Summary of differentiated service delivery at *AIDS 2020: Virtual*

Review from the International AIDS Society DSD initiative

All of *AIDS 2020: Virtual* content was considered

- Abstracts
  - Including late-breaker abstracts
  - Including orals and posters
- Bridging and symposium sessions
- Satellites

Download the complete DSD roadmap for *AIDS 2020: Virtual* here

Overview

1. Integration
2. Specific populations
3. DSD country planning/optimization
4. Costing
5. Enrollment strategies
6. Quantitative outcomes
7. Qualitative outcomes
8. DSD for PrEP
9. Re-engagement
10. Testing and linkage
11. DSD for advanced HIV disease
12. DSD & COVID-19

1. INTEGRATION WITH DIFFERENTIATED SERVICE DELIVERY

1.1 TB PREVENTIVE THERAPY
1.2 NCD'S

INTEGRATION - A comparative analysis of adherence and completion rates in TB preventive therapy (TPT)

A Comparative analysis of adherence and completion rates in TB preventive therapy (TPT) among People Living With HIV on 3-months & 6-months Multi-Months ART dispensing

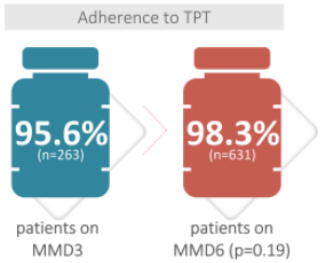
K. Kakanfo1, U. Akpan2, I. Iyamu3, H. Khamofu1, M. Bateganya4, T. Badru2, A. Olarinoye2, C. Obanubi5, E. James5, S. Raj Pandey1
1Family Health International (FHI360, Nigeria), Akwa Ibom, Nigeria, 2Achieving Health Nigeria Initiative, Nigeria, Akwa Ibom, Nigeria, 3University of British Columbia , Vancouver, Canada, School of Population and Public Health, Vancouver, Canada, 4Family Health International (FHI360, Nigeria), Technical Support, Durham, United States, 5United States Agency for International Development (USAID), Nigeria, Care & Treatment , Office of HIV/AIDS & TB, Abuja, Nigeria

Results

917 patients on MMD initiated on IPT, with a mean age of 39.3 years (SD: 11.6).

648 (70.7%) were females and the median duration on ART was 4 years (IQR: 2 years - 6 years).

Majority of patients were on MMD6 (n = 642; 70.0%), while 275 (30.0%) were on MMD3.



In addition, **95.6% (n=263)** of patients on MMD3 completed TPT

Compared with

98.4% (n=631) among those on MMD-6 (p=0.011)

In multivariable analysis, patients on MMD-3 similar odds of being adherent to TPT (aOR = 0.46 95% CI: 0.12-1.13, p=0.09) and completing TPT (aOR = 0.49, 95% CI: 0.20-1.19, p=0.12) compared with patients on MMD-6, adjusted for age, sex and duration on ART.

- A retrospective review for stable HIV patients on ART and TPT between March 2017 and October 2018; data collected from initiation of TPT to 6 months after TPT initiation
- Adherence was assessed as good (>95%) or poor (<95%) while TPT completion was assessed as either completed or not at the end of 6 months.
- Total of 917 patients on MMD initiated on IPT, majority of patients were on MMD6 (n = 642; 70.0%), while 275 (30.0%) were on MMD3.
- Adherence to TPT was 95.6% (n=263) among patients on MMD3 compared with 98.3% (n=631) among those on MMD6 (p=0.19).
- 95.6% (n=263) of patients on MMD3 completed TPT compared with 98.4% (n=631) among those on MMD-6 (p=0.011).
- **Adherence to TPT and TPT completion rates were good in both MMD models. We also found that TPT adherence and completion rates were comparable both MMD-3 and MMD-6. MMD-6.**

http://programme.aids2020.org/Abstract/Abstract/8383

INTEGRATION - Feasibility and acceptability of providing TPT in Community Antiretroviral Refill Groups (CARGs) in Zimbabwe

Leveraging Zimbabwe's Community Antiretroviral Groups (CARGs) to deliver TB preventive treatment is feasible and acceptable: Findings from a mixed methods study

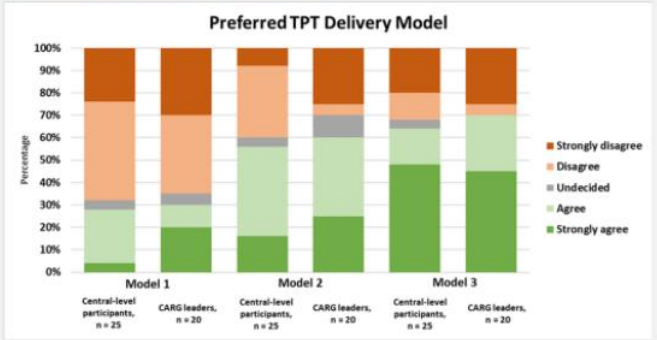
M. Msukwa[1], T. Apollo[2], M. Mapingure[3], R. Boccanera[4], I. Chingombe[3], C. Gwanzura[2], A. Howard[5], J. Mantell[6], T. Masvawure[7], G. Musuka[3], JM. Zech[5], M. Rabkin[5]

1 ICAP at Columbia University, Pretoria, South Africa, 2 Zimbabwe Ministry of Health and Child Care, Harare, Zimbabwe, 3 ICAP at Columbia University, Harare, Zimbabwe, 4 U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Rockville, MD, United States, 5 ICAP at Columbia University, New York, United States, 6 Columbia University, Department of Psychiatry, New York, United States, 7 College of the Holy Cross, Department of Sociology and Anthropology, Worcester, United States

Supporting Graphics

Figure 1
Location of sites where the evaluation was conducted

Figure 2
Respondents' preferences for TPT delivery model

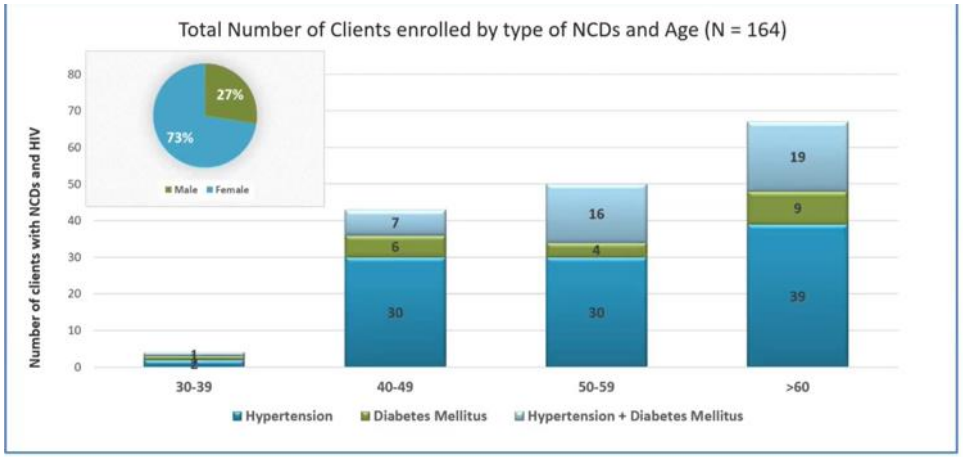


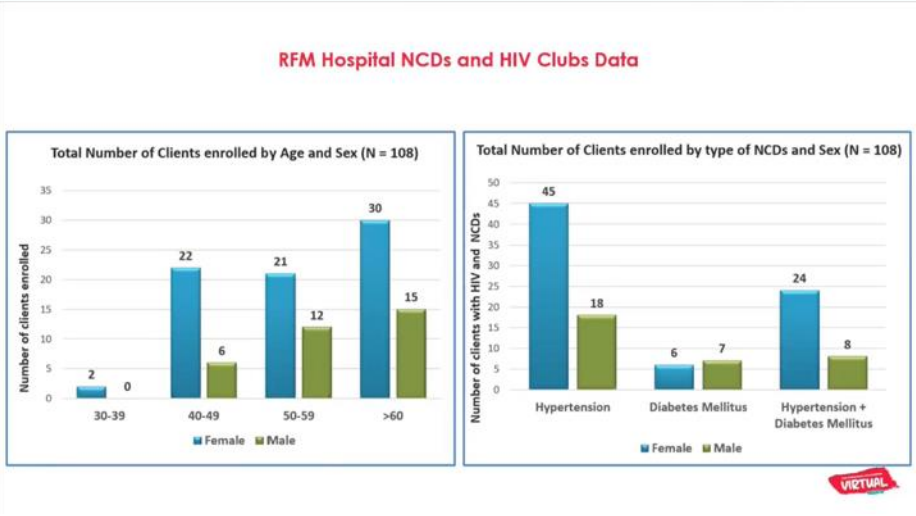
Model	Description
Model 1	Once a person in a CARG initiates TPT, s/he has to leave the CARG model and be seen at the clinic on a monthly basis for the duration of TPT.
Model 2	Once a person in a CARG initiates TPT, s/he must make monthly clinic visits for the first three months, and then return to the CARG for the remainder of the TPT course.
Model 3	TPT would be administered entirely within the CARG.

- 25 central level key informant interviews(KII) with staff, 20 KII with CARG leaders, 16 FGDs with 135 CAARG members
- 96% of central level informants and 85% of CARG leaders described providing TPT via CARGS as a good or very good idea
- All cadres preferred model that included multi month provision of TPT and fewer clinic visits with monitoring of side effects by CARG leaders

http://programme.aids2020.org/Abstract/Abstract/2897

INTEGRATION - Resilient chronic care systems: Differentiated service delivery for people with HIV and non-communicable diseases





- Facility-based group models for ART and NCDs (hypertension, diabetes, asthma)
- Clients on treatment for > 12 months and who are stable
- Model supported task sharing of NCD care to nurses
- Pre-packing of medication reduced waiting time for patients and workload for nurses

https://cquin.icap.columbia.edu/news/cquin-at-ias-2020/

2. SPECIFIC POPULATION CLIENT OUTCOMES

SPECIFIC POPULATIONS - High HIV viremia among adolescents in Teen Clubs, Malawi

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

High HIV viremia among adolescents aged 10-19 years on antiretroviral therapy receiving a scaled up differentiated service delivery in Malawi: Teen club experience

PEB0304

Authors: Rachel Chamanga Kanyenda (rkanyenda@pedaids.org)[1],Tessa Musukwa[1], Joram Sunguti[1], Allan Ahimbisidwe[1], Isaac Phiri[1], Harrid Nkhoma[1], Kwashie Kudiabor[1], Nicole Buono[2], Andrew Auld[2], Evelyn Kim[2], Godfrey Woelk, [3]Alice Maida[2], Thulani Maphosa[1]

RESULTS

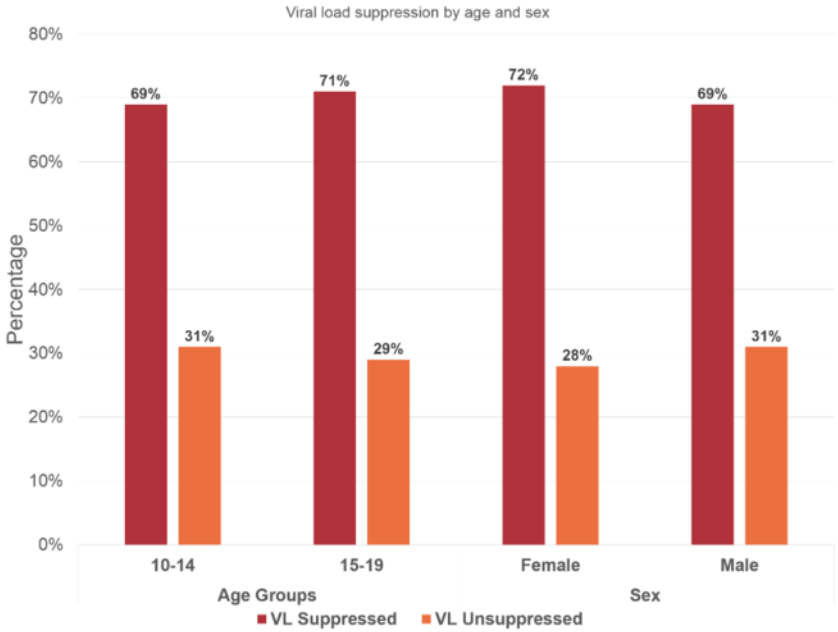


Figure 1: Viral Load Suppression percentage by age groups and sex

- Teen clubs of 10-19 year olds in Malawi, run by EGPAF - “Ariel teen clubs”, monthly and open to all adolescents (not stability criteria)
- Cross sectional study from 38 facilities in Malawi, n=1,345 adolescents, median age 15 years, 53% female
- 30% of adolescents had virema (high VL >1000 copies/mL), less (aOR 0.52, 95% CI 0.33-0.8) likely in secondary school adolescents compared to primary school

http://programme.aids2020.org/Abstract/Abstract/3554

SPECIFIC POPULATIONS - Low transition to adults care from HIV team clubs, Malawi

An evaluation of the effectiveness, facilitators and barriers of HIV Teen Clubs in achieving successful transition from teen to adult care in Blantyre, Malawi using the RE-AIM Framework

Jerome Galagade
University of Malawi – College of Medicine

Factors associated with successful transition from HIV Teen Club to adult care

Variable	% who transitioned	Crude OR (95%CI)	P-value	Adjusted OR (95%CI)
Gender				
Male	*4.0%*	*1 (Reference)*		
Female	*8.6%*	*2.3 (0.5, 11.4)*	*0.319*	
Age at transition				
≥20	*5.3%*	*1 (Reference)*		
<20	*7.5%*	*1.5(0.3,7.4)*	*0.460*	
Facility Location				
Urban	*12.5%*	*1 (Reference)*		*1 (Reference)*
Rural	*1.5%*	*0.1(0.01, 0.9)*	*0.037*	*0.1(0.01,0.9)*
Facility Ownership				
Government	*1.0%*	*1 (Reference)*		*1 (Reference)*
Private	*22.9%*	*28.1(3.4, 235.0)*	*0.002*	*22.8(2.4, 219.*
Adolescent Guardian				
Parents	*12.3%*	*1 (Reference)*		
Other	*6.3%*	*0.5(0.1,2.4)*	*0.374*	

- Retrospective cohort of 131 adolescents in HIV team clubs in 14 primary care facilities in Malawi
- Assess fidelity of implementation of a checklist for Teen Club transition protocols
- Only 6.9% of adolescents transitions within six months of the expected transition time

http://programme.aids2020.org/Abstract/Abstract/4670

SPECIFIC POPULATIONS - Outcomes from postnatal clubs in Khayelitsha, South Africa

Integrated postnatal clubs show improved maternal viral load completion and infant testing uptake compared to historical controls in Khayelitsha, South Africa

