education complete
- Employment
- Residential independence
- Dating/partner/marriage
- Pregnancy/parenthood
- Sexual relationships
- Healthcare self-management



*Anatomy of a Teenager's Brain*

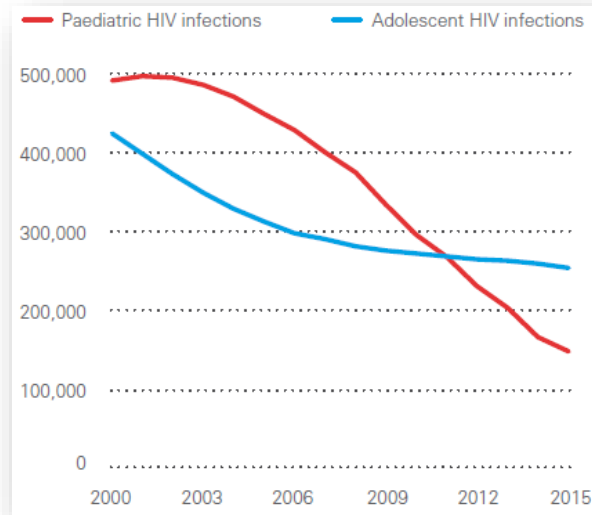
# Risky taking during adolescence: an emerging theory suggests an adaptive need to gain **experience**

- Teens have heightened attraction to novel, exciting experiences known as sensation seeking, peaking during adolescence.
- Adolescents lack experience so they try things for the first time – like learning how to drive. They also try drugs, decide what to wear, whom to hang out with.
- For some youth, this leads to problems but for the vast majority of adolescents this period passes without major catastrophe.
  - A smaller subset of teens, those who exhibit impulsive behavior and have weak cognitive control – who are at most risk of unhealthy outcomes.
- **The increase in risk taking by adolescents is an adaptive need to gain experience required to assume adult roles and behaviors.**

