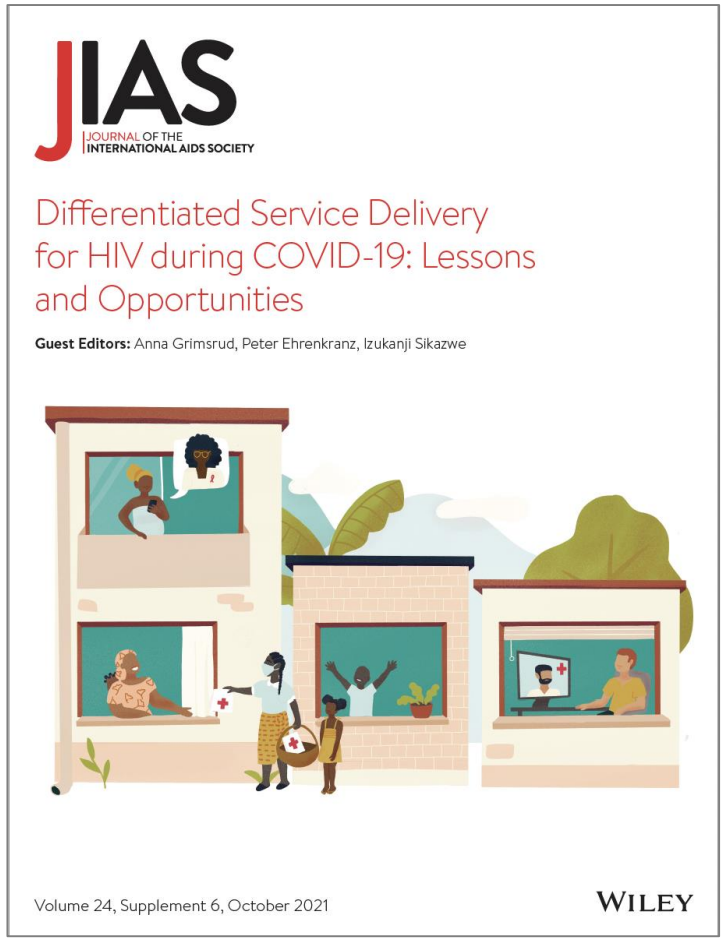

Differentiated service delivery for HIV during COVID-19: Lessons and opportunities

Follow up on the JIAS supplement

https://bit.ly/DSD-HIV

Anna Grimsrud, IAS – the International AIDS Society
Izukanji Sikazwe, Centre for Infectious Disease Research in Zambia (CIDRZ)

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Today

Introduction and overview	Anna Grimsrud, IAS – International AIDS Society, South Africa & Izukanji Sikazwe, Centre for Infectious Disease Research in Zambia (CIDRZ), Zambia
Differentiated service delivery for HIV treatment during the COVID-19 pandemic: Descriptive analysis of programmatic data from Nigeria	Olusola Sanwo, FHI 360, Nigeria
Distribution of antiretroviral therapy through private pharmacies and postal courier services during COVID-19 in Botswana: acceptability and reach of two out-of-facility individual differentiated service delivery models	Masego Gilbert, FHI 360, Botswana
Supporting PrEP access for female sex workers in Zimbabwe during COVID-19 lockdown with community-based delivery, extended PrEP refills and virtual support during COVID-19 lockdown	Primrose Matambanadzo, Centre for Sexual Health and HIV/AIDS Research (CeSHHAR), Zimbabwe
Changes in utilization of DSD for HIV treatment during COVID-19 in Zambia	Youngji Jo, Boston Medical Centre, USA and Bevis Phiri, Clinton Health Access Initiative (CHAI), Zambia
Silver linings: How COVID-19 expedited differentiated service delivery for HIV	Peter Ehrenkranz, Bill & Melinda Gates Foundation (BMGF), USA

Tran CH et al. *Journal of the International AIDS Society* 2021, **24**(S6):e25809
http://onlinelibrary.wiley.com/doi/10.1002/jia2.25809/full | https://doi.org/10.1002/jia2.25809

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COMMENTARY

Tuberculosis treatment within differentiated service delivery models in global HIV/TB programming

Cuc H. Tran[1,§], Brittany K. Moore[1], Ishani Pathmanathan[1], Patrick Lungu[2], N. Sarita Shah[3], Ikwo Oboho[1], Teeb Al-Samarrai[4], Susan A. Maloney[1], Anand Date[1] and Andrew T. Boyd[1]