Keitumetse Lebelo[1], Tali Cassidy[1,2], Laura Trivino Duran[1], Vinayak Bhardwaj[1], Nompumulelo Mantangana[1], Leticia Mdani[1], Nikiwe Malabi[1], Kate Buchanan[1], Leigh Snyman[1], Damian Hacking[1], Virginia de Azevedo[3], Shariefa Patel-Abrahams[3], Clare Hofmeyr[4], Jude Igumbor[4], Landon Myer[4], Aurélie Nelson[1]

[1] Médecins Sans Frontières, Cape Town [2] Division of Public Health Medicine, School of Public Health and Family Medicine, University of Cape Town [3] City Health of Cape Town
[4] Mothers2mothers, Cape Town, South Africa, [4] Division of Epidemiology and Biostatistics, School of Public Health and Family Medicine, University of Cape Town, Cape Town, South Africa

Contact: Aurelie Nelson MSFOCB-Capetown-deputyMed@brussels.msf.org

Postnatal clubs	Controls
The Mother-Infant Pairs (MIPs) were HIV positive mothers and their HIV-uninfected exposed infants	
MIPs enrolled in PNCs from June 2016-December 2018	MIPs with babies born from November 2015 to June 2016 with a negative 6-week PCR
The model comprises of psychosocial support, early childhood development, and integrated maternal and child health	Infants tested with birth PCR through another study and referred back into standard of care. Results of subsequent infant tests and mother's viral load followed up
A peer mentor facilitates a group session of 3-11 MIPs and each MIP consults with a nurse	Mothers counselled on infant testing at birth and traced if infants were not known to have tested

Table 1: Maternal VL completion and suppression and infant testing in postnatal clubs and historical controls

	Historical controls n=221	Postnatal clubs n=141	Risk Ratio (95% CI) [PNC/controls]
Infants			
9 months rapid completion (8-10mth)	112/221 (51%)	114/141 (81%)	1.6 (1.4-1.9)
18 months rapid completion (17-19mth)	70/220 (32%)	90/140 (64%)	2.0 (1.6-2.6)
Seroconversions*	2	1	
Mothers			
0-12month viral load completion	149/221 (67%)	140/141 (99%)	1.5 (1.3-1.6)
0-12 month viral load suppression	141/149 (95%)	134/140 (96%)	1.0 (0.96-1.1)
12-18month viral load completion	65/221 (29%)	107/141 (76%)	2.6 (2.1-3.2)
12-18 month viral load suppression	63/65 (97%)	101/107(94%)	0.97 (0.9-1.0)

***Control group:** two infants seroconverted before 18 months.. ***PNC cohort:** one infant seroconverted (after exiting the PNC) before their 18 months test

- Postnatal clubs for mother-infant-pairs in Khayelitsha, South Africa
- N=141 in postnatal clubs and n=221 in historical control
- Improved rapid completion in infants and 12-18 month viral load completion (but not suppression) in mothers

http://programme.aids2020.org/Abstract/Abstract/7275

3. DSD COUNTRY PLANNING/OPTIMIZATION

OPTIMIZATION - Feasibility and determinants of multi-month scripting (MMS), Thailand

The Mean of days MMS were significant differences among;

- The highest was Chonburi =100 days (95% CI [93:107)
  The lowest was Samutprakarn = 68 days (95% CI [57:80]), ***p* < .001**
- Tertiary hospitals = 95 days (95% CI [89:101])
  Secondary hospitals = 84 days (95% CI [79:89]), ***p* = .004**
- Patients with universal health coverage = 93 days (95% CI [90:95])
  Other health rights such as employment insurance, civil servant medical benefit scheme, etc. = 81 days (95% CI [71:92]), ***p* = .046**
- General populations = 87 days (95% CI [82:92])
  Key populations = 94 days (95% CI [90:98]), ***p* = .036**
- Public hospitals = 94 days (95% CI [90:98])
  Private hospitals = 66 days (95% CI [57:76])
  ***p* < .001**

- Describes MMS across Thailand using patient records and with focus group discussions with providers
- 82% of client receiving 3-6 month prescriptions with differences by province, level of hospital, payment scheme (insurance) and population
  - Longer in Tertiary vs. secondary hospitals, in patients with UHC vs. other schemes, in key populations vs. general and in public vs. private hospitals

http://programme.aids2020.org/Abstract/Abstract/6805

OPTIMIZATION - Diversity of DSD models in Malawi, South Africa and Zambia

The landscape of differentiated service delivery models in Malawi, South Africa, and Zambia

A. Huber[1,2], S. Pascoe[1,2], L. Long[1,2,3], B. Nichols[1,2,3], S. Kuchukhidze[3], I. Mokhele[1,2], N. Lekodeba[1], S. Rosen[1,2,3]

1. Health Economics and Epidemiology Research Office, Johannesburg, South Africa
2. University of the Witwatersrand, Department of Internal Medicine, School of Clinical Medicine, Johannesburg, South Africa 3. Boston University, Department of Global Health, Boston, United States

- Conducted interviews with 28 respondents in the three countries
- Much diversity in models, but most are individual models for stable adults
- Six month dispensing well established in Zambia, becoming more common in Malawi, limited to 2-months in South Africa

- 39% delivered services to individuals outside facilities, primarily at medication pickup points
- 29% were facility-based individual models, such as fast-track services and specialized clinics
- 24% were healthcare worker-led group models, predominantly adherence clubs
- 8% were client-led groups such as community ART groups (CAGs).

http://programme.aids2020.org/Abstract/Abstract/4696

OPTIMIZATION- Strategies to maintain care during major and prolonged turmoil, Haiti

Strategies to maintain patients on ART in the context of major and prolonged socio-political turmoil in Haiti

Patrice Joseph[1], Jean Edouard Mathon[1], Rose Irene Verdier[1], Colette Guiteau[1], Karine Severe[1], Marc Antoine Jean Juste[1], Rode Secours[1], Serena Koenig[2], Marie Marcelle Deschamps[1], Hoi Ching Cheung[3], Jean William Pape[1,4]

1) GHESKIO, Port-au-Prince, Haiti; 2) Harvard University, Boston, MA, USA; 3) Analysis Group, Inc., Boston, MA, USA ; 4) Weill Cornell Medical Center, New York, NY, USA

- GHESKIO, largest HIV provider in the Caribbean, adapted services to respond to the political turmoil
- Key adaptations (aimed at reducing patients' wait time) include extending clinical visits to every 6 months and support community drug distribution
- 35% reduction in the total annual number of all patients visiting centre between 2017 and 2019
- **In 2019, decrease of 46% in ART patient visits, but overall loss to follow-up of only 2%**

Table. Change in number of patient clinic visits and active ART patients at GHESKIO Center, 2019

	Patient visits	Active Patients on ART
Jan 2019	18,801	11,044
Dec 2019	10,128	10,823
% Change	46%	2%

http://programme.aids2020.org/Abstract/Abstract/5498

4. DSD COSTING

COSTING - Economic evaluation of cost-to-provider and cost-to-patient of DSD models, RCT in Lesotho

Economic Evaluation of Differentiated Service Delivery Models for ART Service Delivery from a Cluster-Randomized Trial in Lesotho: Cost to Provider and Cost to Patient

B. Nichols[1,2], G. Fatti[3,4], R. Cele[2], N. Lekodeba[2], T. Maotoe[5], M.V. Sejana[6], C. Chasela[5,7], I. Faturiyele[8], B. Tukei[5,6], S. Rosen[1,2]

[1] Department of Global Health, School of Public Health, Boston University, Boston, MA; [2] Health Economics and Epidemiology Research Office, Department of Internal Medicine, School of Clinical Medicine, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; [3]Kheth'Impilo AIDS Free Living, Cape Town, South Africa, [4]Stellenbosch University, Division of Epidemiology and Biostatistics, Department of Global Health, Faculty of Medicine and Health Sciences, Cape Town, South Africa, [5] Right to Care, Centurion, South Africa; [6]EQUIP, Lesotho, Maseru, Lesotho; [7]Department of Epidemiology and Biostatistics, School of Public Health, Faculty of Health Sciences, University of Witwatersrand, Johannesburg, South Africa; [8]USAID, Washington DC, USA;

Figure 1. Unit cost of facility visit and DSD interactions, by cost component and DSD model

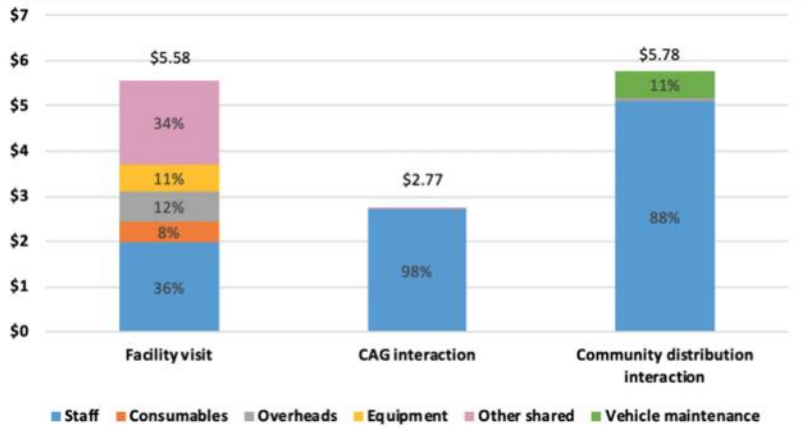


Figure 2. Cost to patients per year, by cost component and model

- Estimated the total cost per patient retained at 12 months after entry into a DSD model:
  a. Standard of care (SOC)
  b. Community adherence groups with 3-month dispensing (CAGs), and
  c. Community ART distribution with 6-month dispensing.
- CAG and community distribution interactions incur costs primarily for healthcare provider staff, while facility visits include costs for infrastructure and other expenses (Fig 1)
- The annual cost to patient was substantially less for the 3-months CAG and 6 months community distribution arms compared to SOC (Figure 2)
- Community- based ART delivery with multi-month dispensing in Lesotho reduced provider costs of treatment by approximately 7%
- Much larger savings accrued to patients from community-based models; patient costs fell by roughly 60%
- Community-based models of DSD for ART for stable clients likely produce small cost savings for providers and large savings for patients in Lesotho

http://programme.aids2020.org/Abstract/Abstract/3814

COSTING - National OTC tool to estimate ART costs for DSD models

Using the National OTC tool to estimate ART costs for differentiated care

Lori Bollinger and Adebiyi Adesina
Avenir Health, 655 Winding Brook Drive Floor #4, Glastonbury, CT, 06033, USA

The tool is designed to answer questions such as:

1. Where will cost savings occur when treatment scenarios are changed?

2. Which optimized treatment scenario provides the greatest cost savings

3. What is the total projected cost for different treatment scenarios annually for the next 5 years by patient by type

4. What is the overall unit cost by patient type for different treatment scenarios

The tool helps policymakers evaluate potential costs savings of various DSD models, including alternate scenarios of different service delivery schedules and types, task-shifting policies, different ARV regimes and different laboratory test schedules.

Tool is available on http://avenirhealth.org/software-pc.php5

http://programme.aids2020.org/Abstract/Abstract/5643

COSTING - Patient costs and satisfaction associated with DSD models for HIV treatment in four sub-Saharan African countries

Patient costs and satisfaction associated with differentiated models of service delivery for HIV treatment in sub-Saharan Africa

S. Kuchukhidze[1], L. Long[1,2], S. Pascoe[2,3], A. Huber[2,3], B. Nichols[1,2], M. Fox [1,2], S. Rosen[1,2]

1. Boston University, Department of Global Health, Boston, United States 2. Health Economics and Epidemiology Research Office, Johannesburg, South Africa
3. University of the Witwatersrand, Department of Internal Medicine, School of Clinical Medicine, Johannesburg, South Africa

- Review of peer-reviewed literature, non-peer reviewed literature that reported empirical information on patient costs and satisfaction among people in DSD models in Malawi, South Africa, Tanzania, Uganda
- All sources with a comparison showed a substantial reduction in patients' monetary costs and/or time spent obtaining ART compared to conventional care.
- A large majority of patients were satisfied with their DSD model, and most preferred a DSD model to conventional care; group models (e.g. adherence clubs) were less popular than individual models.
- Only a handful of studies have compared the costs to patients of DSD models to conventional care and/or reported patient satisfaction with DSD models.

Table 2. Patient satisfaction with and preference for DSD models

Country	Model name	Satisfaction metric or model to which DSD is preferred (SOC=standard of care or conventional model)	% of patients reporting satisfaction with DSD model	% of patients reporting that they prefer the DSD model
Kenya	Facility fast track[7]	Compared to community adherence group		84.7%
	Community adherence groups[7]	Compared to facility fast track		15.3%
South Africa	Centralized chronic medicines dispensing and distribution[2]	% patients who were happy to be enrolled in model	96.3%	
	Adherence clubs[2]	% patients who were "satisfied" or "very satisfied" with care	96.3%	
Tanzania	ARV community delivery[5]	% patients who were "satisfied" or "very satisfied" with ARV community delivery	96.9%	
	Home-based delivery[8]	Compared to SOC		86.0%
Zambia	Home-based delivery[9]	Compared to adherence club or SOC		70.5%
	Adherence clubs[9]	Compared to home-based delivery or SOC		15.4%
	Community adherence groups[10]	Compared to SOC		89.6%

http://programme.aids2020.org/Abstract/Abstract/3358

5. DSD ENROLMENT STRATEGIES

ENROLLMENT STRATEGIES - Impact of changes to eligibility on DSD in Eswatini, Malawi, Tanzania and Zambia

Small changes in eligibility criteria could have significant implications for differentiated service delivery model utilization in Eswatini, Malawi, Tanzania, and Zambia

Ashley Bardon[1], Corrina Moucheraud[2], Risa Hoffman[3]

[1] Department of Epidemiology, University of Washington; [2] Department of Health Policy & Management, University of California Los Angeles; [3] Division of Infectious Diseases, University of California Los Angeles

- Sought to examine how differences to DSD eligibility would impact the proportion and total number of patients eligible using PHIA data from the four countries
- DSD eligibility was defined as: over 18 years, on first line ART, not on TB treatment and less than 5 missed doses in the prior 30 days
- Varied eligibility by:
  - Level of VL suppression (<40, 200 or 1000 copies/mL)
  - Time on ART (3, 6, 12 months)
  - Pregnancy/breastfeeding status.
- Inclusion of pregnant and breastfeeding women would achieve the highest proportion of adults eligible across all four countries (range from 57% in Tanzania to 71% is Eswatini)
- Lowest proportion from defining viral suppression as <40 or by requiring 12 months on ART
- Cohort sizes for DSD programme could increase by up to 20-30%

http://programme.aids2020.org/Abstract/Abstract/3352

6. DSD QUANTITATIVE PATIENT OUTCOMES

6.1 ACROSS DSD MODELS
6.2 MULTI-MONTH REFILLS
6.3 FAST-LANE PICK-UP
6.4 COMMUNITY MODELS

QUANTITATIVE - Systematic review of outcomes within differentiated ART delivery models for stable clients

