

Reaching 90:90:90

The Promise of Differentiated Service Delivery

Differentiated Care for Patients at High-Risk of HIV Disease Progression

Dr. Maureen Syowai Kathuku-Kaati
Regional Technical Specialist, ICAP at Columbia University

19th ICASA
December 4, 2017
Abidjan, Cote D'Ivoire



HIV LEARNING NETWORK
The CQUIN Project for Differentiated Care



ICAP

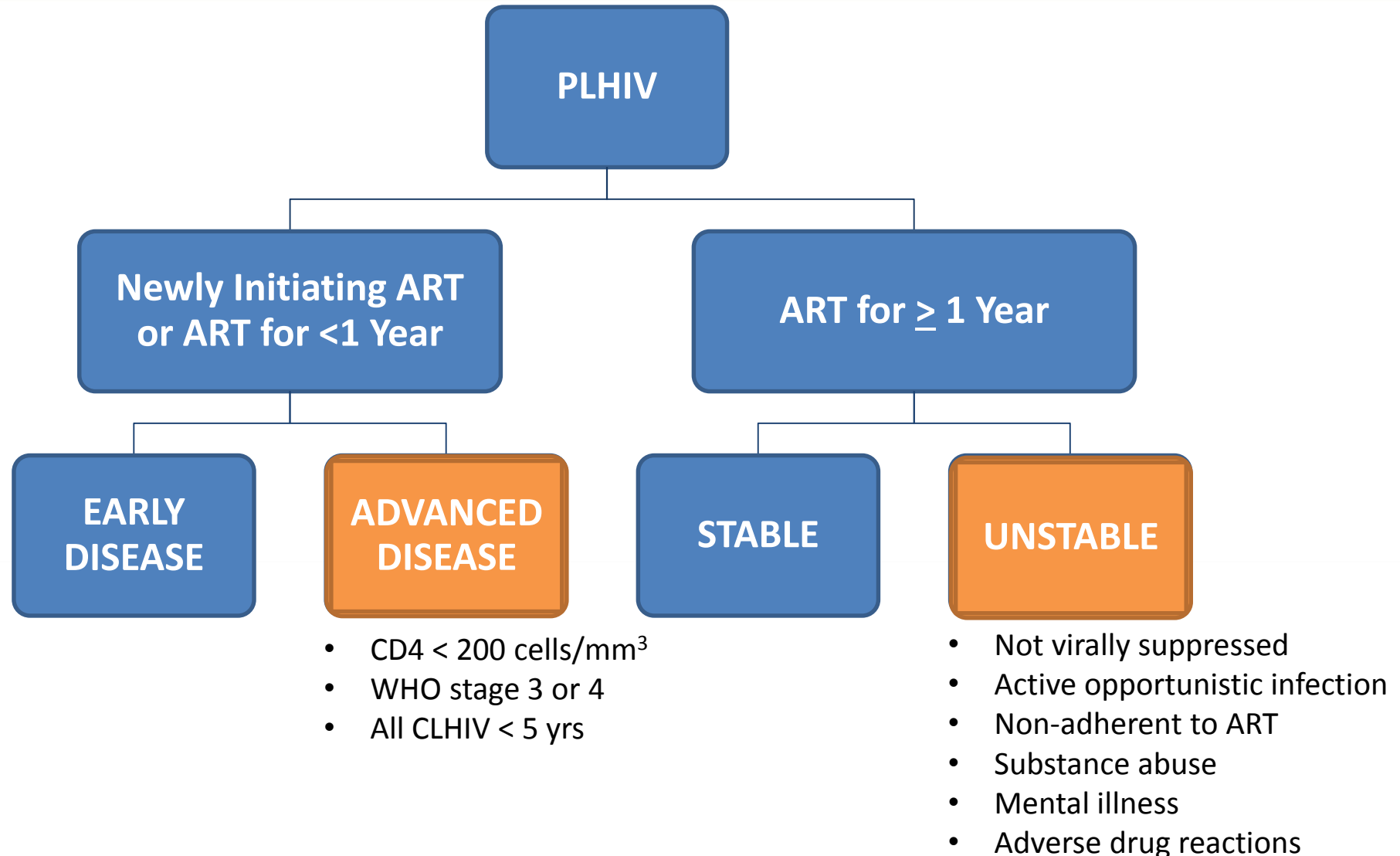
GLOBAL. HEALTH. ACTION.

Columbia University
Mailman School of Public Health

Outline

- Defining “Patients at High Risk of Disease Progression”
- Management of P@HR – Experience in Kenya
- Opportunities for scaling up DSD for P@HR

Defining “Patients at High Risk of Disease”



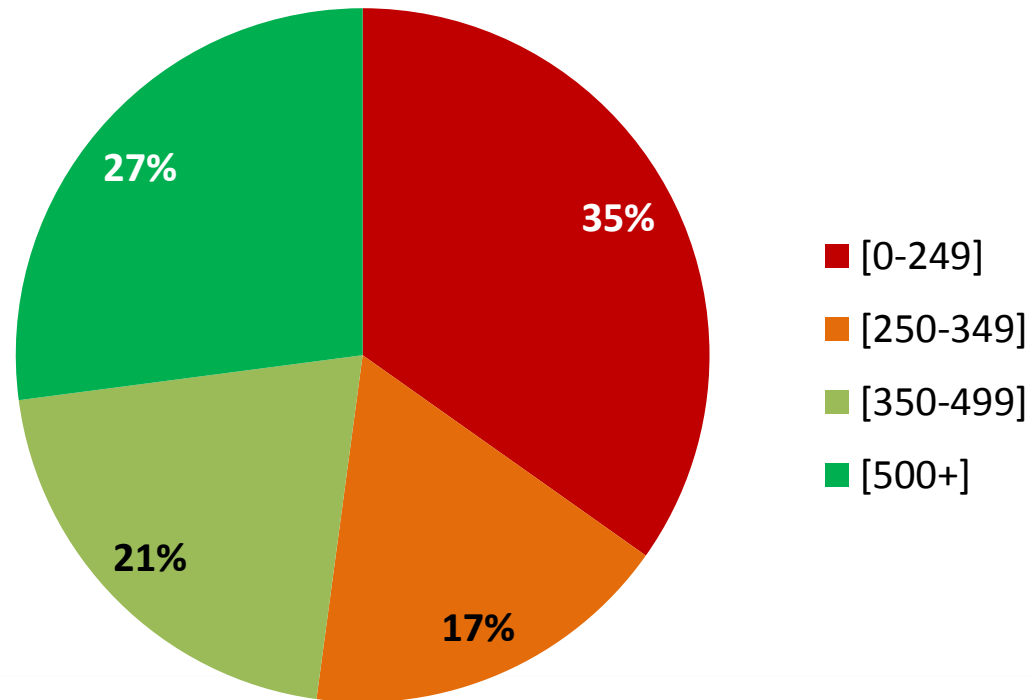
Why Focus on Patients at High Risk?