McGinnis KA et al. *Journal of the International AIDS Society* 2021, **24**(S6):e25810
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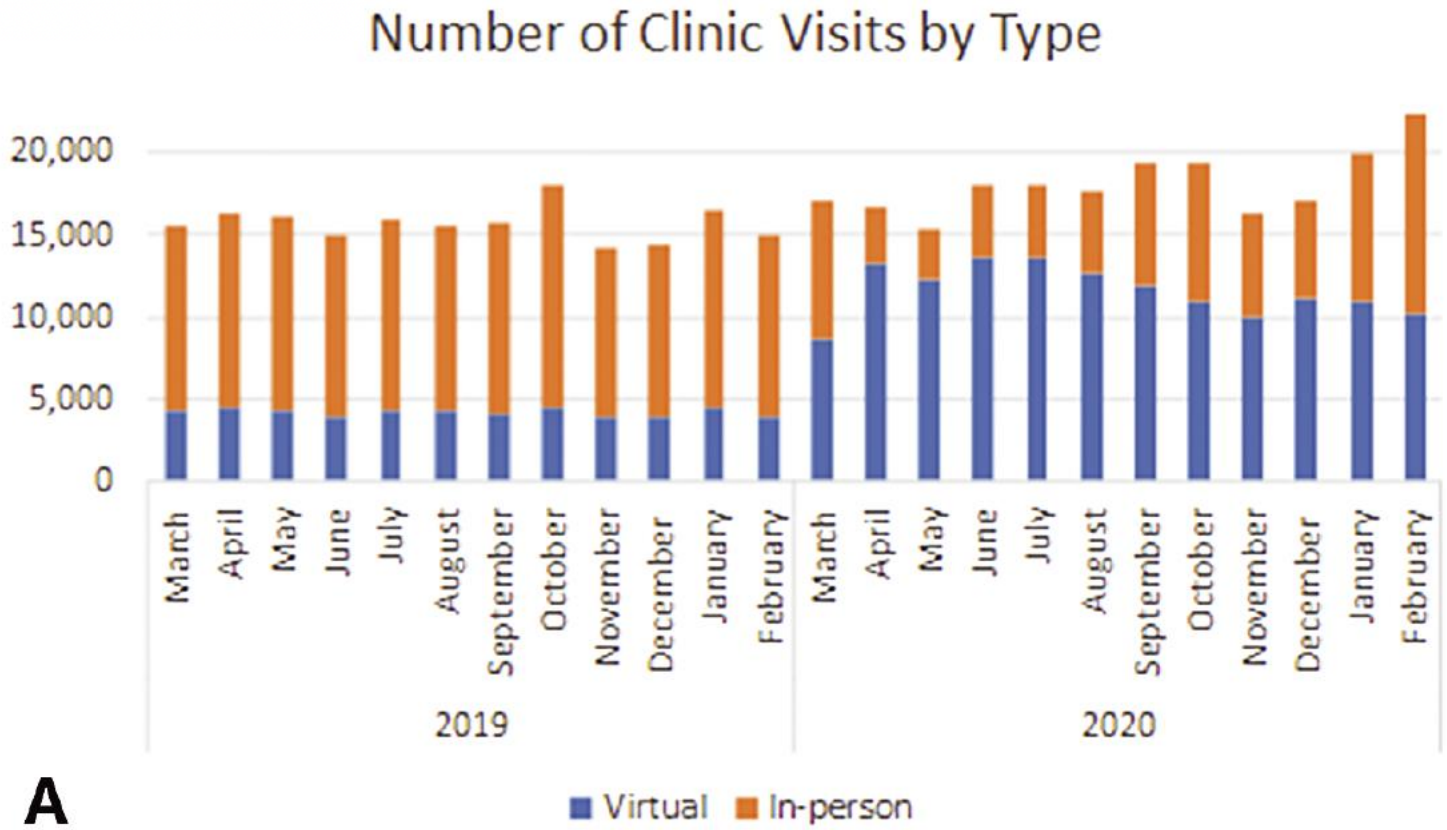
RESEARCH ARTICLE

HIV care using differentiated service delivery during the COVID-19 pandemic: a nationwide cohort study in the US Department of Veterans Affairs

Kathleen A. McGinnis[1,§], Melissa Skanderson[1], Amy C. Justice[1,2], Kathleen M. Akgün[1,2], Janet P. Tate[1,2], Joseph T. King Jr.[1,2], Christopher T. Rentsch[1,2,3], Vincent C. Marconi[4], Evelyn Hsieh[1,2], Christopher Ruser[1,2], Farah Kidwai-Khan[1,2], Roozbeh Yousefzadeh[1,2], Joseph Erdos[1,2] and Lesley S. Park[5]

"During the COVID-19 pandemic, the VA increased the use of virtual visits and longer ARV refills, while maintaining a high percentage of patients with suppressed VL among those with VL measured. Despite decreased in-person services during the pandemic, access to ARVs was not disrupted."