Retention in care and viral suppression in differentiated models of HIV treatment delivery in sub-Saharan Africa: few estimates, similar results

L Long[1,2], S Kuchukhidze[1], S Rosen[1,2], S Pascoe[2,3], A Huber[2,3], M Fox [1,2], B Nichols[1,2]

1. Boston University, Department of Global Health, Boston, MA, USA 2.University of the Witwatersrand, Health Economics and Epidemiology Research Office, Johannesburg, South Africa.
3. University of the Witwatersrand, Department of Internal Medicine, School of Clinical Medicine, Johannesburg, South Africa

Country	Model name	Outcome reported	Timing of outcome	DSD outcome	Conventional care outcome	Difference (=DSD minus conventional)
DRC	ART support groups[1]	Retention	≤ 12 mos	94%	60%	34%
South Africa	Adherence clubs with 6-month refills[2]	Suppression	≤ 12 mos	98%	97%	1%
	Adherence clubs[3]	Retention	≤ 12 mos	90%	82%	8%
		Suppression	≤ 12 mos	80%	80%	0%
	Community clubs[4]	Retention	≤ 12 mos	90%	86%	4%
		Suppression	12-24 mos	98%	91%	7%
	Decentralized medication delivery[3]	Retention	≤ 12 mos	82%	87%	-6%
		Suppression	≤ 12 mos	77%	74%	3%
	Facility clubs[4]	Retention	≤ 12 mos	85%	86%	-1%
		Suppression	12-24 mos	95%	91%	4%
	Quick pick-up model[4]	Retention	≤ 12 mos	91%	86%	5%
		Suppression	12-24 mos	96%	91%	5%
	Youth care clubs[5]	Retention	≤ 12 mos	81%	84%	-3%
Zambia	Community ART centres [6]	Suppression	≤ 12 mos	90%	85%	6%
	Community adherence groups[7]	Retention	Unknown	97%	76%	21%
	Faith based organization community ART delivery[8]	Suppression	12-24 mos	89%	84%	5%

- Systematic review of patient ≤12m or 12-24 months post enrolment retention and VL suppression outcomes
  - In differentiated ART delivery models compared to conventional care
  - In sub-Saharan Africa
- 8 studies included
- 10/16 outcomes represented small (<10%) improvements compared to standard of care
- Two group models showed large improvements (>20%) in retention while three had slightly worse retention outcomes

http://programme.aids2020.org/Abstract/Abstract/4327

Most published DSD models produce equivalent or slightly better health outcomes than conventional care for patients already stable on ART

QUANTITATIVE - Patient outcomes during scale-up of multiple models, South Africa

Retention in care among patients in differentiated models of HIV care in KwaZulu-Natal, South Africa

Altynay Shigayeva[1], Ntombi Gcwensa[1], Celiwe Dlamini Ndlovu[1], Nosicelo Ntumase[1], Scelinhlanhla Sabela[1], Liesbet Ohler[1], Laura Trivino-Duran[2], Ellie FordKamara[1], Khanyo Hlophe[3], Gilles Van Cutsem[3,5]

Retention on ART

Overall retention on ART among DMOC patients was 96.6%, 93.2%, 90.2% at 12, 24, and 36 months and did not differ across DMOC types (P=0.09) (Figure 3). Retention on ART among DMOC patients (including who returned) was significantly higher compared to clinics (P<.0001).

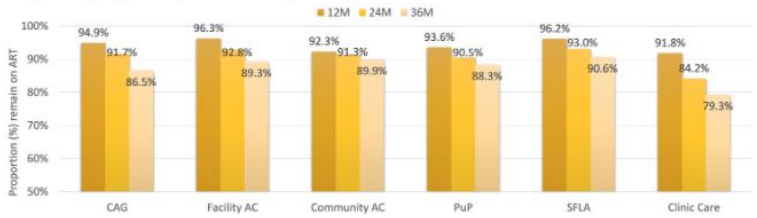


Figure 3: Kaplan Meier estimates of proportion remaining on ART at 12, 24 and 36 months since DMOC enrollment

Viral suppression

Patients who participated in community models and AC were less likely to maintain VL suppression (P<.0001), as compared to PuP, SFLA and standard clinic care (Figure 3). At 24 months since DMOC initiation, VL suppression <400 copies/ml was 81.1%, 82.4%, 81.3%, 95.6%, and 95% among patients in CAG, facility AC, community AC, PuP and SFLA respectively (Figure 4).

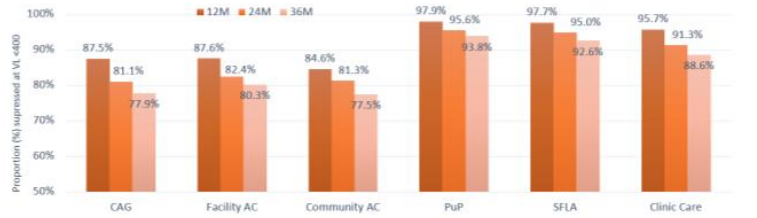


Figure 4: Viral suppression <400 copies/ml, at 12, 24 and 36 months since DMOC initiation

- Comparison of DSD model outcomes when patients given a *choice* of model in routine setting
- Compared to patients who qualified for differentiated ART delivery but not enrolled.
- *All models only provide clinical review annually*
- Small numbers in Community ART Groups (N=178)/Community Adherence Clubs (N=104) but significant numbers in Facility Adherence Clubs (N-3482)/Spaced Fast Lane Appointments (SFLA) (N=2101)/Community Pick-up Points (PuP) (N=3616)
- Overall retention at 12, 24 and 36 months in DSD models was high, and significantly higher than compared to SoC (yellow bars)
- Viral suppression was high among those in PuPs and SLFA

http://programme.aids2020.org/Abstract/Abstract/7027

QUANTITATIVE - 24-month outcomes of extended (6 monthly) ART refills in Adherence Clubs from a randomized control trial

- RCT of standard of care (SoC) adherence clubs (ACs) and intervention ACs with 6-monthly ART refills
- N= 1,173 SoC & 977 Intervention patients
- Non-inferior retention, viral load completion and suppression at 24-months

- **24-month retention**
  Intervention:
  93.1% (95% CI: 91.2-94.7%)
  SoC:
  94.0% (95% CI:92.4-95.2%)

- **Viral load completion**
  Intervention: 94.5% (95% CI:92.9-95.8%)
  SOC: 89.3% (95% CI: 85.6-92.1%)
- **Viral load suppression**
  Intervention: 96.3%
  (95% CI:94.6-97.58%)
  SOC: 97.5% (95% CI: 96.4-98.3%)

http://programme.aids2020.org/Abstract/Abstract/11592

QUANTITATIVE - Impact of multi-month scripts and dispensing on outcomes, Nigeria and Tanzania

High Treatment Retention Rates Among Patients With Multi-month Antiretroviral Therapy (ART) Supply From HIV Clinic Settings In Nigeria

Juliet Adeola, Patrick Akande, Prosper Okonkwo, Remi Olaitan, Isah Ahmed, Ifeyinwa Onwuatuelo, Toyin Jolayemi
APIN Public Health Initiatives Ltd/Gte., Abuja, Nigeria

Percentage Retention on ART for Patients with Multi-Months Drug Supply			
Description	Retained on ART		Overall
	Yes	No	Retention (%)
Total Number of Patients (6,936)	**6,389**	**547**	**92%**
1 Month drug supply (1,268)	898	370	71%
2 Months drug supply (2,174)	2,038	136	94%
3 Months drug supply (2,991)	2,950	41	99%
4 Months drug supply (463)	463	0	100%
5 Months drug supply (16)	16	0	100%
6 Months drug supply (24)	24	0	100%
Sub-Total: Multi-months drug supply (5,668)	**5,491**	**177**	**97%**

- Increased likelihood of being retained the longer the script (small numbers beyond 3 months)

http://programme.aids2020.org/Abstract/Abstract/7326

PREDICTORS OF MISSED APPOINTMENTS AMONG HIV-POSITIVE PATIENTS ON LIFELONG ANTIRETROVIRAL THERAPY IN TANZANIA

Authors: Festo Mazuguni (fmazuguni@pedaids.org), Gretchen Antelman, Roland Van de Ven, Bonita Kilama, Ola Jahanpour

- 6 health facilities in Tanzania
- Patients on multi-month dispensing (MMD) for ≥2 months had lower odds of missed appointments (AOR = 5.30; 95% CI [5.17-5.44])

http://programme.aids2020.org/Abstract/Abstract/3248

QUANTITATIVE - 3 vs 6-month dispensing in community ART groups, Zimbabwe

Outcomes of 3 vs 6-monthly Dispensing of Antiretroviral Treatment (ART) for Stable People Living with HIV in Community ART Refill Groups: a Cluster-Randomized Trial in Zimbabwe

Geoffrey Fatti,[1,2] Nicoletta Ngorima-Mabhena,[3] Eula Mothibi,[1] Trish Muzenda,[1,4] Regis Choto,[5] Tonderai Kasu,[5] Taurayi A. Tafuma,[6] Nyika Mahachi,[6] Kudakwashe C. Takarinda,[5] Tsitsi Apollo,[5] Owen Mugurungi,[5] Charles Chasela,[7,8] Risa M. Hoffman,[9] Ashraf Grimwood[1]

1. Khath'impilo AIDS Free Living, Cape Town, South Africa. 2. Division of Epidemiology and Biostatistics, Department of Global Health, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa. 3. Khath'impilo, Harare, Zimbabwe. 4. School of Public Health and Family Medicine, University of Cape Town, Cape Town, South Africa; 5. Ministry of Health and Child Care, Zimbabwe. 6. FHI360, Zimbabwe. 7. EQUIP Health, Centurion, South Africa. 8. Department of Epidemiology and Biostatistics, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa. 9. Division of Infectious Diseases, Department of Medicine, David Geffen School of Medicine at the University of California, Los Angeles

Table 1: Participant retention in ART care (primary outcome) after 12 months (all participants)

	Retention (primary outcome)					
	Enrolled	Retained		Adjusted Risk Difference (RD)		
Arm	N	n	%	RD	95% CI	P
3MF (control)	1919	1784	93.0%	Ref	-	–
3MC	1335	1265	94.8%	1.1%	-0.5 to 2.8	0.17
6MC	1546	1477	95.5%	1.2%	-1.0 to 3.6	0.27
6MC vs. 3MC				0.1%	-2.4 to 2.6	0.93

- RCT between SoC (3-monthly health facility drug pick-up) 3 and 6-monthly CARGs in Zimbabwe
  - Annual clinical visit and viral load across arms
- 12-month retention high in both CARG arms: non-inferior (3M Facility=93%, 3M CARG=94.8% and 6M CARG=95.5%)
- Men had improved retention in 3M CARG model and people who lived>9km from clinic in the 6M CARG model.
- Rural clinic patients had higher retention in CARG than facility pick-up model.

http://programme.aids2020.org/Abstract/Abstract/4845

QUANTITATIVE - Outcomes of community-based differentiated ART delivery models, South AFrica

Community-based Antiretroviral Therapy Delivery Associated with Viral Suppression and Retention in Care in South Africa

Lauren R. Violette[a], Jienchi Dorward[b], Justice Quame-Amaglo[a], Nigel Garrett[b], Paul K. Drain[a]

[a] University of Washington, Seattle, Washington, USA. [b] Centre for the AIDS Programme of Research in South Africa (CAPRISA), University of KwaZulu-Natal, Durban, South Africa.

PDE0105

- Secondary analysis within STREAM trial
- 390 people living with HIV assessed for CCMDD eligibility and outcomes after 12m on ART
- Importantly - indicates proportion eligible for differentiated ART delivery at 6m on ART

http://programme.aids2020.org/Abstract/Abstract/5697

Figure 1. CCMDD program eligibility, referral, and enrollment among STREAM participants, N=390

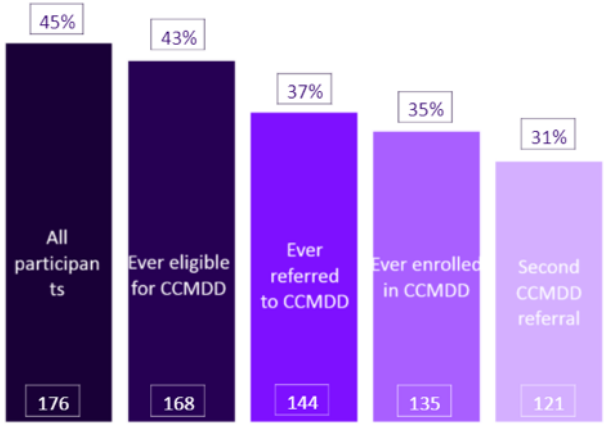


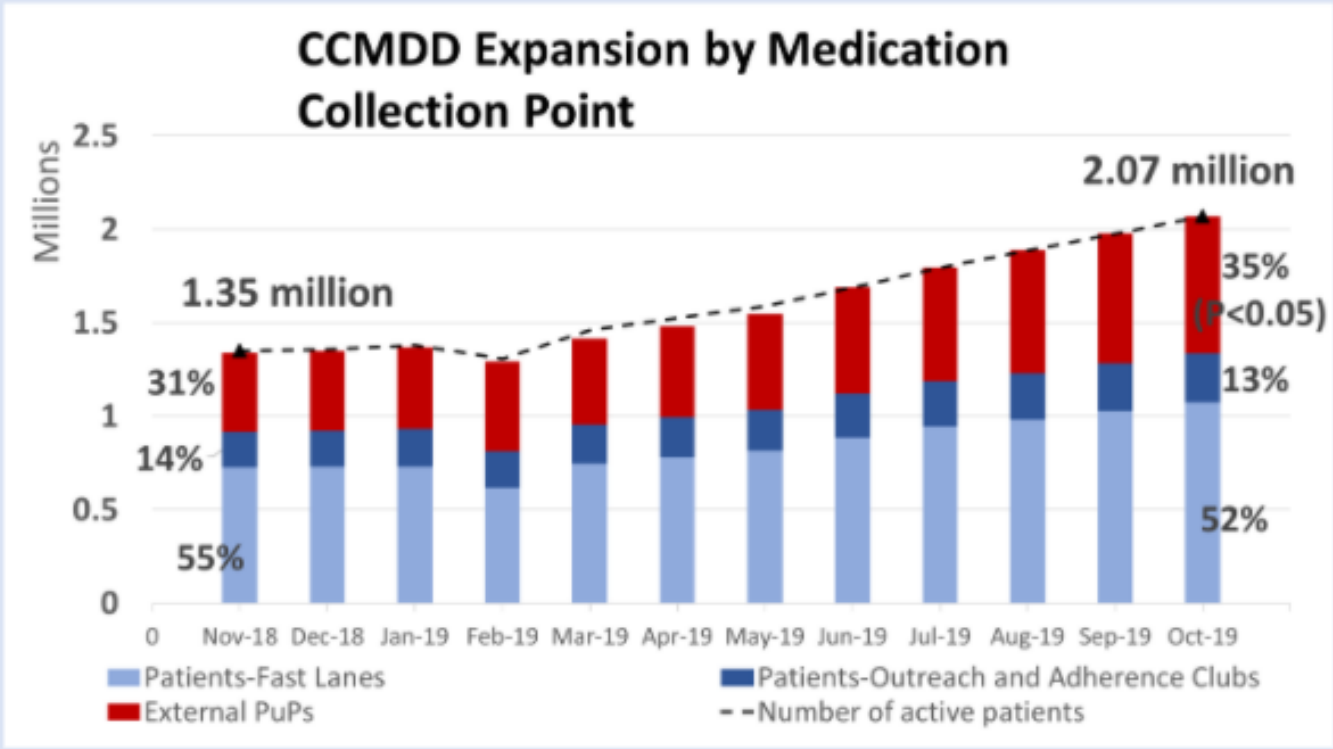
Table 2. CCMDD program enrollment and associations with HIV care outcomes 18 months after ART initiation, STREAM study, N=390