- Advanced Disease:
 - The proportion of people starting ART in LMIC with CD4 < 200 is falling, but remains high (30-40%)
 - Mortality amongst this population is high, particularly in the first 3-6 months on ART (8-26% in SSA)
- Unstable PLHIV:
 - Systems and strategies for patients on ART but virally unsuppressed (patients with “unstable” HIV) lack a robust evidence base

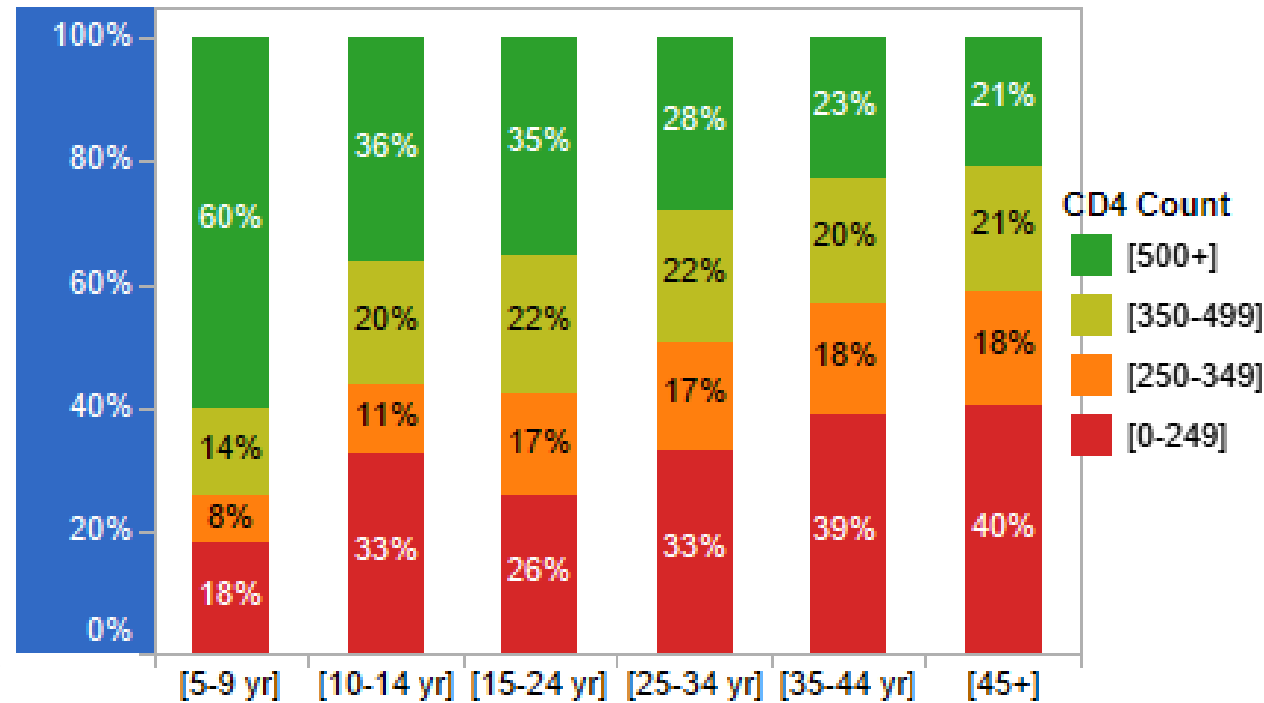
Outline

- Defining “Patients at High Risk of Disease Progression”
- Management of P@HR – Experience in Kenya
- Opportunities for scaling up DSD for P@HR

CD4 Distribution at Enrolment in Kenya

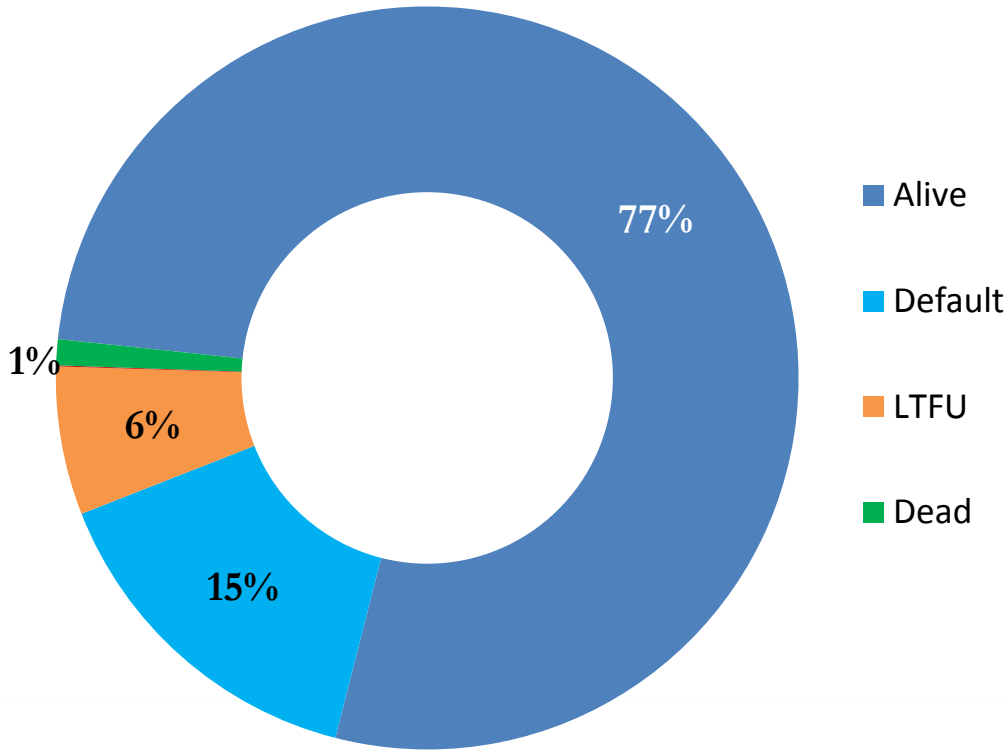


- **CD4 Distribution at enrolment among PLHIV \geq 5 yrs enrolled in 2015**
- PLHIV with CD4 count of 0 to 249 cells/mm³ represented 35% of the population