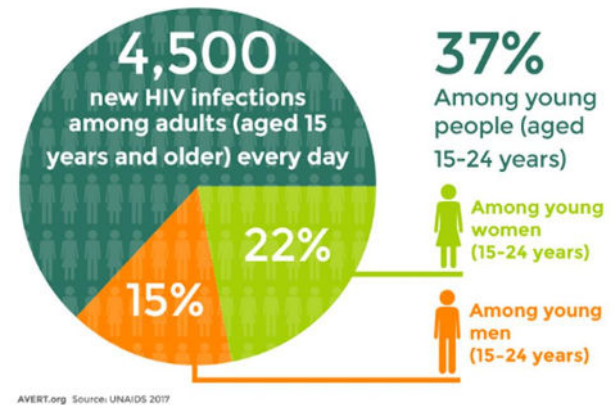


# Adolescents and HIV

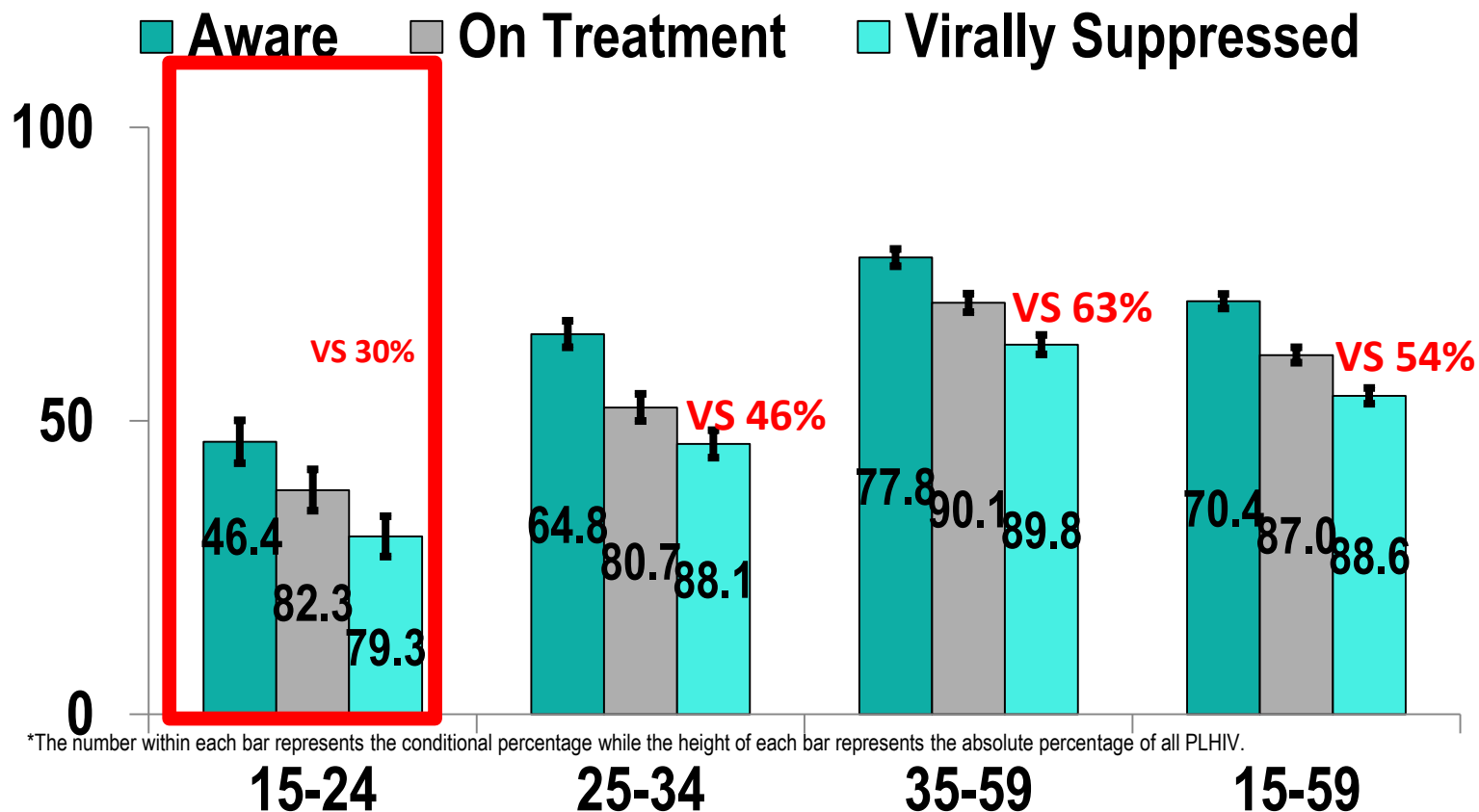
- 2.1 million adolescents aged 10-19 years living with HIV
  - Majority reside in sub-Saharan Africa
- Adolescents are the only age group where mortality from AIDS related conditions has not decreased
- Rate of new infections in children has decreased by more than 70% between 2000 and 2015, the rate of decline in adolescents is slower
- 37% of new infections were amongst young adults 15-24 years



UNAIDS 2016 estimates



# Progress Toward 90-90-90 among adolescents and adults 3-Country Combined: Zambia, Zimbabwe, Malawi



# Pregnancy in perinatally-infected females

- Between 1998-2015, 23 publications on 759 pregnancies in 1226 perinatally-infected girls.