	Not enrolled in CCMDD [a] N=264 (68%)	Enrolled in CCMDD [a] N=126 (32%)	Unadjusted RR (95% CI)	p-value	Adjusted RR [b] (95% CI)	p-value
Achieved composite primary outcome: virally suppressed and retained in HIV care	204 (77.3)	119 (94.4)	1.22 (1.13-1.32)	<0.01	1.19 (1.09-1.29)	<0.01
Viral suppression (<200 copies/mL)	218 (82.6)	126 (100.0)	1.21 (1.15-1.28)	<0.01	1.20 (1.12-1.29)	<0.01
Retained in HIV care	226 (85.6)	119 (94.4)	1.10 (1.03-1.18)	<0.01	1.08 (1.01-1.16)	0.02

QUANTITATIVE - Expansion of the centralized chronic medication dispensing and distribution programme, South Africa

Project Last Mile in South Africa supports a national differentiated service delivery (DSD) model for integrated disease management and improved access to antiretrovirals (ARVs)

Sarah Christie, Lingrui Liu, Maggie Munsamy, Phil Roberts, Merlin Pillay, Erika Linnander, Mayur Desai



http://programme.aids2020.org/Abstract/Abstract/9739

QUANTITATIVE - Improved outcomes in ART clubs, Tanzania

Assessment of clinical outcomes and risk of LTFU among patients receiving differentiated HIV care: Results from a prospective cohort study in northern Tanzania

Authors: Ramadhani Abdul[1], Tobias Rinke de Wit[2], Giulia Martelli[3], Mwanaid Maulid[4], Edith Cosmas Kwezi[4], Kathleen Costigan[5], Patrobas Katambi[6], Anton Pozniak[7], Sabine Hermans[2]
Affiliation and address: [1]Amsterdam Institute for Global Health and Development (AIGHD), Shinyanga, Tanzania, United Republic of, [2]Amsterdam Institute for Global Health and Development (AIGHD), Amsterdam, Netherlands, [3]Doctors with Africa - CUAMM, Padova, Italy, [4]Doctors with Africa - CUAMM, Shinyanga, Tanzania, United Republic of, [5]Missionary Sisters of our Lady of the Apostles, Shinyanga, Tanzania, United Republic of, [6]Diocese of Shinyanga, Shinyanga, Tanzania, United Republic of, [7]Chelsea and Westminster Hospital NHS Foundation Trust, London, United Kingdom

- Compared outcomes of nurse overseen and CHW-led ART clubs with patients remaining in clinics *(not clear if including only those eligible or all patients)*
- n=2,521 with 25% in DSD model
- Outcomes:
  - DSD patients 92% vs SOC 82% retention at 12m
  - DSD patients 99.2% vs SOC 95.7% adherence *(not defined)* at 12m
  - SOC patients more likely to become unstable over time (*appears they started stable)*
  - Urban patients more likely to become unstable over time

http://programme.aids2020.org/Abstract/Abstract/2421

QUANTIATIVE - Private pharmacy distribution, Nigeria

Expanding access to HIV treatment in low- and middle-income countries through decentralized drug distribution in the private sector

H. Marqusee1, K. Badiane1, T. Minior1, S. Baker1, JTayag2, M. Hijazi1
1 USAID, Office of HIV/AIDS, Washington, DC, United States, 2 USAID, South Africa, Pretoria, South Africa

Nigeria Case Study: Success of a Private Pharmacy Model

Between 2016 to 2019, USAID's Sustainable Financing Initiative established ARV refill services at **117 private clinics** and **320 private pharmacies** across four states in Nigeria, enabling nearly **18,000 patients** to pick up medication closer to home. 95 percent of patients picked up their refills on time, and 93 percent of patients were retained in the model, with 5 percent opting to return to the public sector and only 2 percent defaulting. **Pharmacy visit times were under 30 minutes, compared** with an average of **2.3 hours in the public sector**. This work was estimated to provide a **45 percent return on investment** to PEPFAR due to reduced client load and associated staffing and overhead costs at public facilities The program is now sustainably operating without SFI investment.

http://programme.aids2020.org/Abstract/Abstract/8379

QUANTATIVE - Adherence Clubs for men who have sex with men, Uganda

LEAVING NO ONE BEHIND: Assessing the impact of MSM community-based adherence clubs on retention and viral load suppression in Uganda.

Susan Atuhura[1], Damian Weikum[2], Caroline Ajulong[3], Samuel Ganafa[1], Moses Kimbugwe[1], Columbus Ndeloa[4], Flavia Kyomukama[5], Fredrick Okwi[5], Stella Alamo[3], and Chad Martin[2]

[1] Spectrum Uganda Initiatives, Kampala, Uganda; [2] US Centers for Disease Control and Prevention, Atlanta, US; [3] US Centers for Disease Control and Prevention, Kampala, Uganda; [4] Frontline AIDS, Hove, UK; [5] Action Group for Health Human Rights and HIV/AIDS, Kampala, Uganda

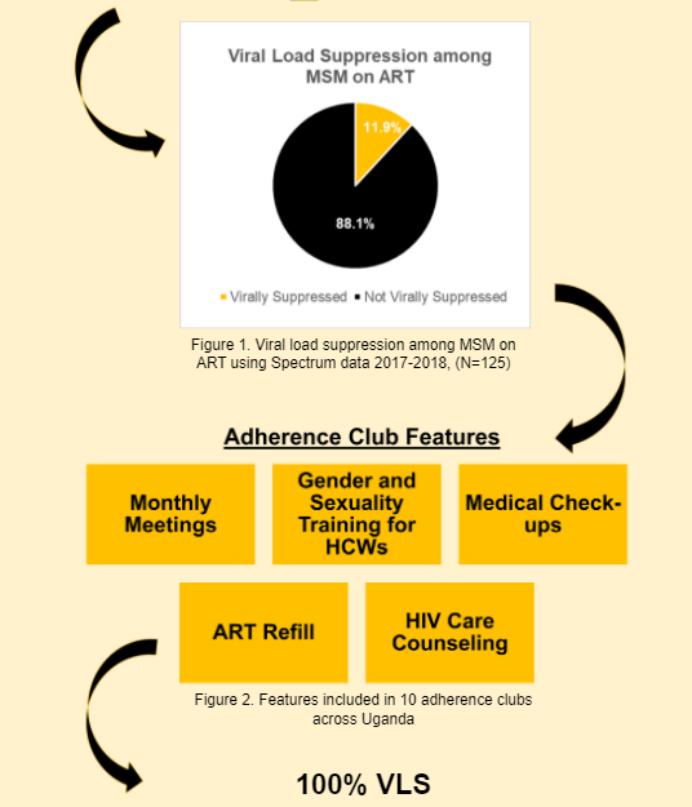


Figure 1. Viral load suppression among MSM on ART using Spectrum data 2017-2018, (N=125)

Figure 2. Features included in 10 adherence clubs across Uganda

- Challenge: Poor VL suppression among MSM (11.9% 15/126 across 8 facilities).
- Set up adherence clubs for MSM across Uganda – 71 eligible with VL suppression and 1 year on ART.
- 10 clubs, 4-11 patients/club, across Uganda with lay HCW trained in gender and sexual diversity.
- Patient preference for monthly meetings
- Followed for 11 months all remained suppressed

http://programme.aids2020.org/Abstract/Abstract/5648

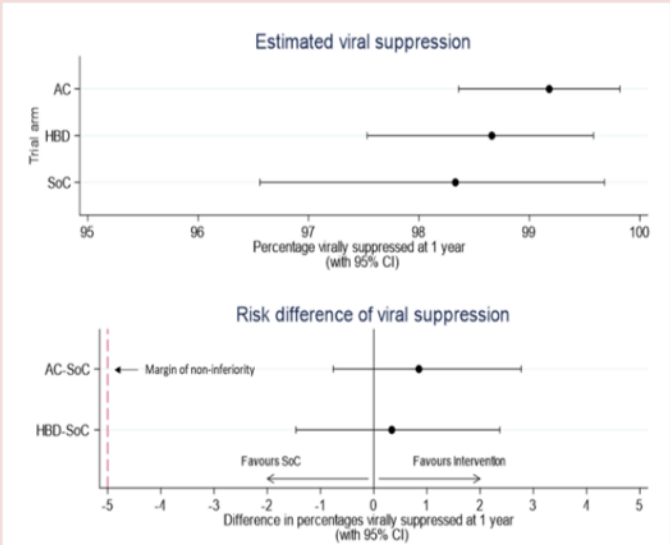
QUANTITATIVE - PopART RCT of Clubs and home-based delivery, Zambia

Viral suppression in stable HIV+ patients in two community models of ART delivery: A cluster-randomized trial nested within the HPTN 071(PopART) trial in Lusaka, Zambia

Mohammed Limbada[1], David Macleod[2], Kenny Chileshe[1], Ellen Muhau[1], Osborne Shibwela[1], Sian Floyd, Ab Schaap[1,4], Richard Hayes[2] Sarah Fidler[3] and Helen Ayles[1,4] on behalf of the HPTN 071 (PopART) Study Team

1. Zambart. Lusaka Zambia, 2. Department of Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, United Kingdom, 3. Imperial College and Imperial college NIHR BRC, London, United Kingdom 4. Department of Clinical Research, London School of Hygiene and Tropical Medicine, London, United Kingdom.

Fig 3. Estimated Viral suppression (Primary results only)



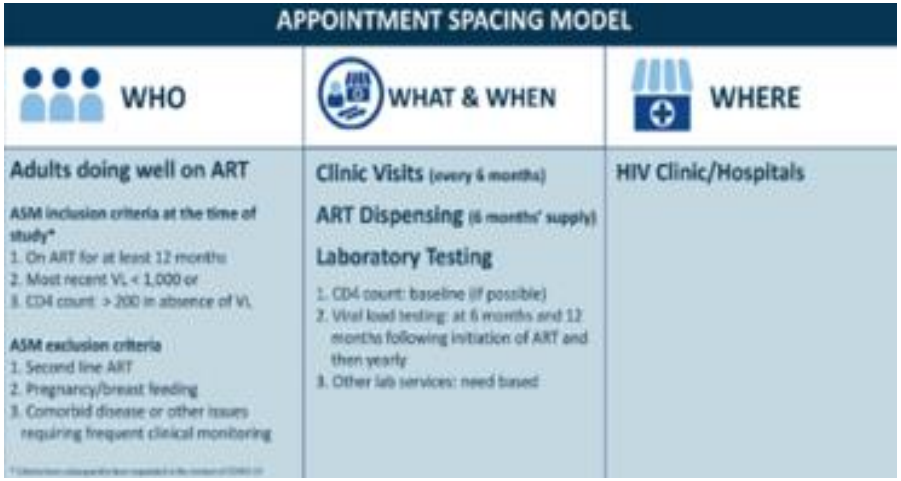
- RCT comparing:
  - SOC (3m refill + clinical)
  - adherence club (AC) (3m refill + 6m clinical)
  - home-based delivery (HBD) (3m refill + 6m clinical)
- Patients given choice between HBD and AC
- n=2,489, followed for 12-months
- High VL suppression across 3 arms (all >98%) –
- LTFU low across arms SOC: 52/781, HBD: 18/852, AC: 20/808)
- Higher known mortality in community arms – more in HBD (17) AC (7) SOC (2)

http://programme.aids2020.org/Abstract/Abstract/4668

7. DSD QUALITATIVE OUTCOMES

QUALTIATIVE – Reasons eligible patients have not joined 6MMD, Ethiopia

"You are not benefiting us by keeping us away": Why do some people decline to participate in Ethiopia's appointment spacing model with 6-month antiretroviral therapy (ART) dispensing?



- 12 focus group discussions (FGDs) with clients eligible for new 6MMD program (known as the "appointment spacing model" or ASM)
- Half on ASM, half declined ASM, n=93
- All on 6MMD very satisfied
- Reasons for declining 6MMD:
  - Decreased frequency of health facility visits
  - Lack of safe and private space for medication storage
  - Misunderstanding about ASM and mistrust in healthcare system

Conclusion

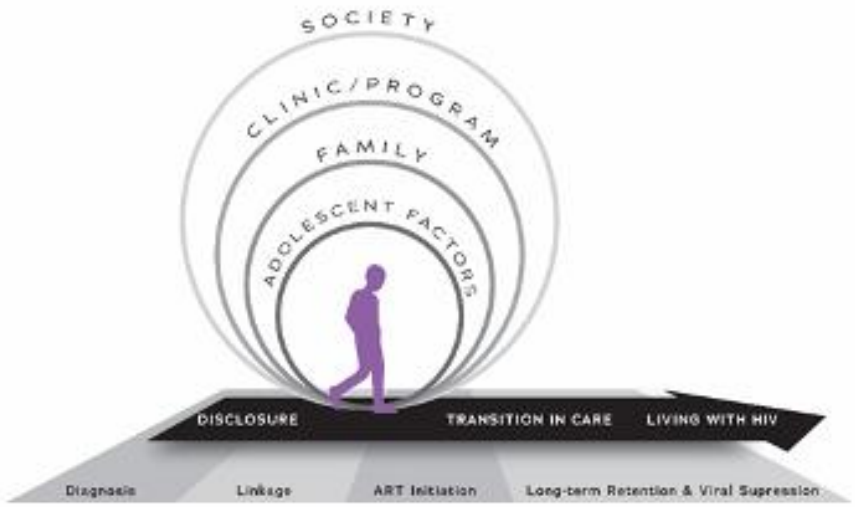
ASM may not suit everyone, but acceptability may be improved by:

- Optimizing ART packaging
- Enhanced education / orientation to reduce misunderstandings and misconceptions
- Improved community engagement and/or supplement comm support services

http://programme.aids2020.org/Abstract/Abstract/3643

QUALTIATIVE – Reasons for adolescents disengaging from HIV care, Kenya

Semi structured interviews with adolescents living with HIV (n=32) + caregivers (n=25) in Kenya who were LTFU more >60 days, and started ART within preceding 18 months



Reasons for disengagement included:

- Stigma (Drop out to avoid disclosure; enacted stigma -neglect upon disclosure; anticipated stigma – at clinic or school)
- Family-level factors (especially when orphaned and/or newly living with caregivers who lacked the knowledge or resources to support them in care)
- Financial (e.g. transportation, especially when newly orphaned/new caregivers)
- Mental health (‘giving up on life’)

http://programme.aids2020.org/Abstract/Abstract/5534

QUALTIATIVE – Acceptability and feasibility by clients and providers of Urban Adherence Groups (UAGs), Zambia

Acceptability and Feasibility: Patient and Provider Experiences of Urban Adherence Groups (UAGs) in Zambia.