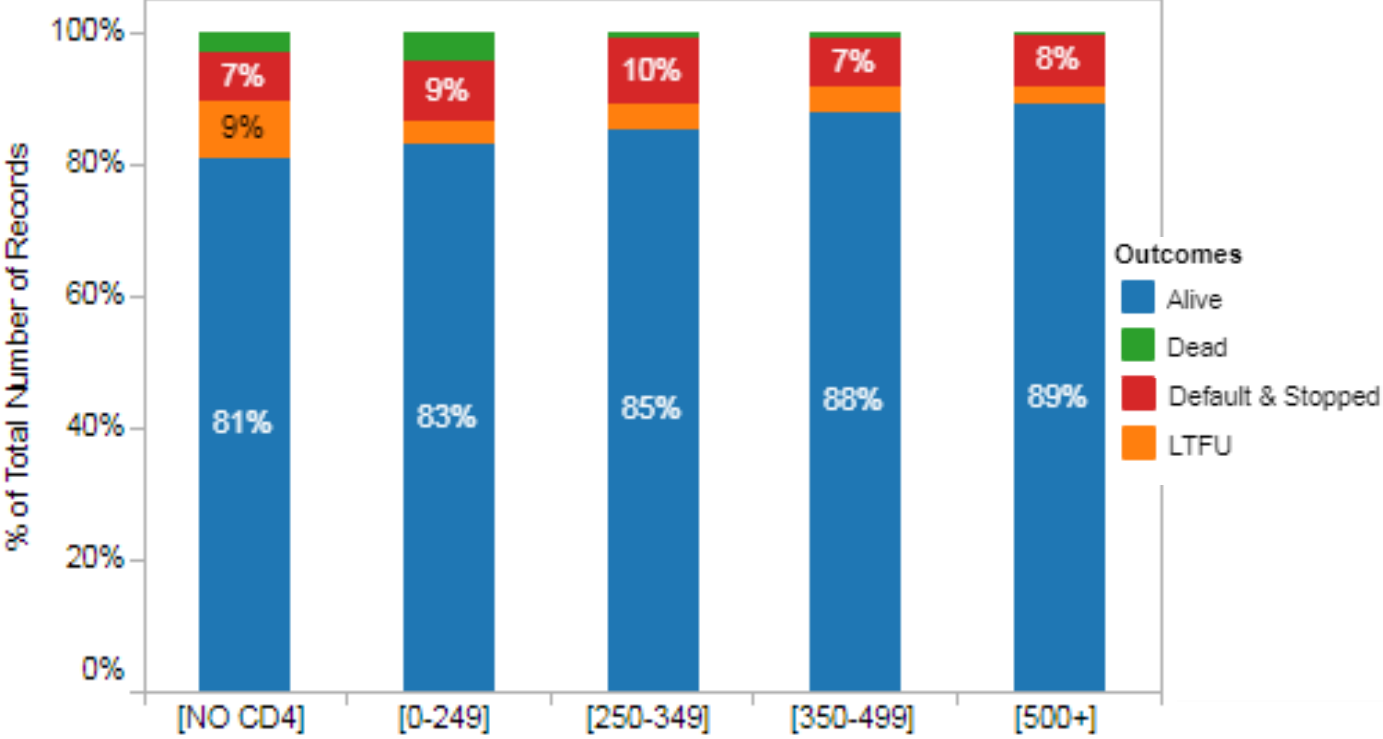


- **CD4 Distribution at enrolment by age group among PLHIV \geq 5 yrs enrolled in 2015**
- Late entry into care for PLHIV 10-14 yrs, and PLHIV > 35 yrs

2015 Cohort 12 Month Outcomes



- 2015 12 Month Pre-ART Cohort Outcomes
- Overall mortality of 1%



- 2015 Cohort 12 month ART outcomes by baseline CD4
- 5 % mortality for 0-249 CD4 count