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RESEARCH ARTICLE

Evaluation of the integration of telehealth into the same-day antiretroviral therapy initiation service in Bangkok, Thailand in response to COVID-19: a mixed-method analysis of real-world data

Sorawit Amatavete[1,§,*], Sita Lujintanon[1,*], Nipat Teeratakulpisarn[1], Supanat Thitipatarakorn[1], Pich Seekaew[1,2], Chonticha Hanaree[1], Jirayuth Sripanjakun[1], Chotika Prabjuntuek[1], Lertkwan Suwannarat[1], Thana Phattanathawornkool[1], Nuttawoot Photisan[1], Sujittra Suriwong[1], Matthew Avery[3], Stephen Mills[3], Praphan Phanuphak[1], Nittaya Phanuphak[1] and Reshmie A. Ramautarsing[1]

"We needed to find a way for clients to get their ART and receive the [medical services] as if they came to the clinic. This led to the [incorporation of] the telehealth follow-up via video call. We chose the technological tools that are widely available, which are smartphone and LINE application. If the clients could not do telehealth because they didn't have a phone or internet, they could still come to the clinic, given how small the outbreak was in our country". – *Physician 1*

"We found that participants were appreciative of adaptations of the national AIDS program to ensure continuity of services, such as MMD and home/community-based ART delivery"

Pollard R et al. *Journal of the International AIDS Society* 2021, **24**(S6):e25800
http://onlinelibrary.wiley.com/doi/10.1002/jia2.25800/full | https://doi.org/10.1002/jia2.25800

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RESEARCH ARTICLE

HIV service delivery in the time of COVID-19: focus group discussions with key populations in India

Rose Pollard[1,§], Usha Gopinath[2], Yeruva A. Reddy[1], Bogam R. Kumar[2], Parthasarathy Mugundu[1], Canjeevaram K. Vasudevan[2], Aylur K. Srikrishnan[2], Aditya Singh[1], Allison M. McFall[3], Kenneth H. Mayer[4,5], Shruti H. Mehta[3] and Sunil S. Solomon[1]

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RESEARCH ARTICLE

Differentiated service delivery for people using second-line antiretroviral therapy: clinical outcomes from a retrospective cohort study in KwaZulu-Natal, South Africa

Lara Lewis[1], Yukteshwar Sookrajh[2], Kelly Gate[3,4], Thokozani Khubone[2], Munthra Maraj[2], Siyabonga Mkhize[3], Lucas E. Hermans[3,5,6], Hope Ngobese[2], Nigel Garrett[1,7] and Jienchi Dorward[1,8,§]

"In this retrospective cohort study of 61 public sector clinics in South Africa, we found that among PLHIV receiving second-line ART, those who were referred into a community differentiated ART delivery programme had comparable retention in care and viral load outcomes to those who continued to collect ART in clinics."

"Community-based DSD incorporating three- and six-monthly ART refills and single annual clinical visits were at least non-inferior to standard facility-based care amongst newly stable ART clients aged ≥25 years."

Fatti G et al. *Journal of the International AIDS Society* 2021, **24**(S6):e25819
http://onlinelibrary.wiley.com/doi/10.1002/jia2.25819/full | https://doi.org/10.1002/jia2.25819

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SHORT REPORT

Community-based differentiated service delivery models incorporating multi-month dispensing of antiretroviral treatment for newly stable people living with HIV receiving single annual clinical visits: a pooled analysis of two cluster-randomized trials in southern Africa

Geoffrey Fatti[1,2,§], Nicoletta Ngorima-Mabhena[1], Appolinaire Tiam[3], Betty Bawuba Tukei[4], Tonderai Kasu[5], Trish Muzenda[1,6], Khotso Maile[4], Carl Lombard[2,7], Charles Chasela[8,9] and Ashraf Grimwood[1]

Bailey LE et al. *Journal of the International AIDS Society* 2021, **24**(S6):e25794
http://onlinelibrary.wiley.com/doi/10.1002/jia2.25794/full | https://doi.org/10.1002/jia2.25794

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SHORT REPORT

The impact of COVID-19 on multi-month dispensing (MMD) policies for antiretroviral therapy (ART) and MMD uptake in 21 PEPFAR-supported countries: a multi-country analysis

Lauren E. Bailey[1,§], George K. Siberry[1], Patricia Agaba[2,3], Meaghan Douglas[1], Jessica R. Clinkscales[1] and Catherine Godfrey[4]

"The COVID-19 adaptations to MMD policy created an enabling environment for accelerating MMD uptake and extending dispensing intervals, particularly among clients < 15 years of age."