S.M. Topp[1], C. Mwamba[2], C. Bolton-Moore[2], A. Sharma[2]
[1]James Cook University, Townsville, Australia, [2]Centre for Infectious Disease Research in Zambia, Lusaka, Zambia

Focus group discussions with clients (32 FGDs), professional (n=16) and lay providers (n=16) + interviews with staff
Inductive and deductive analysis to synthesize findings under the themes – acceptability, appropriateness and feasibility

Theme	Patients	Providers
Acceptability	Highly acceptable	Highly acceptable
Appropriateness	Highly appropriate	Moderately appropriate
Feasibility	Moderately feasible/scalable	Moderately feasible/scalable

CONCLUSIONS

- UAGs show promise as one method of improving patient experience of, and engagement in HIV care & treatment.
- UAGs helped patients engage with HCW and each other to ask questions and seek advice about their health & HIV treatment.
- But successful scale-up *must* account for the skills & resources necessary to deliver this service model effectively.
- Without **resourcing & quality assurance to protect essential treatment and service design features**, acceptability and appropriateness of UAGs would likely decline.

http://programme.aids2020.org/Abstract/Abstract/7372

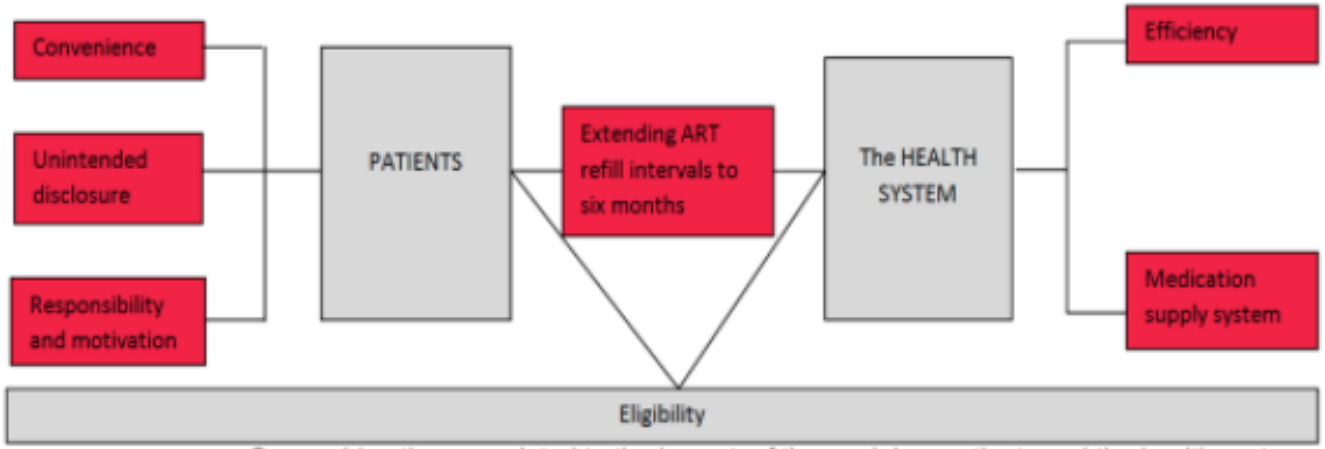
QUALTIATIVE: Interviews with clients, healthcare works and key informants on six-month ART refills in Adherence Clubs, South Africa

"Only twice a year": A qualitative exploration of six-month antiretroviral treatment refills for people living with HIV in Khayelitsha, South Africa

Claire Marriott Keene [1], Nompumelelo Zokufa[1], Emilie Venables[2,3], Lynne Wilkinson[4,5], Risa M Hoffman[6], Tali Cassidy[1,7], Leigh Snyman[1], Anna Grimsrud[4], Jacqueline Voget[8], Erin von der Heyden[8], Siphokazi Zide-Ndzungu[8], Vinayak Bhardwaj[1] and Petros Isaakidis[2]

In-depth interviews with 23 patients, 7 healthcare workers and 6 key informants of randomized control trial of 6-monthly ART Adherence Clubs vs. standard of care adherence clubs

***Pros**: increased convenience, improved motivation for treatment adherence, increased confidentiality (limit unintended disclosure), increased health system efficiency*
***Cons**: concern for adequate drug supply*



Overarching themes related to the impact of the model on patients and the health system

Six-month ART refills could improve efficiency and patient-centredness of differentiated HIV service delivery

http://programme.aids2020.org/Abstract/Abstract/2867

QUALTIATIVE - Barriers and facilitators of PrEP use before and after implementation of a PrEP program for key populations, Uganda

Interviews (n=75) & focus groups (12 groups, n=94) **pre** and **post** (individuals who had started, discontinued, and refused PrEP) **PrEP rollout in Uganda.**

Conclusion: Uptake and adherence could be improved with good comms/opinion leaders as users; **continuation may be facilitated with that flexible delivery and refill models**

Mentioned before PrEP rollout only	Mentioned both before and after	Mentioned after PrEP rollout only
Facilitators		
• Prescription affordability • Convenience for highly mobile groups • Fixed and transparent prescription pricing • Importance of provider confidentiality • Community trust in providers and ancillary implementation staff • Observation of PrEP efficacy from peer experiences	• Desire to remain HIV-negative while having a HIV-positive/unknown partner *"This is what forced me to go on PrEP. Our wives here at the fishing site cannot be trusted. You cannot stand and say she is my wife and mine alone, not at all. So, I found myself at risk of getting HIV and I decided to take PrEP."* *- 42 year old fisherman on PrEP*	• Medical trust in PrEP after community sensitisation • Awareness of living in HIV high-risk community • Greater control over HIV risk in high-risk occupations (e.g. sex work) and social contexts (e.g. fishing communities) • Counselling and support from partners, family, opinion leaders, peers and colleagues *"My colleagues advise me to take my medicine especially when I am travelling to work somewhere far from here."* *- 28 year old female sex worker on PrEP*
Barriers		

• Belief that condom use with "high risk partners" gives sufficient protection
• Fear of:
  • prescription unaffordability
  • unskilled volunteers distributing prescriptions
  • price gouging by community distributers
  • long waiting times
  • operation hours incompatible with end-user availability
  • lack of clear guidelines for end-user eligibility or for adherence counselling
  • being viewed as sex worker if seen at PrEP clinic
	• Unexpected migration acted as a barrier to adherence particularly for sex workers and fisher folks.
	"Another thing, the challenge we have encountered in this is that our clients are mobile. For example, the commercial sex workers: you can work on her today and she migrates to another area without even telling you." *– Health care worker*
		• Stigma: PrEP usage could be viewed as an indication for infidelity, being HIV-positive, having multiple sex partners, or being a sex worker.
		• Community stigma influenced: adherence to daily pill intake (e.g. desire for secrecy led to missed doses), adherence to refill schedules, relationship consequences, and partner support for uptake and adherence.
		"He might ask you the reason why you take that medicine if you are not infected. So, your partner might think that you are a sex worker."
		- Female focus group discussion participant, 15-19 years old

http://programme.aids2020.org/Abstract/Abstract/6669

8. DSD FOR PrEP

Bringing PrEP closer to home: Why now is the time for differentiated PrEP

PrEP continuation extended to 6-monthly with telehealth support and express services

- PrEP screening, initiation, follow-up and continuation at drop-in centre
- 3-month PrEP refills

Pre-recorded satellite featuring:

Increase in digital demand creation, mobile PrEP services and 2-monthly PrEP refills

Peer-led approaches for reaching female sex workers with PrEP in Ethiopia, Fethia Keder, PSI

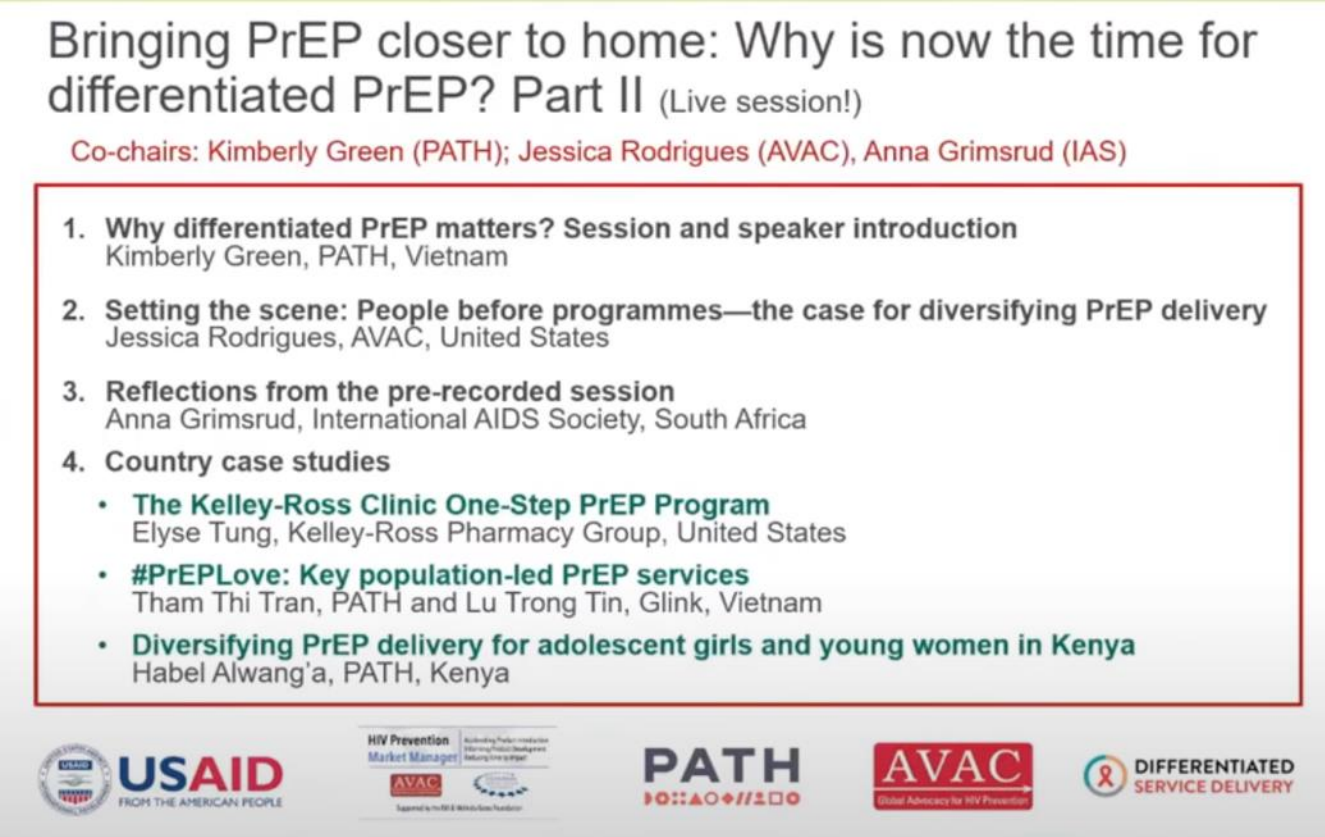
Bringing PrEP to key populations in Thailand, Nittaya Phanuphak, Institute of HIV Research and Innovation

Taking PrEP online: Project PrEP in South Africa – Saiqa Mullick, Wits Reproductive Health Institute

http://differentiatedservicedelivery.org/Resources/differentiated_PrEP_slides

Bringing PrEP closer to home: Why now is the time for differentiated PrEP

Live session



http://differentiatedservicedelivery.org/Resources/differentiated_PrEP_slides

9. RE-ENGAGEMENT STRATEGIES

RE-ENGAGEMENT - Impact of a campaign for re-engagement, South Africa

- Two-part campaign in the Johannesburg Health District to encourage patients to return to care
  - *Part 1*: Healthcare worker training on how to manage returning patients
  - *Part 2:* Mass media messaging on importance of return to care

- Saw a 92% increase in people returning to care

- Not all components were implemented
  - **25% reported patients were sent to the back of the queue and that staff insist on transfer letters**
  - 69% of staff responded they educate and offer differentiated care
  - 83% welcome and 77% encourage those that return
  - **11% give shorter ART refill**

http://programme.aids2020.org/Abstract/Abstract/5672

RE-ENGAGEMENT - Patient-reported reasons for missed appointments from a large South African sample

Patient-reported reasons for missed appointments among ART patients in South Africa, April – June 2019

Poster #9451

Caitlin Biedron[1], Maria Insua[2], Colleen Scott[1], Alaya Koneru[2], Monica E. Patton[2], Jonathan Grund[2], Sherri Pals[1], Carolyn Hall[2], Cobus Olivier[2], Rayna Taback-Esra[2], Philippe Chiliade[2], Gurpreet Kindra[2], Mary Mogashoa[2], Jackie Paterson[3], Josephine Otchere-Darko[4], Dino Rech[5], Sandile Prusente[6], Romy Overmeyer[7], Yogan Pillay[7], Elliot Raizes[1], Amy Herman-Roloff[2], Melissa Briggs-Hagen[2]

[1] Centers for Disease Control and Prevention (CDC), Division of Global HIV & TB, Atlanta, GA, United States; [2] Centers for Disease Control and Prevention (CDC), Division of Global HIV & TB, Pretoria, South Africa; [3] Health Systems Trust (HST), Durban, South Africa; [4] Wits Reproductive Health and HIV Institute, University of the Witwatersrand, Johannesburg, South Africa; [5] The Aurum Institute, Johannesburg, South Africa; [6] TB HIV Care, Cape Town, South Africa; [7] National Department of Health (NDOH), Pretoria, South Africa