DSD Sub-Analysis in Siaya County

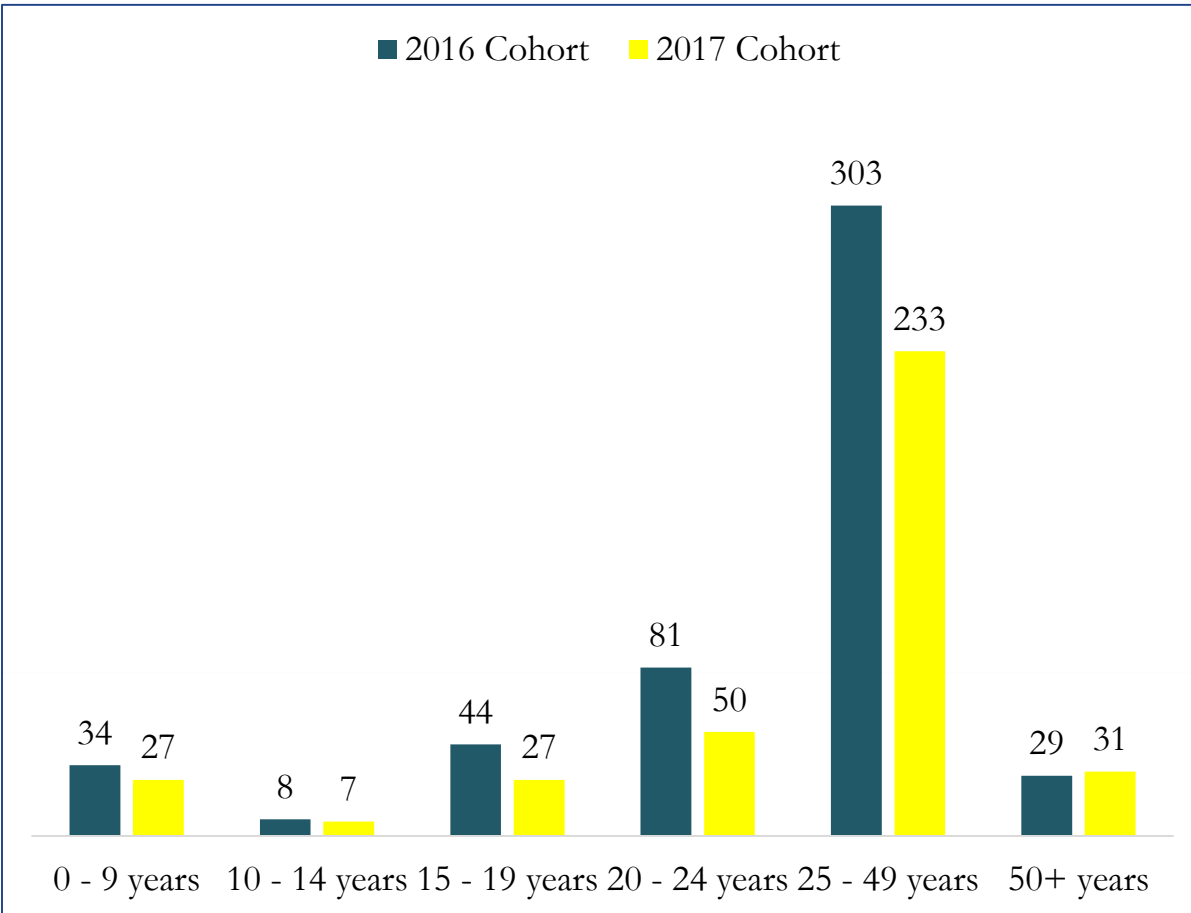
- Siaya County:
 - High HIV burden county: HIV Prevalence 25% (Kenya HIV Est. 2016)
 - 25 facilities supported to implement DSD
 - 18 facilities with up to date data assessed for progress in supporting P@HR
- Comparative analysis between two advanced disease cohorts:
 - February to April 2016 cohort and
 - February to April 2017 cohort
- Analysis of the unstable PLHIV cohort identified between February and April 2017

Differentiated Service Delivery Model - Advanced

Patients who Present with Advanced HIV Disease: WHO Stage 3 or 4, or CD4 count ≤ 200 cell/mm³ (or $\leq 25\%$ for children ≤ 5 years old)

Package of Care	<ul style="list-style-type: none">• Standard Package of Care• Intensive management of presenting illnesses• Priority for identification, management and prevention of OIs• Priority for ART initiation• Close monitoring for development of immune reconstitution inflammatory syndrome (IRIS)
Location of Services	<ul style="list-style-type: none">• Management at any ART service delivery point; all facility levels• Initial management and ART initiation by trained and experienced HCW• Consultation with MDT, TWG, mentors, and senior clinicians as needed (including telephone consultation such as Uliza! NASCOP HIV Hotline)• Referral to a higher-level facility when feasible if consultation is not adequate to stabilize the patient
Focus of Counseling	<ul style="list-style-type: none">• ART is required to prevent further damage to the immune system• Starting ART soon will decrease risk of disease progression, including wasting and OIs• ART is the most important treatment to restore health
Frequency of Follow-up	<ul style="list-style-type: none">• Weekly follow-up until ART initiation, and then at week 2 and 4 after ART initiation, and then monthly until confirmed viral suppression• More frequent visits or hospitalization may be required to stabilize acute medical conditions and address psychosocial and other concerns

Enrolled into HIV Care: Age Distribution



Age Group	2016		2017	
	Cohort	%	Cohort	%
0 - 9 years	34	7%	27	7%
10 - 14 years	8	2%	7	2%
15 - 19 years	44	9%	27	7%
20 - 24 years	81	16%	50	13%
25 - 49 years	303	61%	233	62%
50+ years	29	6%	31	8%
Total	499		375	

2016 Cohort:

Mean age: 29.38, SD 12.4, Median 28.8

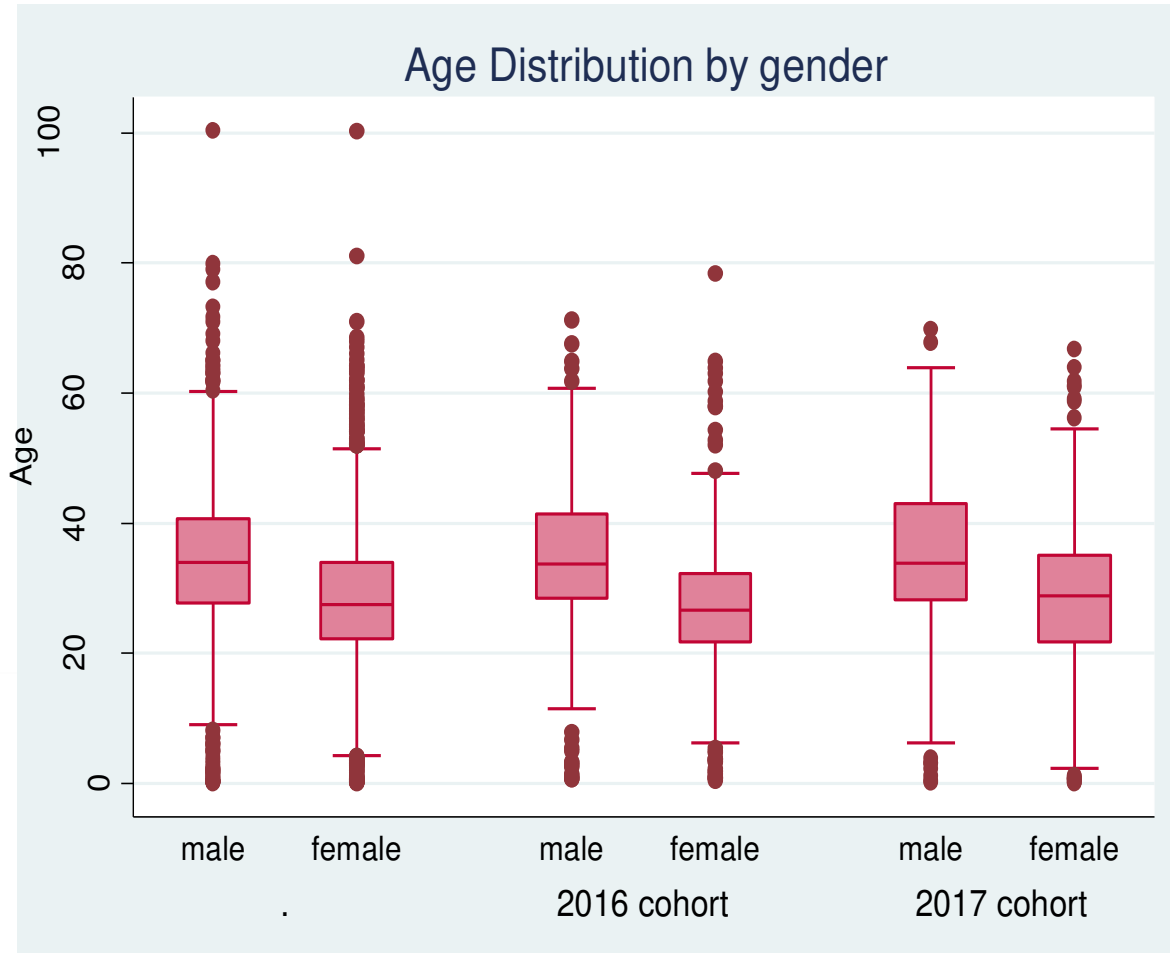
2017 Cohort:

Mean age: 31.1, SD 13.5, Median 29.9

2016 Cohort – Feb, Mar, April 2016.

2017 Cohort – Feb, Mar, April 2017

Enrolled into HIV Care: Gender



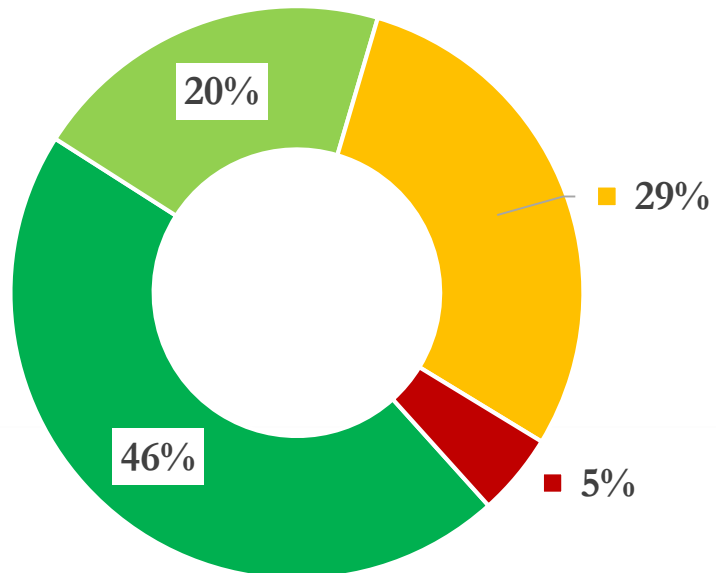
	Male		Female		Total
	n	%	n	%	
2016 cohort	165	33%	334	67%	499
2017 cohort	133	35%	242	65%	375
Total	298		576		874

- Over the two cohorts, a total of **298(34%)** males were enrolled against **576(66%)** females enrolled.
- **2016 Cohort:**
 - Male mean age, **33.6, SD 13.6, Median 33.7.**
 - Female mean age, **27.3, SD 11.5, median 26.7.**
- **2017 Cohort:**
 - Male mean age, **34.7, SD 13.7, SD 13.7, median 33.8.**
 - Female mean age, **29.1, SD 13, Median 28.9**

Disease Progression: WHO Stage at Enrollment

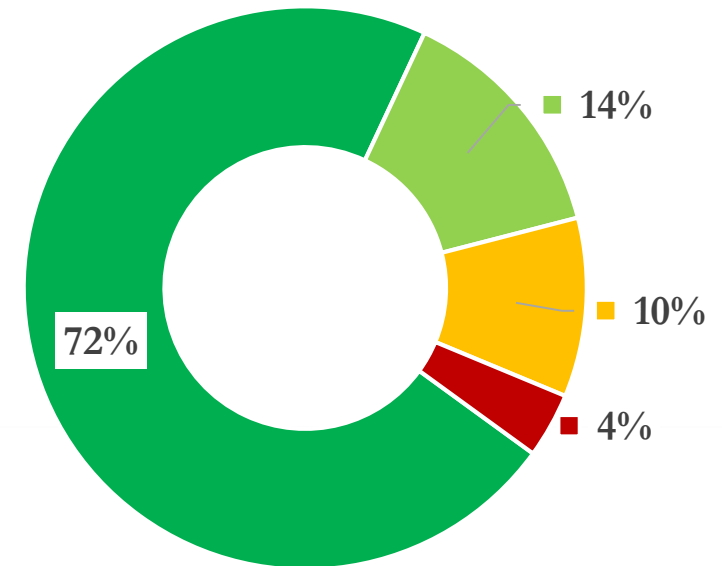
2016 Cohort

■ WHO stage I ■ WHO stage II
■ WHO stage III ■ WHO stage IV



2017 Cohort

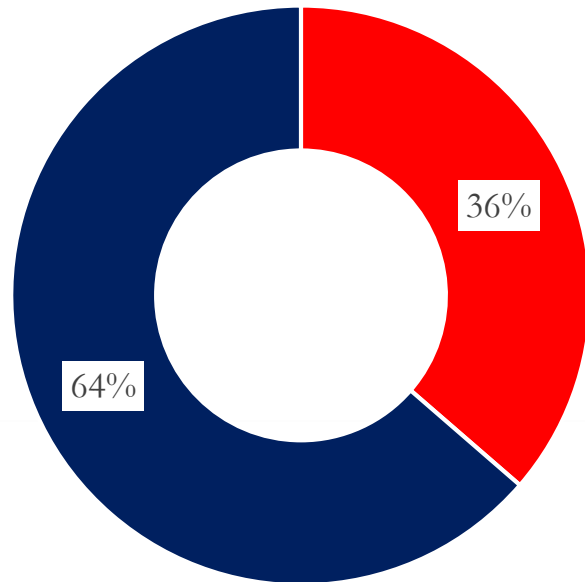
■ WHO stage I ■ WHO stage II
■ WHO stage III ■ WHO stage IV