Author(Journal)	Year (place)	# Perinatal Girls	# Pregnancies	# Infected
Croucher Sex Trans Inf	2013 (UK)	Cohort: 6/31 (19%)	8	0/3 live birth
Munjal Adol Health Med Th	2013 (Bronx)	Case rpt: 30	37	1/37 live birth
Badell (Infect Dis Obstet Gynecol)	2013 (US)	Cohort: 20	20	1/20
Byrne (AIDS)	2017 (UK)	Cohort: 630	70	3/59 live births
Hleyhel (CROI 2017)	2017 (France)	Cohort: 46/1425 (3.2%)	64	0/64
Jao J (Clin Infect Dis)*	2017 (US)	Cohort: 235/ 2270 (10.4%)	270	0
Prieto LM (PLoS One)	2017(Spain)	Cohort:22	28	0
Meloni (AIDS Care)	2009 (Italy)	Case rpt: 2	2	0
Williams (Am J Ob/Gyn)	2009 (Newark)	Case rpt: 10	13	1/7 live birth
Cruz (AIDS)	2010 (Brazil)	Case rpt: 11	15	0/15 live birth
Phillips (AIDS Care)	2011 (US)	Case rpt: 11	15	0/15 live birth
Kenny (J HIV Med)	2012 (UK/Ireland)	Cohort: 30/252 (12%)	42	1/21 live birth
Jao (AIDS)	2012 (NYC)	Case rpt: 14	17	0/19 live birth
Millery (J Ass Nurs AIDS Care)	2012 (NYC)	Cohort: 25/97 (26%)	33	0/19 live birth



# Top five causes of death for all adolescents, globally, 10-19 years in 2015

## Males

- Road traffic injury
- Interpersonal violence
- Drowning
- Lower respiratory infections
- Self-harm

## Females

- Lower respiratory infections
- Self-harm
- Diarrheal diseases
- Maternal conditions\*
  - Leading cause of death in 15-19yrs
- Road traffic injury

\*LMIC in Africa, communicable diseases such as HIV/AIDS, lower respiratory infections, meningitis, and diarrheal diseases are bigger causes of death among adolescents than road injuries.

# Why do adolescents need differentiated services?

- Adolescents with HIV are a very heterogeneous group
  - HIV creates additional burdens and stresses on individuals living with HIV
  - Lifelong daily medication; frequent medical visits; partner disclosure; condom use
- In many settings, community, families and health systems are not aligned to support adolescents as they transition to adulthood, particularly adolescents with HIV
  - Stigma, policy and legislation, guidelines, health and educational services
- Services are not integrated
  - Younger adolescents still depend on a caregiver, so are they are vulnerable to loss to follow-up
  - Youth have other challenges including school, college, head of household and out on the street

# WHO guidance for DSD for stable adolescents

## Criteria for defining clinically stable clients for differentiated ART delivery

The criteria for defining clinically stable children, adolescents, pregnant and breastfeeding women and members of key populations should be aligned with those used to define clinically stable adults in the 2016 WHO consolidated ARV guidelines: clients who have:

- received ART for at least one year;
- no adverse drug reactions that require regular monitoring;
- no current illnesses, including such conditions as malnutrition in children, mental health conditions or postpartum depression;
- a good understanding of lifelong adherence; and
- evidence of treatment success: two consecutive viral load measurements of <1000 copies/mL, rising CD4 cell counts or CD4 counts >200 cells/mm<sup>3</sup>.