- Total of 31,315 reponses categorised, a total 29,102 included in the analysis
- Sample was 68% female, median age of 34 years and median duration on ART of 27 months
- Patient-based barriers (59%), clinic based (21%), structural (13%) and medical (7%)
- **32% of patients were misclassified as having missed their appointment due to data capture barriers**
  - **The most common reason for misclassification was "receiving ART through a DSD modality (55%)**
    - 34% transfer to another clinic
    - 11% visit not captured
- COnclusion that patient-based interventions such as appointment reminder and case managers would be beneficial
- *And that misclassification of those who are in a DSD model or who have transferred contributed significantly to data capture barriers*

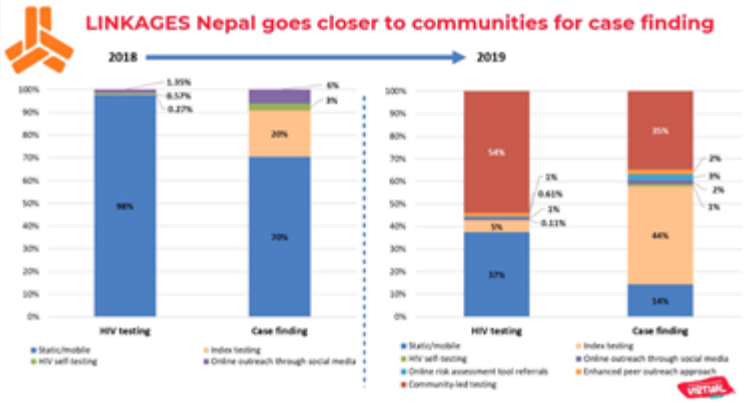
http://programme.aids2020.org/Abstract/Abstract/9451

10. TESTING AND LINKAGE

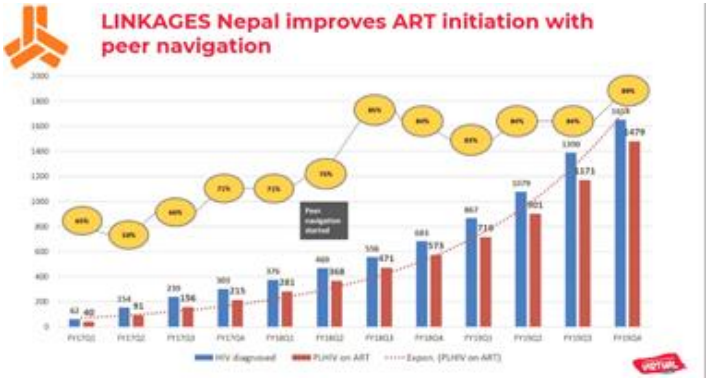
TESTING - Improvements in case finding with community-led testing, Nepal

HIV services closer to the communities: community-level interventions to optimize HIV case findings and treatment initiation in Nepal

Ashima Shrestha, FHI 360/LINKAGES Nepal Project



- Community-led testing increased number of cases identified including community index testing
- Peer navigation helped increase linkage
- http://programme.aids2020.org/Abstract/Abstract/6627



TESTING - Increased testing and yield with faith-based testing and ART initiation services, Zambia

Increased HIV case finding and efficiency through faith-engaged community posts: Catholic Relief Services Circle of Hope, Zambia (March 2018–September 2019)

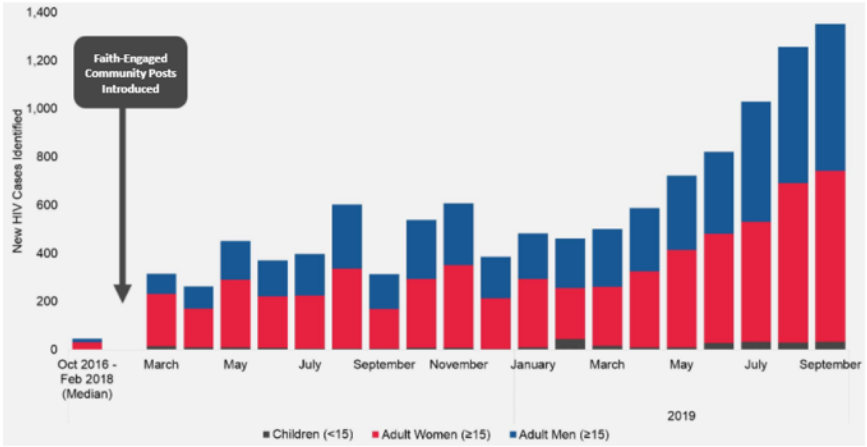
Minesh Shah[1], Gibstar Makangila[2], Albert Mwango[3], Olufunlola Adedeji[4], Susan Hillis[4], Nzali Kancheya[5], Kennedy Nkwemu[4], Idongiset Essiet-Gibson[5], Lauren Erickson Mamane[1], Isaac Zulu[2], Amy Medley[1], Kazadi Jean-Claude Mwayabo[3], Simon Agolory[4]
1. Division of Global HIV & Tuberculosis, Center for Global Health, Centers for Disease Control and Prevention, Atlanta, GA USA; 2. Circle of Hope, Lusaka, Zambia; 3. Catholic Relief Services, Lusaka, Zambia; 4. Office of the Global AIDS Coordinator, Washington, DC USA; 5. Center for Global Health, Centers for Disease Control and Prevention, Lusaka, Zambia

See also AIDS2020 Abstract PDE0302

#AIDS2020Virtual

- Set up faith-based service posts – testing, ART initiation and follow-up linked with parent clinic
  - in busy area with men and other underserved populations
- Only tested based on risk and index
- Testing and yield increased substantially especially for men
- PEPFAR linkage proxy – 103%

Figure. People living with HIV newly identified by CRS Circle of Hope before and after the introduction of faith-engaged community posts (March 2018)



http://programme.aids2020.org/Abstract/Abstract/8349

TESTING - Traditional healers supporting HIVST, Uganda

Informal providers can increase uptake of HIV testing among adults of unknown serostatus: Results from a cluster randomized pilot study in southwestern Uganda

Radhika Sundararajan, Weill Cornell Medical College

- Small testing intervention RCT
- Randomized traditional healers to either doing oral HIVST for clients or alternatively educating on HIV and referring to closest clinics
- 250/250 (100%) in intervention arm tested with 4% positive (10) and 7 started ART
- 57/250 (22.8%) tested at clinic with 0 new positives identified

http://programme.aids2020.org/Abstract/Abstract/5465

TESTING - Combining enhanced peer outreach and index testing, India

PDE0204

Combining enhanced peer outreach approach with index testing: A better strategy for reaching key populations at high risk in HIV-concentrated settings in India

Krishnan K,[1] Parthasarathy MR,[1] Paulraj AK,[1] Shreenivas GS,[1] Bhaisya J,[2] George B[1]

- Combined enhanced peer outreach approach with index testing

FIGURE 3. HIV case finding among MSM through EPOA: 6.09% (2018–2019)

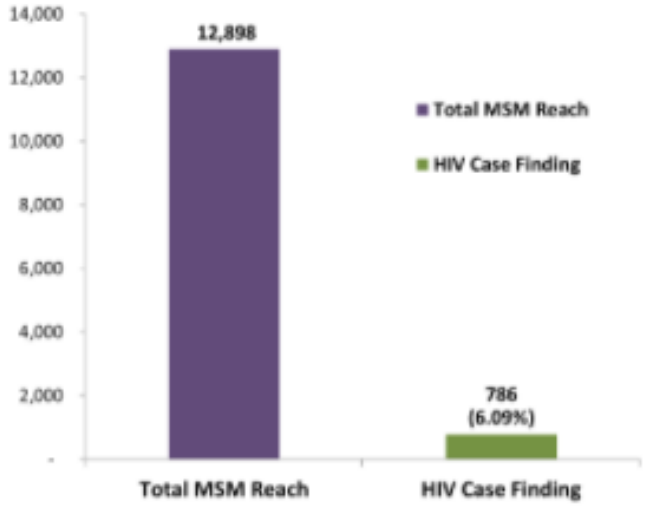
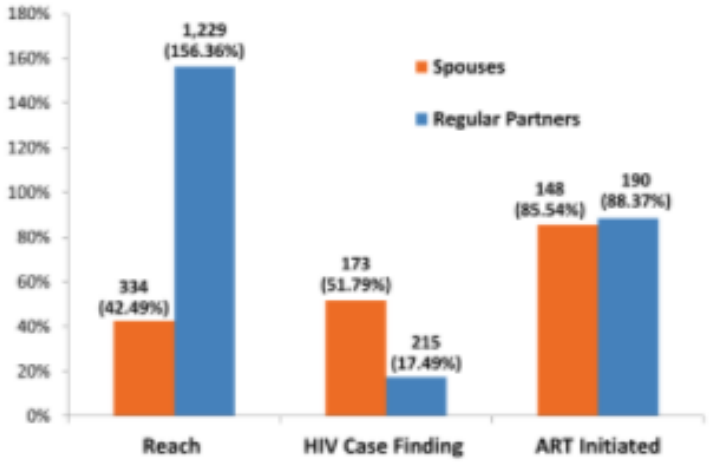


FIGURE 4. HIV case finding through EPOA index cases among spouses (51.79%) and regular partners (17.49%)



http://programme.aids2020.org/Abstract/Abstract/6176

TESTING & LINKAGE - ART initiation within key population drop-in centres, Cameroon

Sustained improvements in linkage to treatment among key populations in Cameroon

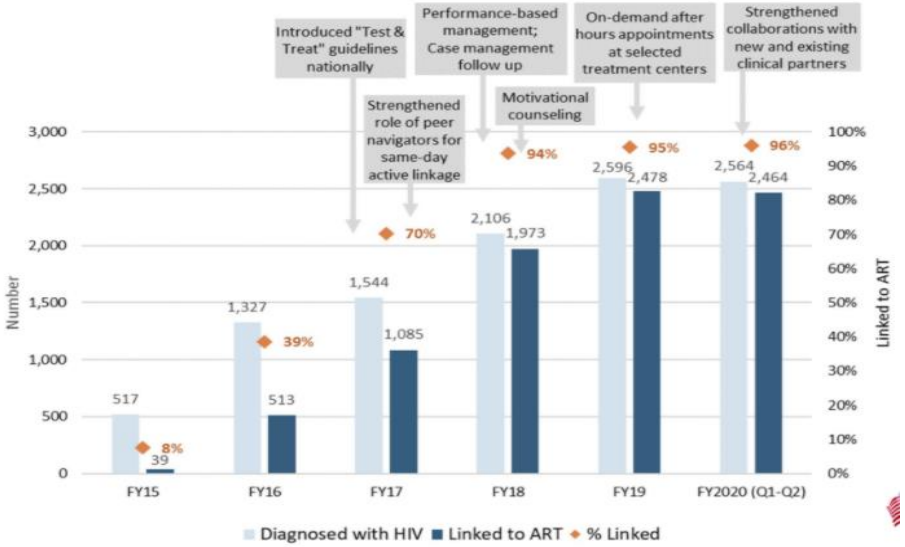
A.L. Bowring[1, 2], G. Fouda[3], C.S. Minka Minka[3], F. Ngueguim Gnintedem[3], I. Mfochive Nkindam[1, 3], G. Fako[2], D.A. Kob Ye Sam[4], Z. Zeh Aky[4], U. Tamoufe[3, 4], S. Baral[1], S. Georges[1], D. Levitt[1], S.C. Billong[4, 5], A.-C. Zoung-Kanyi Bissek[4, 10]
[1]Johns Hopkins School of Public Health, Department of Epidemiology, Baltimore, United States, [2]Burnet Institute, Melbourne, Australia, [3]CARE Cameroon, Yaounde, Cameroon, [4]Johns Hopkins Cameroon, Yaounde, Cameroon, [5]Metabiota, Yaounde, Cameroon, [6]USAID, Yaounde, Cameroon, [7]CARE USA, Atlanta, United States, [8]Groupe Technique Central, National AIDS Control Committee (CNLS), Yaounde, Cameroon, [9]University of Yaounde I, Faculty of Medicine and Biomedical Sciences, Yaounde, Cameroon, [10]Ministry of Health, Department of Operational Research, Yaounde, Cameroon

http://programme.aids2020.org/Abstract/Abstract/3533

Combined strategies to increase testing and linkage for MSM and FSW

On-site initiation at drop in centres/same day initiation/motivational interviewing/on demand appointment to link beneficiaries to treatment after hours/peer navigation and sensitizing health facilities

Figure 2. Linkage to ART among FSW and MSM at CHAMP sites in FY15 to FY20(Q1&Q2)

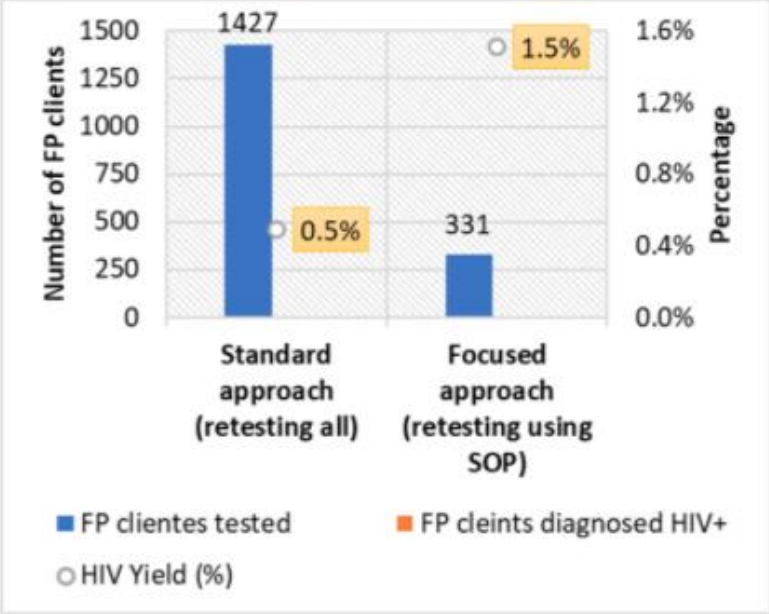


TESTING - Outcomes of differentiated ART testing: Family planning retesting, Angola

Optimization of HIV testing in the Family Planning Service in a Health Facility in Luanda, Angola

Raul Nhanombe[1], Carlos Laudari[1], João Pires[1], Joana Maria[1], Arieth Cruz[1], Amélia Ukuahamba[2], Marta Fonseca[2], Lúcia Furtado[3], Eduarda Gusmão[4], Juliana Soares Linn[4]

Figure 1 *Comparison of HIV positivity yield between standard approach and focused approach for HIV retesting in FP services.*



- Implemented family planning retesting SOP
- Reduced HIV tests provided from 1427 to 331
- Reduced HIV positives found 7 to 5
- Higher yield for fewer tests but missed 2 new positives

http://programme.aids2020.org/Abstract/Abstract/7654

TESTING - Different testing approaches to reach men, Uganda

Differentiated HIV Testing to Reach the male sub-population in Mubende Region-Uganda PEE1562