Disease Progression: CD4 Count at Enrollment

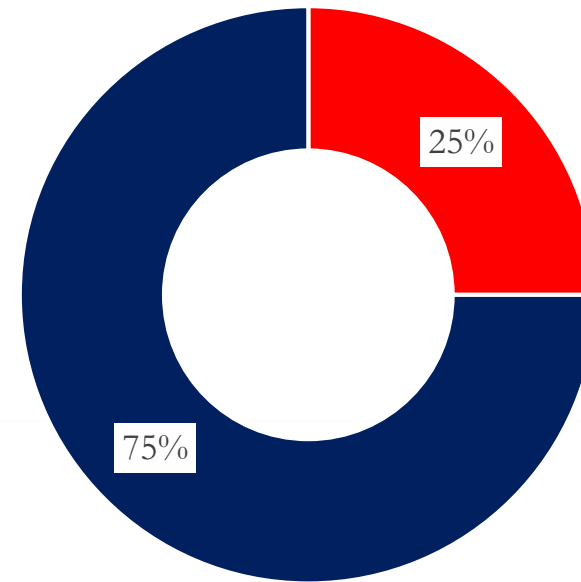
2016 cohort

■ less than 200 ■ 200+

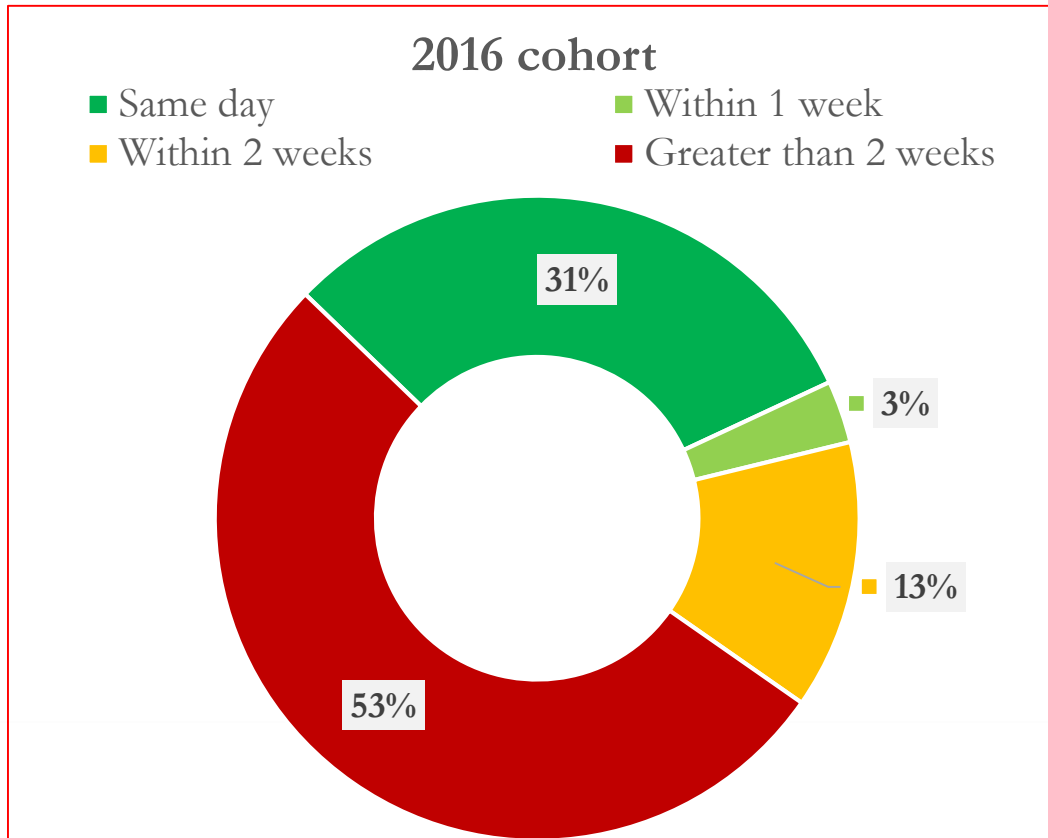


2017 Cohort

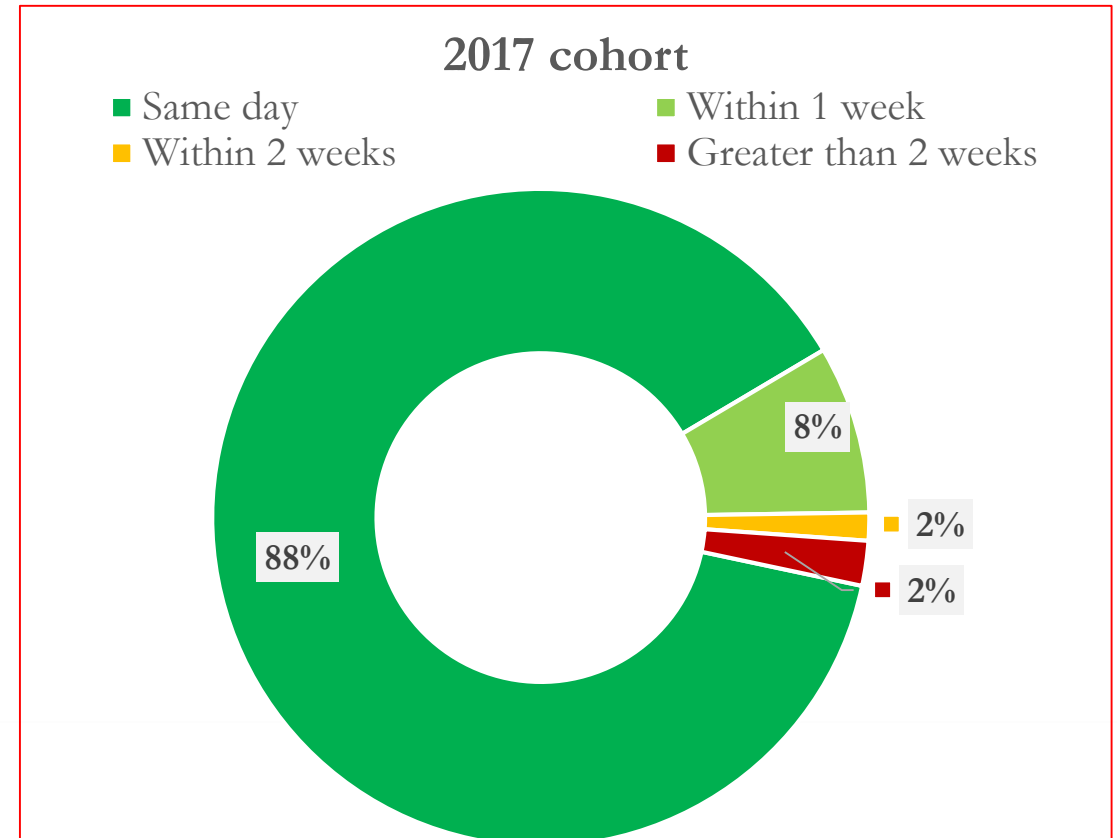
■ Less than 200 ■ 200+



Time To ART Initiation – All



Median time to ART initiation for 2016 Cohort is **17** days

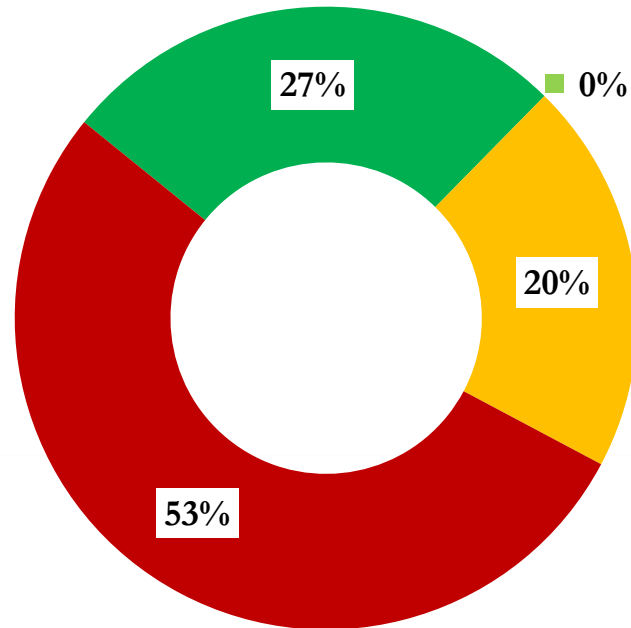


Median time to ART initiation for 2017 Cohort is **0** days

Time To ART Initiation – Advanced Disease

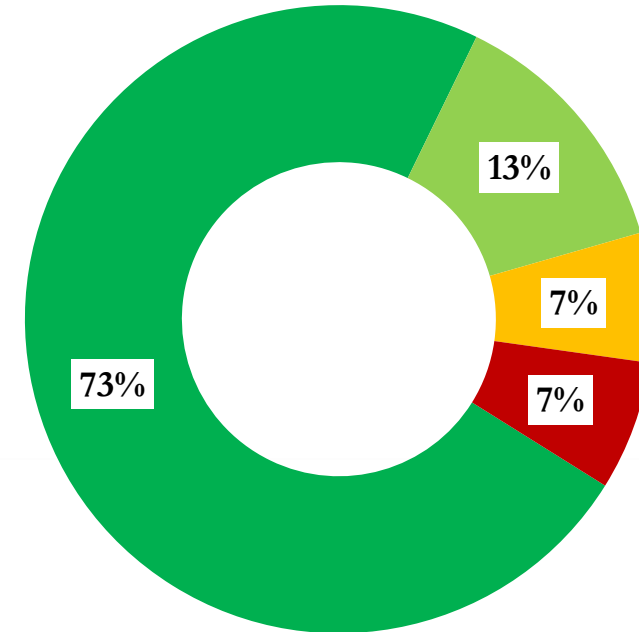
2016 Advanced Disease Cohort

- Same day
- Within 1 week
- Within 2 weeks
- Greater than 2 weeks



2016 Advanced Disease Cohort

- Same day
- Within 1 week
- Within 2 weeks
- Greater than 2 weeks



Differentiated Service Delivery Model - Unstable

Unstable Patients (any of the following):

- On their current ART regimen for < 12 months
- Any active OIs (including TB) in the previous 6 months
- Poor or questionable adherence to scheduled clinic visits in the previous 6 months
- Most recent VL \geq 1,000 copies/ml
- Has not completed 6 months of IPT
- Pregnant or breastfeeding
- BMI < 18.5
- Age < 20 years
- Healthcare team has concerns about providing longer follow-up intervals for the patient*

Note: children and adolescents may be clinically stable, however they are not eligible for longer follow-up periods because of the need for weight-based dose adjustments and close monitoring of support systems.

Package of Care	<ul style="list-style-type: none"> • Standard Package of Care • Case management to address reason/s for not meeting stable eligibility criteria