Table 2. Proportion and absolute number of all ART clients on MMD in 21 PEPFAR-supported countries (October 2019–December 2020)

Quarter	Clients on ART	3–5MMD (%)	6MMD (%)	Total MMD (%)
Q4 2019	10,372,711	4,180,036 (40%)	913,525 (9%)	5,093,561 (49%)
Q1 2020	10,703,679	5,198,528 (49%)	1,014,704 (9%)	6,213,232 (58%)
Q2 2020[1]	11,121,591	6,134,728 (55%)[a]	1,917,047 (17%)[b]	8,051,775 (72%)[c]
Q3 2020	11,476,916	6,196,129 (54%)	2,308,130 (20%)	8,504,259 (74%)
Q4 2020	11,656,878	6,227,107 (53%)	2,517,943 (22%)	8,745,050 (75%)

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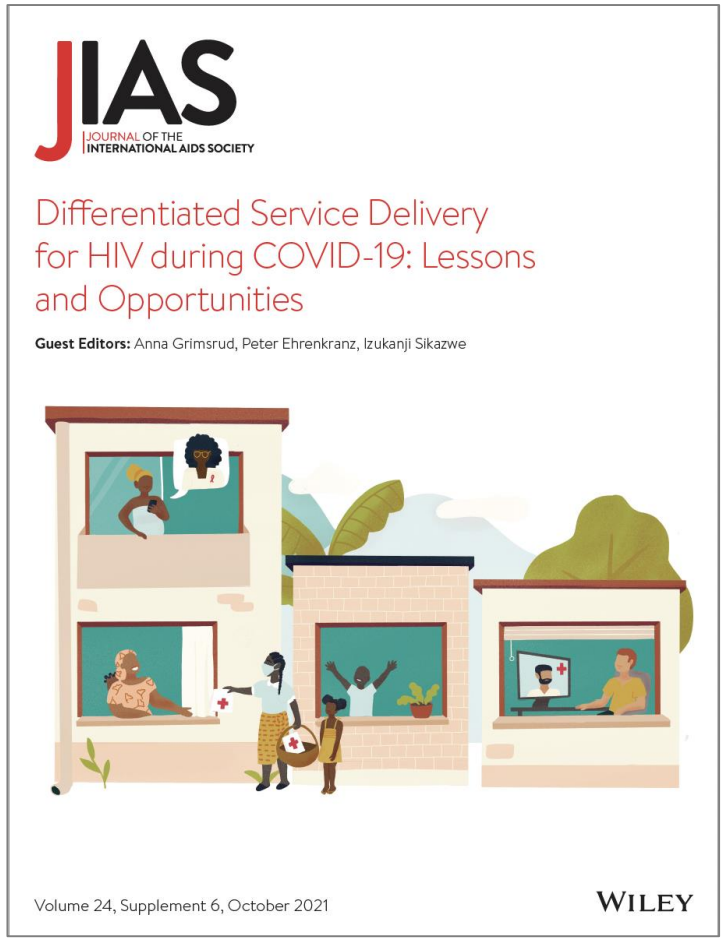


https://bit.ly/DSD-HIV

Differentiated service delivery for HIV treatment during the COVID-19 pandemic: Descriptive analysis of programmatic data from Nigeria