Andrew Mugisa[1], Betty Nakibuuka[1], Joseph Baruch Baluku[1], Jane Nakaweesi[1], Susan Nakubulwa[1] Catherine Senyimba[1]
[1]Mildmay Uganda

Lessons Learned

Period	Flexi Hour Testing		Social Network Strategy(SNS)		Assisted Partner Notification(APN)		HIV Self Testing(HIVST)		WorkPlace Testing		TOTAL HTS	TOTAL POS
	HTS	Pos	HTS	Pos	HTS	Pos	HTS	Pos	HTS	Pos		
Oct-Dec 2018					2354	504					2354	504
Jan-March 2019	1135	40			2207	446		10	3374	154	6716	650
April-June 2019	1809	78	293	28	2982	507		18	2107	107	7191	738
July-Sept 2019	2195	77	343	86	3141	699		6	3091	138	8770	1006
TOTAL	**5139**	**195**	**636**	**114**	**8330**	**1652**		**34**	**8572**	**399**	**22677**	**2394**
% Yield	**4%**		**18%**		**20%**				**5%**		**11%**	

- Implemented 4 testing approaches aimed at men – APN, social network testing at facilities, late hrs at 25 facilities, HIVST for partners of pregnant and breastfeeding women, workplace HTS using male champions

http://programme.aids2020.org/Abstract/Abstract/4868

TESTING & LINKAGE - Same day ART initiation, Uganda

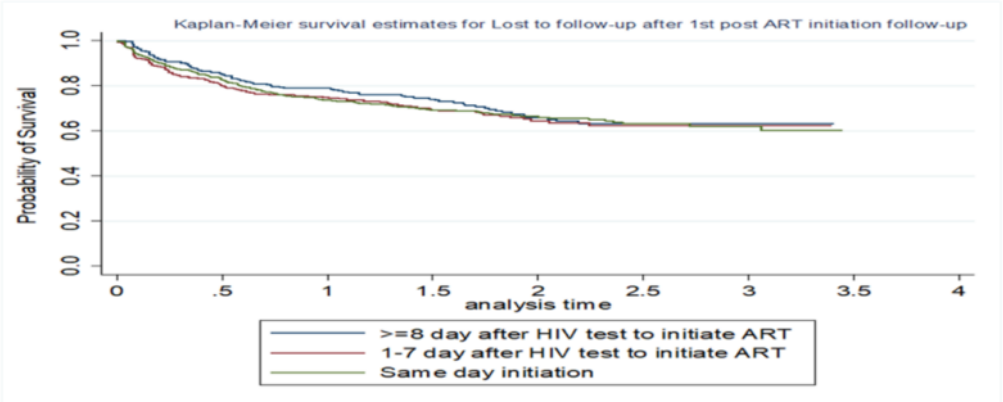
Effect of same-day ART initiation on early retention in Rakai, Uganda

PEE1646

Jesca Basiima1, Victor Ssempijja1,2, Anthony Ndyanabo1, Alice Kisakye1, Grace Mong Bua1, Denis Bbaale1, Larry Chang1,3, Nelson Sewankambo1,5, David Serwadda1,5, Lisa Mills6, Joseph Kagaayi1, Patrick Komakech6 , Gertrude Nakigozi1, Michelle R Adler6

[1]Rakai Health Sciences Program, Rakai, Uganda. [2]Clinical Monitoring Research Program Directorate, Frederick National Laboratory for Cancer Research sponsored by the National Cancer Institute. [3]Johns Hopkins School of Medicine, Baltimore, Maryland USA. [5]Makerere College of Health Sciences , [6] Centers for Disease Control and Prevention-Uganda

Time lapse from HIV test to ART initiation was not a significant predictor of long term retention



- Retrospective analysis – patients >18years initiating ART at 20 HIV facilities from April 2016-Sept 2019
- 1,873 patient with HIV test and ART initiation recorded – looked at return at 1m depending on whether:
  - same day initiation (61%),
  - 1-7 days (21%) or
  - 8+days (18%)
- Same day lower retention at 1m (82.1%), 1-7 days (91.7%), 8+days (93.9%).
- Long term term retention not impacted by time to start

http://programme.aids2020.org/Abstract/Abstract/5075

TESTING & LINKAGE - Integrated “Siyenza” approach to increase linkage and same-day initiation, South Africa

Increases in Proxy Linkage and Same-Day Initiation of Anti-Retroviral Therapy: Findings from the “Siyenza” Approach in South Africa

Jonathan M. Grund[1], Sarah E. Porter[1], Monica Patton[1], Vanessa Da Costa[1], Romy Overmeyer[2], Melissa Briggs-Hagen[1], Romel Lacson[1], Jackie Paterson[3], Dino Rech[4], Yogan Pillay[2], Amy Herman-Roloff[1]
[1]Centers for Disease Control and Prevention (CDC), Division of Global HIV & TB, Pretoria, South Africa [2]National Department of Health (NDOH), Pretoria, South Africa [3]Health Systems Trust (HST), Durban, South Africa [4]The Aurum Institute, Johannesburg, South Africa

Siyenza Interventions

- Implement program fundamentals well: HIV case finding; same-day ART initiation, immediate tracking and tracing for “out of care” clients, and transitioning stable clients into differentiated care
- Follow the data: reach men and young women with tailored programs; linking the missing PLHIV to ART
- Improve data systems and data use at all levels

Figure 1. Proportion of HIV positive clients initiated on ART increased in 69 Siyenza facilities in 5 districts in South Africa

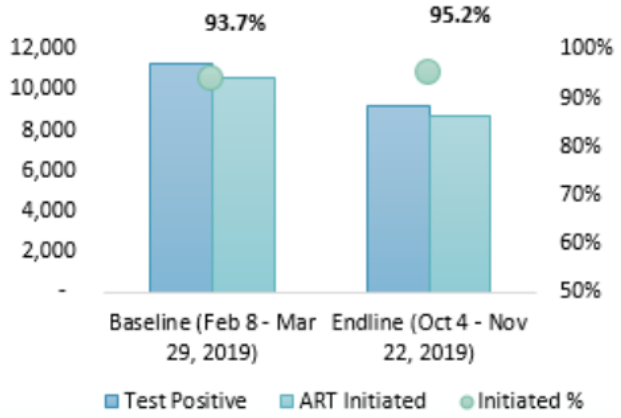
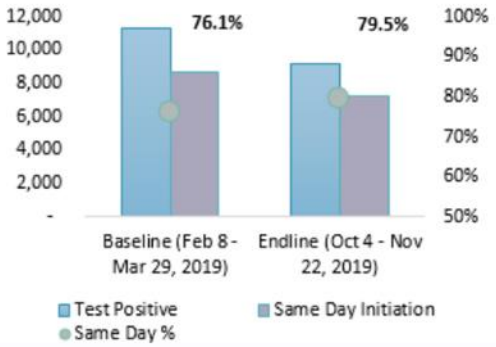


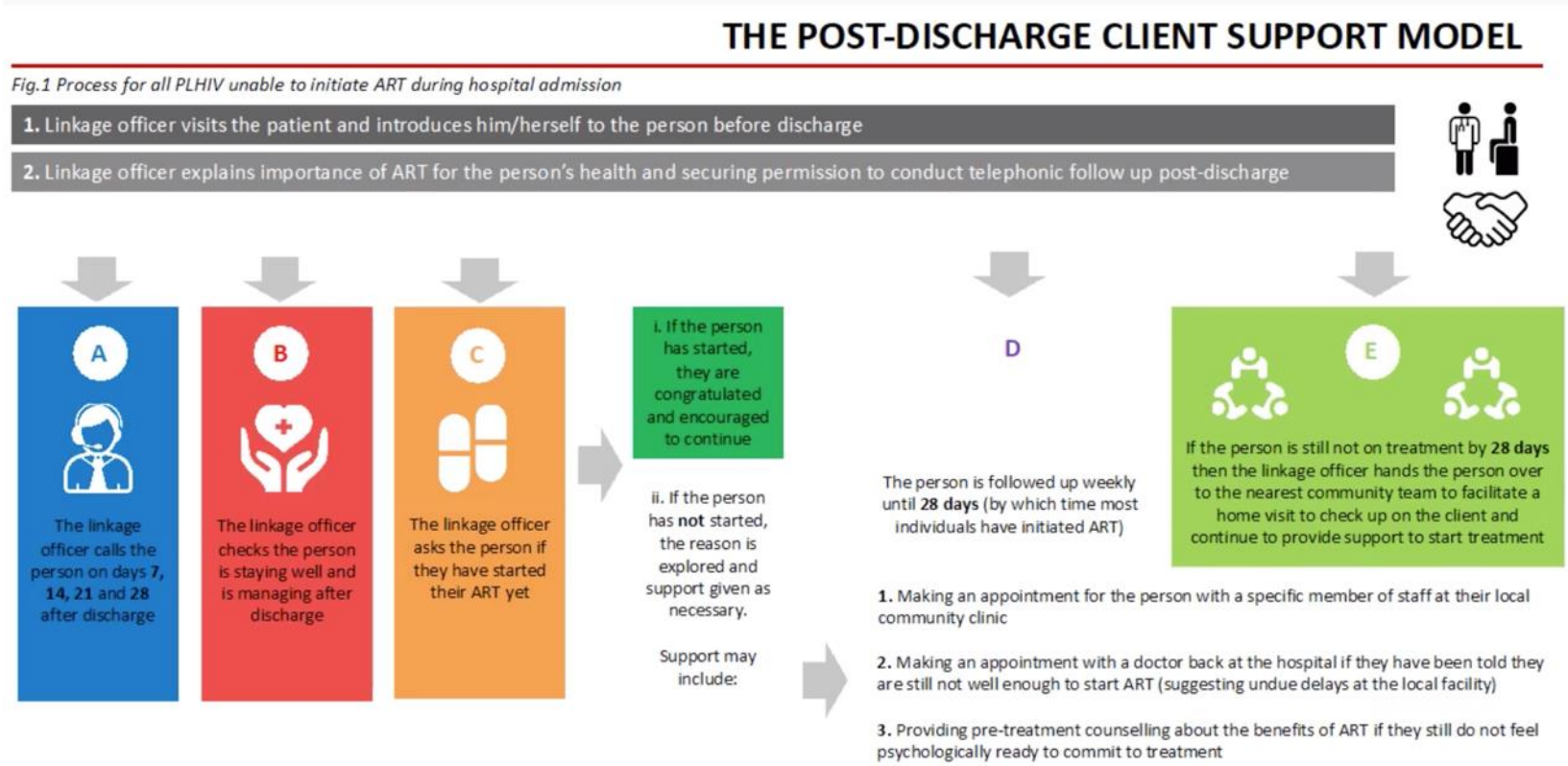
Figure 2. Proportion of same-day ART initiations increased in 69 Siyenza facilities in 5 districts in South Africa



http://programme.aids2020.org/Abstract/Abstract/8529

11. DSD AND ADVANCED HIV DISEASE

ADVANCED HIV DISEASE - Post discharge linkage for AHD patients, South Africa

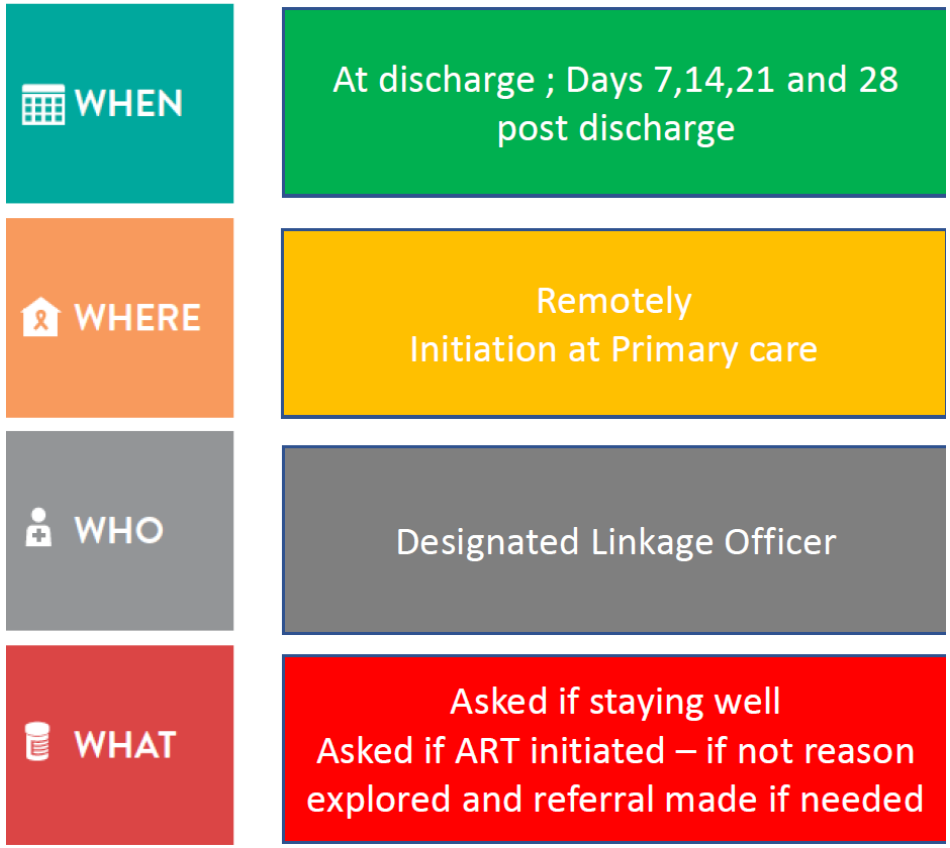


- Specific linkage officer visits patient before discharge
- Linkage officer makes call to patient at days 7,14,21 and 28 post discharge
- If ART not started linkage officer liaises with clinician at hospital, at primary care site and arranges home visit as needed

http://programme.aids2020.org/Abstract/Abstract/5558

ADVANCED HIV DISEASE - Post discharge linkage for AHD patients, South Africa (2)

- Before implementing the model, an average of **55%** of clients needing ART were confirmed to have initiated treatment following hospital admission.
- After implementation, **over 90%** of clients had initiated ART within 28-days post-discharge
- This model can be described using the building blocks approach



http://programme.aids2020.org/Abstract/Abstract/5558

ADVANCED HIV DISEASE - Building capacity for management of patients on advanced ART regimes through guided practice using telemonitoring, KENYA

OAE0403 - Building capacity for management of patients on advanced ART regimens through guided practice using the ECHO tele-monitoring model in Kenya

John Humphrey, Indiana University, School of Medicine

Results

Staff participant characteristics.