Location of Services	<ul style="list-style-type: none"> • Management at any ART service delivery point; all facility levels • Consultation with MDT, CSC, mentors, and senior clinicians as needed (including telephone consultation with Uliza! NASCOPHIV Hotline) • Referral to a higher-level facility when feasible if consultation is not adequate to stabilize the patient
Focus of Counseling	<ul style="list-style-type: none"> • ART is the most important treatment to improve health and return to an active life • Targeted counselling to address reason/s they have not meet stable eligibility criteria
Frequency of Follow-up	<ul style="list-style-type: none"> • Every 1-3 months, based on clinical judgement and the specific reason/s they have not met stable eligibility criteria • Additional visits as required to address any medical or psychosocial concerns

Unstable Clients: TB Status

Baseline TB Status

TB status	Percent	%
No signs	11,705	98.99
TB suspect	69	0.58
TB Rx	35	0.3
Not done	16	0.14
Total	11,825	100

6 month VL result

TB status	Less than 1000 copies/ml		Total
	>1000 copies/ml		
No signs	482	85	567
TB suspect	5	4	9
TB Rx	10	1	11
Total	497	90	587

There exists a statistically significant association at 95% significance levels between TB status and latest VL result. **Chi(2) = 6.25, p value = 0.044**

6 month patient outcome

TB status	Active (%)	Defaulted (%)	LTFU (%)	Total
No signs	10,986 (94%)	642 (5%)	77 (1%)	11,705
TB suspect	57 (83%)	8 (12%)	4 (6%)	69
TB Rx	26 (74%)	5 (14%)	4 (11%)	35
Not done	14 (88%)	2 (13%)	0 (0%)	16
Total	11,083 (94%)	657 (6%)	85 (1%)	11,825