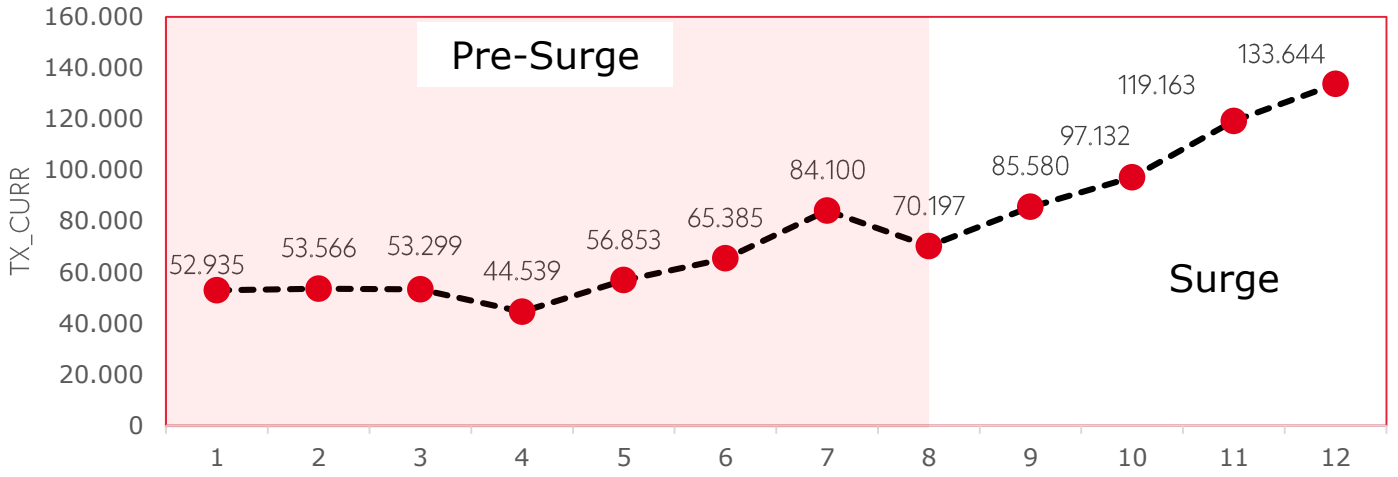
Olusola Sanwo
FHI 360
osanwo@fhi360.org

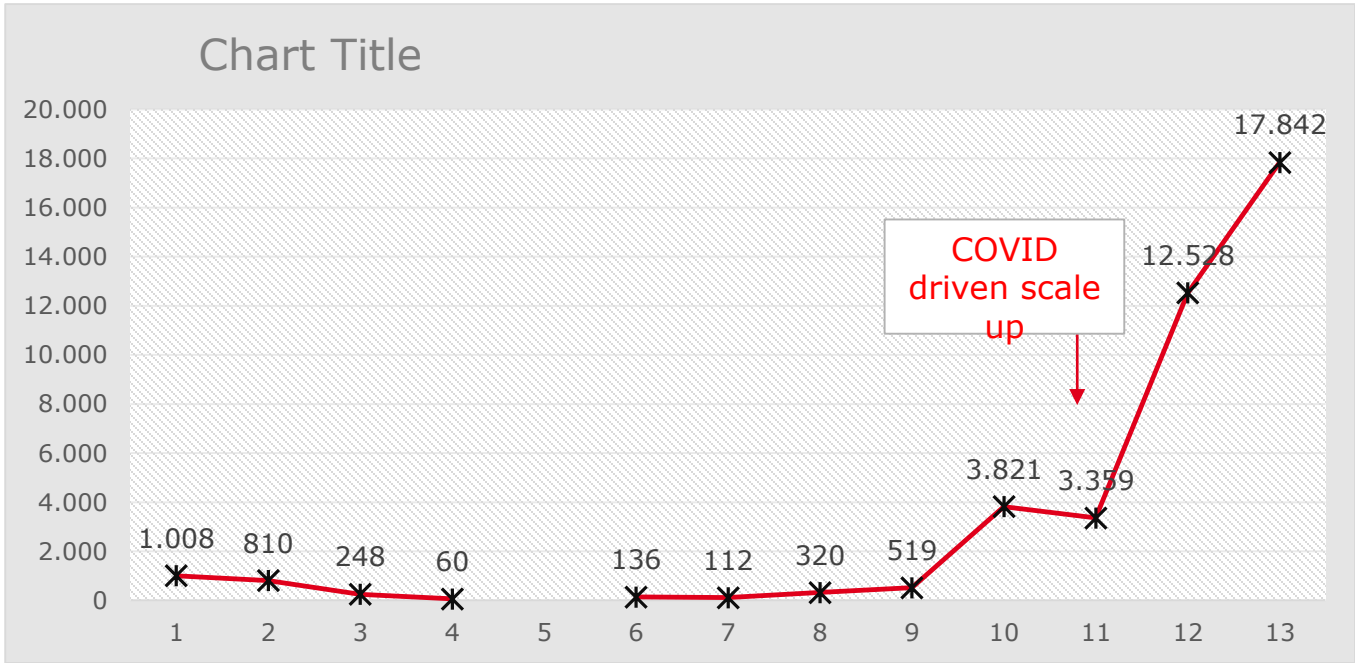
https://bit.ly/DSD-HIV

Background

- The USAID funded Strengthening Integrated Delivery of HIV/AIDS Services (SIDHAS) project supported HIV services in two states (Akwa Ibom and Cross River states) in Nigeria
- The Surge caused a rapid increase in PLHIV on ART over a 3-year period which led to overcrowding and long wait times in facilities
- To address this, clients were devolved to five DSD models
- Due to COVID-19 related travel restrictions, out-of-facility models were key mechanisms for service delivery.