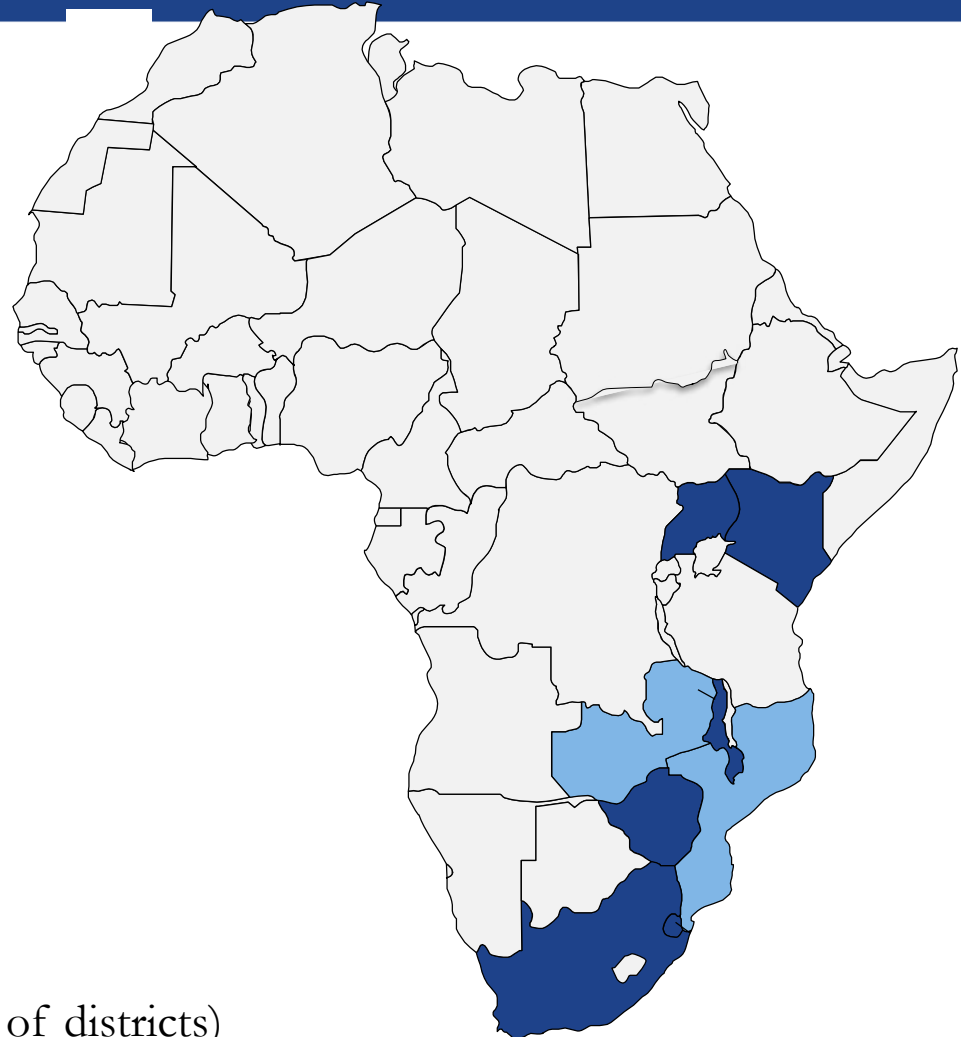


There may be additional criteria for specific populations.

- **Children:** should be at least two years old, taking the same regimen for more than three months and caregivers counselled and oriented on the disclosure process.
- **Adolescents:** should have access to psychosocial support.

# CQUIN Network Countries that have implemented DSD for adolescents

- Ethiopia
- Kenya
- Malawi
- Mozambique
- South Africa
- Swaziland
- Uganda
- Zambia
- Zimbabwe



- Implemented at scale (e.g., >50% of districts)
- Implemented to an extent (e.g., pilot programs)

# Youth Care Clubs

- Facility-based Youth Care Clubs
  - Endorsed the South African NDOH for scale up

## WHEN


Monthly for 1<sup>st</sup> year then they decide if every 2 months

## WHERE

At facility or near facility

## WHO

YCC counsellor (Youth Nurse (AYFS Champion)

  
12-25 years  
Pre and on ART

## WHAT

Integrated clinical care, SRH. Mental health screening, ART refill, Psychosocial support and peer counseling

- Clients in YCC -325
- # YCCounselors-23
- # PHCs with YCCs-13
- Median age -19 years
- Retained @ 6 mons-88%
- Virally suppressed at last measurement-81%

# Teen Clubs

- Facility based HCW managed, with teen peers, scaled up by the Malawi MOH
  - Teen clubs in 26 of the 28 districts
  - 160 teen clubs with 11, 659 teens enrolled
- Population:10-19 years, fully disclosed, no restrictions on stability (stable and unstable, PRE/ART), agrees to confidentiality policy
- WHEN
  - Monthly for unstable and every 2 months for stable
- WHO
  - Nurse, clinical officer, mentors and teen leaders
- WHERE
  - Primary health facility/ tertiary ART referral center
  - Session is outside of normal clinic hours on weekend