Characteristics	N=245 n (%)
Female	(68%)
Median age (IQR)	38 (33-43)
≥5 years of experience	167 (68%)
Type of staff	
Nurse	53 (22%)
Clinical officer	62 (25%)
Counsellor	79 (32%)
Nutritionist	17 (7%)
Social worker	10 (4%)
Other	25 (10%)

Key themes identified through SSIs.

Facilitators
- Participatory format
- Inclusion of multiple sites
- Access to experts
- Session coordinator
- Provision of pre-paid internet data bundles

Barriers
- Unstable internet
- Technology issues
- Rain (poor audio)
- Inadequate devices
- Schedule interruptions

Pre/post intervention questionnaire (n=32).

Attribute	Pre		Post	
	Mean	95% CI	Mean	95% CI
Manage patients on 2nd line ART	5.0	4.7-5.4	6.5	6.2-6.7
Switch ART for 2nd line failure	4.9	4.5-5.3	5.8	5.6-6.1
Manage patients on 3rd line ART	3.8	3.3-4.3	6.1	5.7-6.4
Identify barriers to adherence	5.8	5.6-6.1	6.0	5.7-6.4
Use MMAS-8 adherence scale	5.5	5.2-5.9	5.9	5.6-6.3
Provide adherence support	5.4	5.0-5.8	5.8	5.4-6.1
Construct a multidisciplinary team plan	5.2	4.7-5.5	5.9	5.6-6.2
Interpret a HIV drug resistance test	4.7	4.2-5.1	5.4	5.0-5.7

[a]Likert scale: 1 None or no skills — 2 Vague knowledge, skills or competence — 3 Slight knowledge, skills or competence — 4 Average among peers — 5 Competent — 6 Very competent — 7 Expert, teach others

- Zoom platform was used to assist clinicians at remote sites to make decisions to switch patients to second and third line
- Multi site covering 245 staff
- Increased confidence of staff in remote sites
- Reduced need for patients to travel to centralised sites

http://programme.aids2020.org/Abstract/Abstract/2359

12. DSD AND COVID-19

DSD in 2020 – Responding to the needs of people living with HIV before, during and after COVID-19

- **KENYA**
  - **DSD in Kenya's HIV programme before and during COVID-19**, Dr Catherine Ngugi, *National AIDS and STI Control Programme*
  - **Scaling up DSD in Kenya during COVID-19**, Dr Paul Wekesa, *Centre for Health Solutions*
- **CAPE TOWN, SOUTH AFRICA**
  - **Scale up and adaption of City of Cape Town Clubs**, Dr Beth Harley, *City of Cape Town*
- **SIERRA LEONE**
  - **Utilizing the Network of HIV Positives in Sierra Leone (NETHIPS) for DSD during COVID-19** , Idrissa Songo, *NETHIPS*
  - **Prioritized DSD implementation in Sierra Leone due to COVID-19**, Dr Alren Vandy, *National AIDS Control Programme*

Learning from and beyond COVID-19 for DSD, Lynne Wilkinson, *International AIDS Society*

http://differentiatedservicedelivery.org/resources/DSD_satellite_AIDS2020

DSD & COVID-19 – DSD policy adaptations in response to COVID-19

VIRTUAL AIDS2020 | POSTER NUMBER: **LBPEE44**

Rapid Adaptation of HIV Differentiated Service Delivery Program Design in Response to COVID-19: Results from 14 Countries in Sub-Saharan Africa

P. Preko[1], S. Shongwe[2], A. Abebe[3], A.O. Vandy[4], D. Aly[5], F. Boraud[6], S. Caldwell[7], R.I. Chuy[8], C. Gwanzura[9], H.N. Kambale[10], J. Kiggundu[11], L. Momanyi[12], P. Mulenga[13], S. Ngoma[14], M. Phokojoe[15], M. Rutaihwa[16], M. Rabkin[1]

- All 14 countries have adapted national DSD programmes
- Asked how DSD has changed of people within the department of health
- 10 have expanded MMD eligibility, four waiving VL suppressed, 6 permitting newly initiated, 3 including PBFW and virally suppressed children above 2 years. 7 have increased MMD and 9 enabled MMD of TPT

http://programme.aids2020.org/Abstract/Abstract/10900

Table 1 *DSD Policy Adaptations in Response to COVID-19 by CQUIN Member Countries*

Country	Expanding eligibility criteria for multi-month dispensing (MMD)?	Moving to 3-MMD or 6-MMD?	MMD for any non-ART meds?	Stopping or suspending any DSDM?	Changes to how group models work?	Changing approach to lab monitoring?
Cote d'Ivoire	Yes. Everyone on ART will now receive 3-MMD	Some pilots of 6-MMD underway.	No	Yes. Facility-based group models suspended.	No	No
DRC	Yes. Clinical stability can now be used to assess eligibility for 6-MMD. People newly on ART who are doing well after 3 months can receive 3-MMD.	Yes, for people who are "stable" on ART	Yes, for TB preventive tx (TPT) & cotrimoxazole (CTX)	No although larger groups discouraged.	Peers will supply ART to people difficult for health care workers to reach.	No
Eswatini	Yes. 3-MMD newly available for adults initiating ART and for virally suppressed children > 2 years of age	Yes. Aim is to provide 6-MMD to 20,000 clients on TLD and 20,000 clients on TLE	Yes, for TB treatment, TPT and NCD treatment	Yes. Facility-based teen clubs and adult treatment clubs have been suspended.	Community ART Group (CAG) meetings replaced by individual ARV distribution. Fast Track may change to 6-MMD, ART stock permitting	Yes. Deferring routine VL testing in some contexts.
Ethiopia	Yes. 3-MMD newly available to people w/ unsuppressed VL engaged in adherence counseling, people newly starting ART, children, adolescents, and pregnant & breastfeeding women.	No change. Both 3-MMD 6-MMD already available.	Yes, for TB treatment, TPT and NCD treatment	Yes. Some adolescent models and community group meetings suspended	Some community ART group members now receive 6MMD.	No
Kenya	Yes. Everyone on ART will now receive 3-MMD, irrespective of VL results.	No	Yes, for TB treatment.	No	No CAG meetings in the community. Members collect meds and leave.	Yes: No VL results required for 3-MMD
Liberia	Yes. MMD newly available to people on ART irrespective of VL. Those with advanced disease and newly initiating ART remain ineligible for MMD.	Strongly recommending 3-MMD for all and 6-MMD for virally suppressed clients when stocks allow	Yes, for TB treatment and TPT	No	N/A	No
Malawi	Yes. 6-MMD newly available for adults and children on TLD, ABC/3TC + DTG.	Yes. Pregnant women and lactating women will receive 3-MMD	Yes, for PrEP and some people on TPT.	Yes. Group models suspended, including Teen Clubs and patient support groups.	Virtual support services encouraged for teens previously meeting in Teen Clubs.	
Mozambique	Yes. Everyone on ART for 3 months now eligible for 3-MMD, irrespective of CD4 and VL results. Pregnant and BF women newly eligible for 3-MMD.	Yes, all HFs will now provide 3-MMD.	No	Yes, 6-MMD project for migrant workers suspended; other group meetings discouraged.	CAG members now get 3-MMD; group meetings suspended. Home delivery of ART initiated.	No
Sierra Leone	Yes, everyone on ART will receive 3-MMD, including those newly initiated on ART if clinically stable.	Moving to 3-MMD	Yes, for TB treatment, CTX and TPT	No	No	No
South Africa	Yes, some people on TLD will be eligible for 3-MMD.	Plan to expand 3-MMD and 6-MMD suspended due to fear of ART supply interruption; pilot of 6-MMD will continue in 2 districts.	No	Yes, people in facility-based models shifting to external pick up points or community clubs.	No.	No
Tanzania	No	No	Yes, for TPT and NCD treatment.	Teen/adolescent clubs suspended	No	Yes, people stable on ART should defer routine lab testing
Uganda	Yes. MMD newly available to people on ART irrespective of VL or age. Those with advanced disease, newly initiating ART, pregnant or BF remain ineligible.	Moving from 3-MMD to 6-MMD if ART stocks permit.	Yes, for TPT.	Yes. Facility-based groups have been suspended		No
Zambia	No	Moving to 6-MMD for people > 10 years old "stable" on ART, excluding pregnant women. Moving to 3-MMD for stable children 2-10 years	Yes, for TPT.	No	3-MMD instead of monthly ART pickup for CAG members.	No
Zimbabwe	No	Moving to 6-MMD for adolescents, people > 50 years and those with co-morbidity, if ART available.	Yes, for TPT	Yes. Facility-level groups suspended and community ART groups no longer meeting.	CAGs distribute ART to participants, but not meeting as a group.	No

DSD & COVID-19 – Expanding DSD in response to COVID-19, Trinidad and Tobago

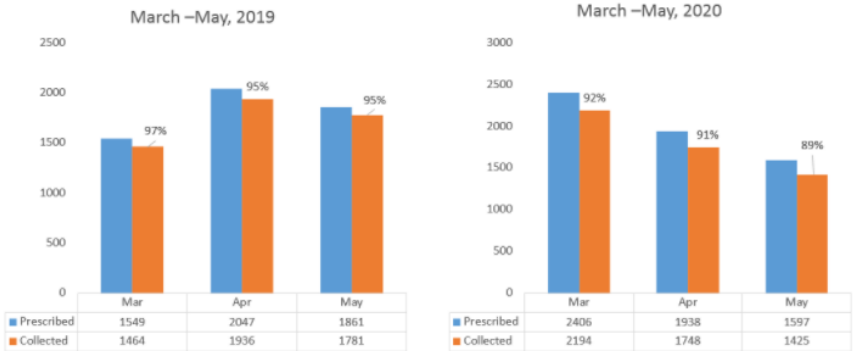
Using differentiated models of care (DSD) to maintain gains in ART retention during the COVID-19 pandemic: Lessons from a large HIV treatment facility in Trinidad and Tobago

Presenting Author: N. Lyons (nlyons@mrftt.org)

Contributing Authors: J. Edwards, I John, S. Todd, I. Marcellin- Wiseman, W. Samaroo-Francis, O. Lavia, G. Boyce

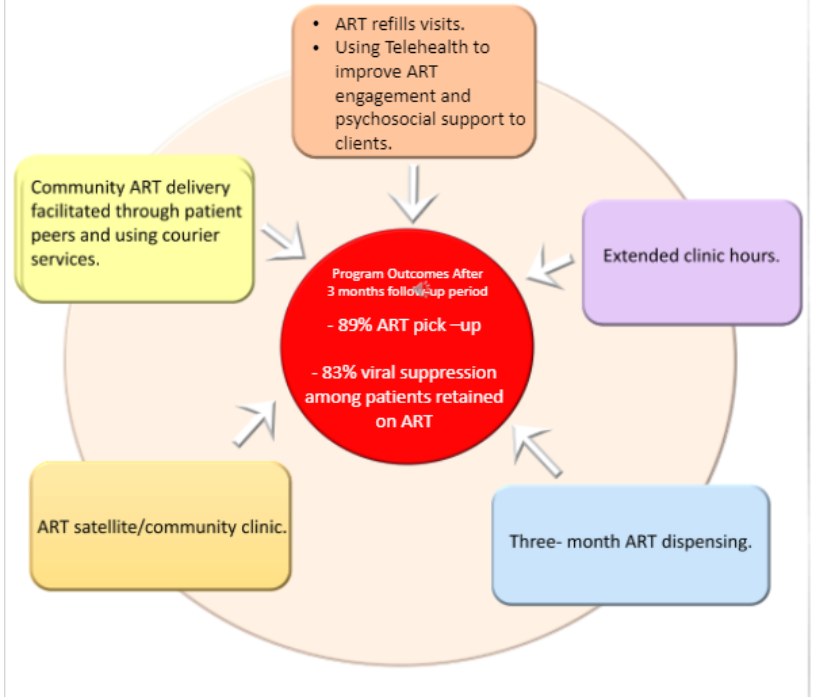
Medical Research Foundation of Trinidad and Tobago

Figure 3: Antiretroviral Treatment (ART) Pick–Up: Mar –May (2019, 2020)



http://programme.aids2020.org/Abstract/Abstract/11805

Prioritizing Complementary Models of Differentiated ART Delivery during COVID-19 "stay-at-home" orders (March –May, 2020)

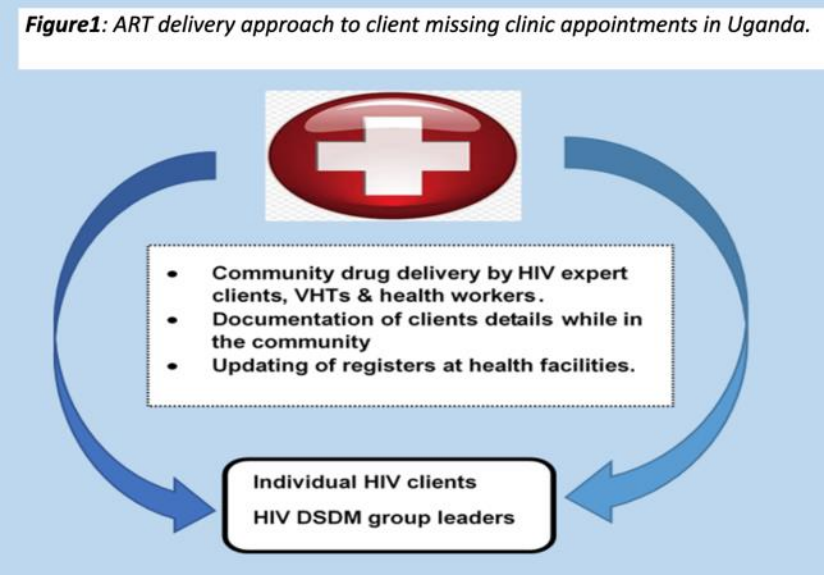


DSD & COVID-19 - Costs of community-based antiretroviral therapy delivery due to COVID-19 lockdown, Uganda

Estimated costs of community-based antiretroviral therapy delivery amidst COVID-19 lockdown in mid-Western Uganda.

Authors: Rogers Ssebunya[1], Peter Elyanu[1], Hilda N. Sekabira[1], Patricia Nahirya-Ntege[1], Heather Haq[2], Adeodata Kekitiinwa[1]
Affiliations: [1]Baylor College of Medicine Children's Foundation, Uganda. [2]Baylor College of Medicine, Houston, Texas

Abstract #: LBPEE51



- Estimated additional costs for home-delivery of HIV medicines as as result of lockdown
- Additional costs included: staff transport and allowance, motorcycle repair, purchase of delivery envelopes and airtime
- Calculated cost/ patient and estimated regional cost for those who would be unable to attend due to lockdown
- Cost was $2.80/patient and an additional $34,000 would be needed to reach 15,000 patients who would miss appointments during a 6-month lockdown.

http://programme.aids2020.org/Abstract/Abstract/11479