Access to care and treatment rapidly expanded during the Surge





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DSD models

These DSD models were

- ARC – Adolescent Refill Clubs
- CPARPs – community pharmacy ART refill programs
- CARCs – community ART refill clubs
- CARGs – community ART refill groups
- FTRs –fast-track refills,

	ARC	CPARP	CARCs	CARGs	FTRs
WHEN	Fixed (After Work Hours)	Flexible	Flexible	Flexible	Fixed (Working Hours)
WHERE	Health facility	Community Pharmacies	Community Centers	Client's Homes	Health facility
WHO	Nurses and Pharmacist	Private Pharmacists	Community teams – Clinicians /Pharmacist	Peers	Clinicians, Nurses and Pharmacists
WHAT	Individual counselling, drug refills and viral load sample collection	Individual counselling, and drug refills	Clinical consultation, individual counselling, drug refills and VL sample collection	Individual counselling, and drug refills	Clinical consultation, individual counselling, drug refills and VL sample collection

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Methodology

- Retrospective cohort study of people living with HIV receiving ART in 151 health facilities, January 2018-December 2020
- We compared retention and viral suppression among those devolved to DSD with those who continued standard care at facilities.
- Used Data from Electronic Medical Records
- Outcomes: Client retention and viral suppression
  - Retained in care defined as their next pickup date for ART was after December 31, 2020
  - Viral suppression defined as a recorded viral load <1,000 copies/ml
- Kaplan-Meier assessed retention at 3-, 6-, 9-, and 12-months.
- Differences in proportions were compared using the chi-square test; bivariate analyses were conducted to assess retention and viral suppression by sociodemographic characteristics

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Results

- A total of 133,644 PLHIVs were receiving ART.
  - 92,844 (69.5%) received ART at the facilities
  - 40,800 (30.5%) devolved to DSD models.
    - CARC (53%), FT (19.1%), ARC (12.1%), CPARP (10.4%), and CARG (5.4%).

Table 2. Number of PLHIV devolved at different times

Time period	Number (%) devolved
January 2018–December 2019	3250 (7.96%)
January–March 2020	3821 (9.4%)
April–June 2020	3359 (8.2%)
July–September 2020	12,528 (30.7%)
October–December 2020	17,842 (43.7%)
Total	40,800 (100%)

PLHIV, people living with HIV.

Table 3. Characteristics of people receiving treatment through different methods

	CARC *n* (%)	FT *n* (%)	ARC *n* (%)	CPARP *n* (%)	CARGs *n* (%)	Standard care *n* (%)
Sex						
Male	8525 (39.6)	2208 (28.4)	979 (19.19)	1534 (36.2)	828 (37.9)	33,047 (35.5)
Female	13,000 (60.4)	5569 (71.6)	3933 (80.1)	2705 (63.8)	1355 (62.1)	59,961 (64.5)
Age (years)						
<20	721 (3.3)	193 (2.5)	1829 (37.1)	38 (0.9)	131 (6.0)	3992 (4.3)
≥20	20,867 (96.7)	7591 (97.5)	3098 (62.9)	4278 (99.1)	2054 (94.0)	89,016 (95.7)
Median (IQR)	35 (29–42)	37 (31–45)	20 (18–22)	41 (35–48)	34 (28–41)	36 (29–43)
Total	21,588	7784	4927	4316	2185	93,008

Abbreviations: ARC, adolescent refill clubs; CARC, community ART refill clubs; CARG, community ART refill groups; CPARP, community pharmacy refill programs; FT, fast track; IQR, inter-quartile range.