There exists a statistically significant association at 95% significance levels between TB status and follow up status. **Chi(2) = 6.25, p value = 0.001**

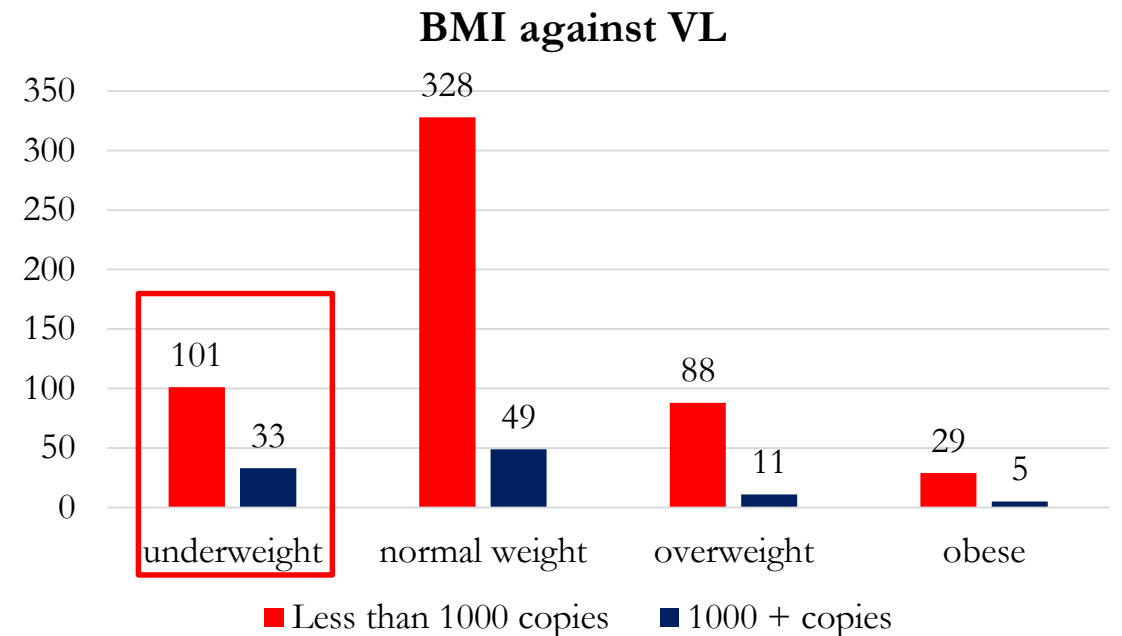
Unstable Clients: BMI

BMI	Less than	>1000	Total
	1000	copies/ml	
Underweight	101	33	134
Normal Weight	328	49	377
Overweight	88	11	99
Obese	29	5	34
Total	546	98	644

There exists a statistically significant association at 95% significance levels between client's BMI and latest VL result.

Chi(2) = 11.93, p value = 0.008

- For clients who presented with a BMI of less than 18.5 (Underweight), **25%** had a 6 month VL of **>1000** copies. This was against an overall VL suppression of **85%**.



Outline

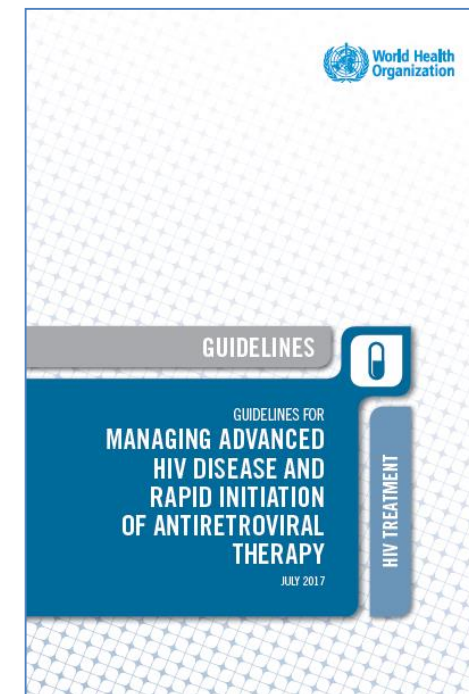
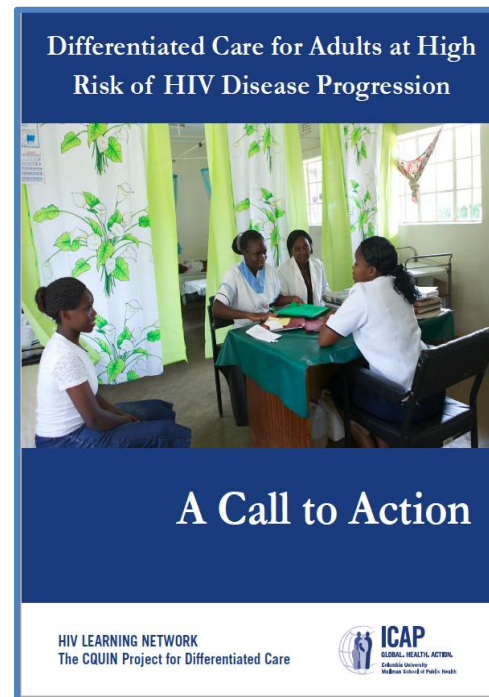
- Defining “Patients at High Risk of Disease Progression”
- Management of P@HR – Experience in Kenya
- Opportunities for scaling up DSD for P@HR



ICAP
GLOBAL. HEALTH. ACTION.
Columbia University
Mailman School of Public Health

Opportunities for Scaling up DSD for P@HR

- Expansion of the package of care for P@HR of disease progression in line with current evidence and guidance
- Demand creation:
 - Build the HCW & LHW capacity to support implementation of DSD models for P@HR
 - Encourage patient understanding of the benefits of an enhanced DSDM for P@HR
- Support an integrated M&E system to facilitate performance measurement:
 - Coverage
 - Outcome
 - Impact of DSD models
- The CQUIN network provides an opportunity to move from policy to practice



ICAP
GLOBAL. HEALTH. ACTION.
Columbia University
Mailman School of Public Health