- WHAT

- ART refills every month during group meeting
- Monthly comprehensive clinical review
- Psychosocial support and peer counseling
- Provide transport and snack



## Case Controlled study using program data from Zomba Central Hospital , Malawi

- 617 ALHIV ( 135 non-retained cases and 405 retained controls
- Proportion not retained was 7.9 % (teen club exposure ) versus 35.2% (no teen club exposure ),  $p < 0.01$

# Zvandiri-Community Adolescent Treatment Supporter

## WHEN

Every 3 months

## WHERE

At the facility

## WHO

Nurse assisted by  
primary counsellor or  
community adolescent  
treatment supporter



0-24 years

## WHAT

ART and cotrimoxazole  
refills  
  
Peer support  
  
SRH education and  
services for adolescents

Zvandiri



AFRICAID 

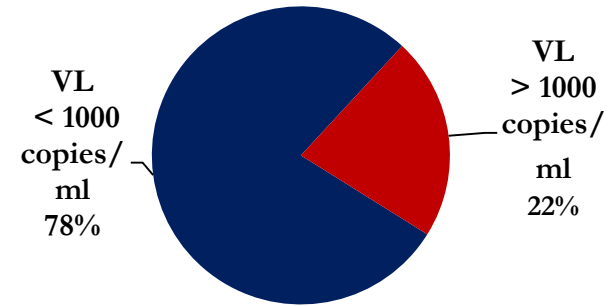
### CATS programme Zvandiri Africaid

- 1047 CATS trained
- Integrated into 456 facilities
- Supporting 45,000+ HIV positive children, adolescents and young people
- 85 CATS in Mozambique, Tanzania & Swaziland

# JOORTH Facility Based Peer Model

- Population
  - HIV-infected adolescents and youth 10-24 years
- Eligibility criteria
  - Newly enrolled, stable and unstable

Total adolescents 10-19 yrs = 407  
 Total adolescents with VL test = 397  
 VL coverage among 10-19 years = 98%



Data Source: NASCOP VL Website  
 Period: Oct 2016- September 2017

ADSD	Newly enrolled into care	Stable	Unstable
<b>What</b>	<ul style="list-style-type: none"> <li>• Clinical care</li> <li>• Adherence and psychosocial support:                             <ul style="list-style-type: none"> <li>- Living Hope PSSG: conducted monthly; age categories 10-14, 15-19 and 20-24 to provide treatment literacy and life skills counselling</li> <li>- Peer led social media engagements - discussions held on daily basis</li> </ul> </li> <li>• Prevention package to address HIV transmission</li> <li>• Referrals, linkages and supporting continuum of care</li> </ul>	<ul style="list-style-type: none"> <li>• ART refills: Multi-month prescription - 3 monthly prescriptions</li> <li>• Clinical visits every 3 months integrated with other services</li> </ul>	<ul style="list-style-type: none"> <li>• Operation Triple Zero: Provides support on adolescent self care</li> <li>• Frequent clinic visits based on clinical judgement of HCW</li> </ul>
<b>Who</b>	<ul style="list-style-type: none"> <li>• HCW &amp; Adolescent peers</li> </ul>	<ul style="list-style-type: none"> <li>• HCW &amp; Adolescent peers</li> </ul>	<ul style="list-style-type: none"> <li>• HCW &amp; Adolescent peers</li> <li>• Adolescent champions</li> </ul>
<b>When</b>	Adolescent clinic days re-aligned with school calendar and held during weekends		
<b>Where</b>	Adolescent Clinic		





# Summary

- Extension of differentiated care to adolescents has highlighted the importance of psychosocial support
- Clinically stable adolescents can benefit from access to differentiated antiretroviral therapy (ART) delivery models
- Adolescents presenting with advanced disease and those who become unstable should receive more intensive follow up
- Need for evaluation and sharing of best practices as these models are scaled up



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