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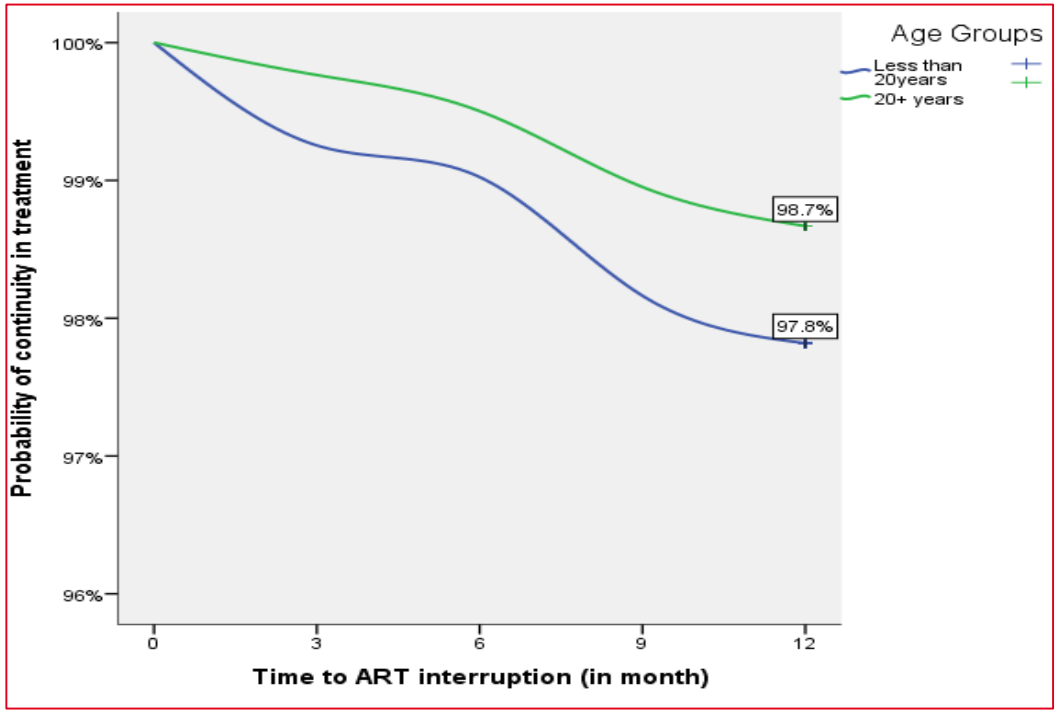
Results

- Retention rates at 6 months exceeded 96% for all models compared to 94% among those continuing standard care.
- Among those devolved to DSD,
  - Retention rates at 12 months were significantly higher among those who were 20 years or older (98.7%) compared to those less than 20 (97.8%), and children (96.7%)
  - Higher retention (98.2%) among children in the ARCs than their peers who continued to receive standard care at facilities (93.6%)
  - No significant differences in retention rates were found among males and females



Retention by aggregated period - Total DSD							
Period	Elements	ARC	CARC	CPARP	Fast track	CARG	Total
3 months (July - Sept 2020)	% continued in treatment	99.50%	99.50%	99.20%	99.70%	99.74%	99.50%
6 months (April - June 2020)	% continued in treatment	97.60%	98.30%	98.50%	99.00%	100.00%	98.40%
9 months (Jan - March 2020)	% continued in treatment	97.00%	96.30%	97.70%	100.00%	98.77%	97.00%
12 months (Oct - Dec 2019)	% continued in treatment	96.60%	86.40%	98.20%	100.00%	50.00%	89.50%

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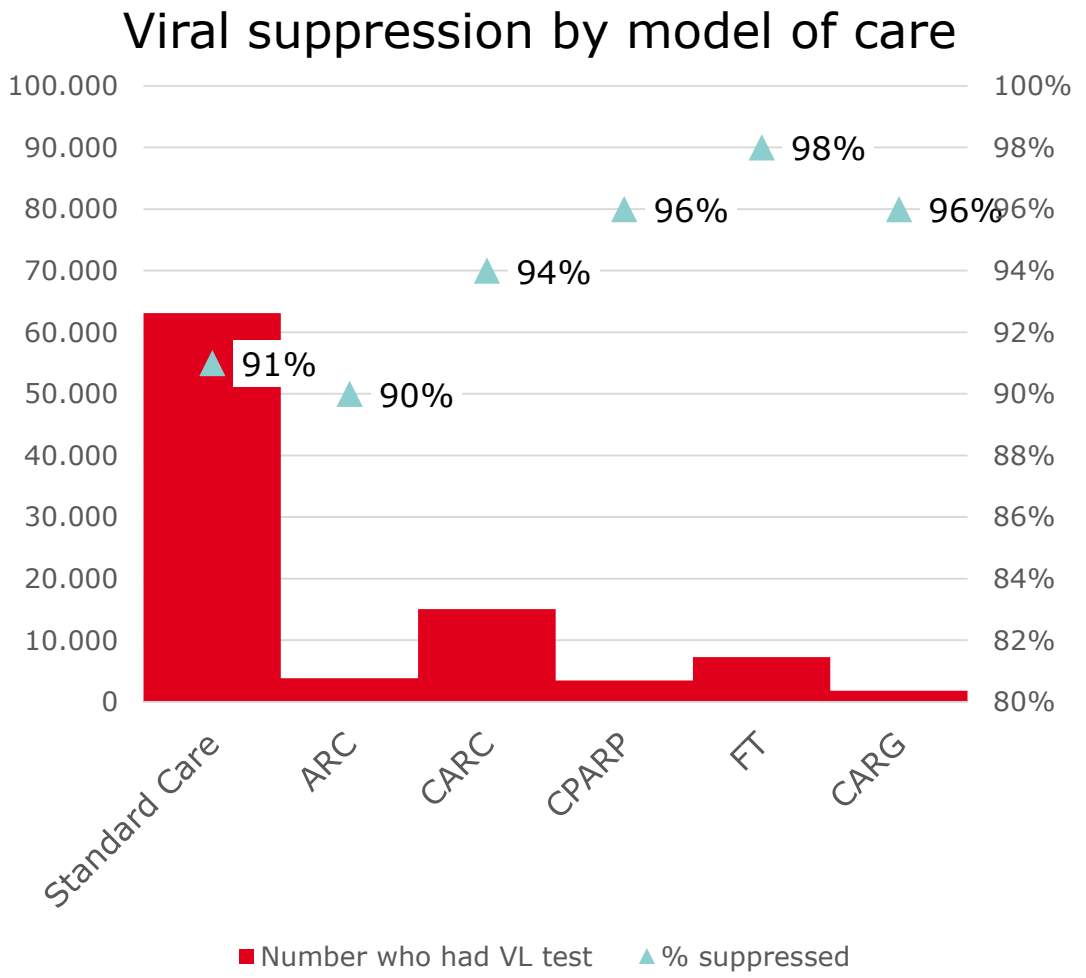
Results

- Overall viral suppression was higher among DSD participants compared to those who continued to receive standard care at facilities (94.9% vs. 91.5%).
- Viral suppression rates among those served through DSD were significantly higher among adults than children (95.4% vs. 89.2%).
- Among adults, 95.4% enrolled in DSD were virally suppressed compared to 91.8% of those in standard care.
- For children, 89.2% enrolled in DSD were virally suppressed compared to 83.2% in standard care.



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Strengths and limitations

Strengths

- Large sample size
- Use of program data

Limitations

- The eligibility criteria for some of the DSD models required clients to be stable on treatment. These clients would more likely also be retained in care and maintain their VL suppression.
- Majority of the patients were devolved during the last six-month resulting in a relatively short follow-up period resulting in limited ability to make inferences about the longer-term outcome across the DSD models.
- Use of program data has inherent weaknesses such as missing data and inconsistencies that could affect generalizability of the results.

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Conclusion and next steps

Conclusion

- PLHIV receiving ART through DSD models had better treatment retention and viral suppression rates than those receiving ART through standard care at facilities.
- Expanding DSD treatment models during the COVID-19 pandemic, especially the community-based models, helped ensure uninterrupted access to ART in Nigeria.

Next Steps

- Further scale-up of various DSD models to improve clinical outcomes among people living with HIV
- Disseminate findings and share learnings with projects working in similar environments.

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Thank you

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Navindra Persaud, Pius Nwaokoro, Augustine Idemudia, Uduak Akpan, Otoyo Toyo, Philip Imohi, Titilope Badru, Chika Obiora-Okafo, Chimamaka Excellence Uzochukwu, Oluwapelumi Aliu, Kolawole Olatunbosun, Satish Raj Pandey, Hadiza Khamofu, Robert Chiegil, Ezekiel James, Isa Iyortim, Dorothy Oqua, Moses Bateganya

Distribution of antiretroviral therapy through private pharmacies and postal courier services during COVID-19 in Botswana: Acceptability and reach of two out-of-facility individual differentiated service delivery models

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https://bit.ly/DSD-HIV

Background

- HIV prevalence in Botswana is the third highest globally - 20.3% among those 15 years and above
- Overcrowded and stretched health system
- Further exarcabated during COVID-19
- Epic Project, funded by USAID piloted decentralized drug distribution models to prevent interruption of ART refills for people living with HIV during COVID-19

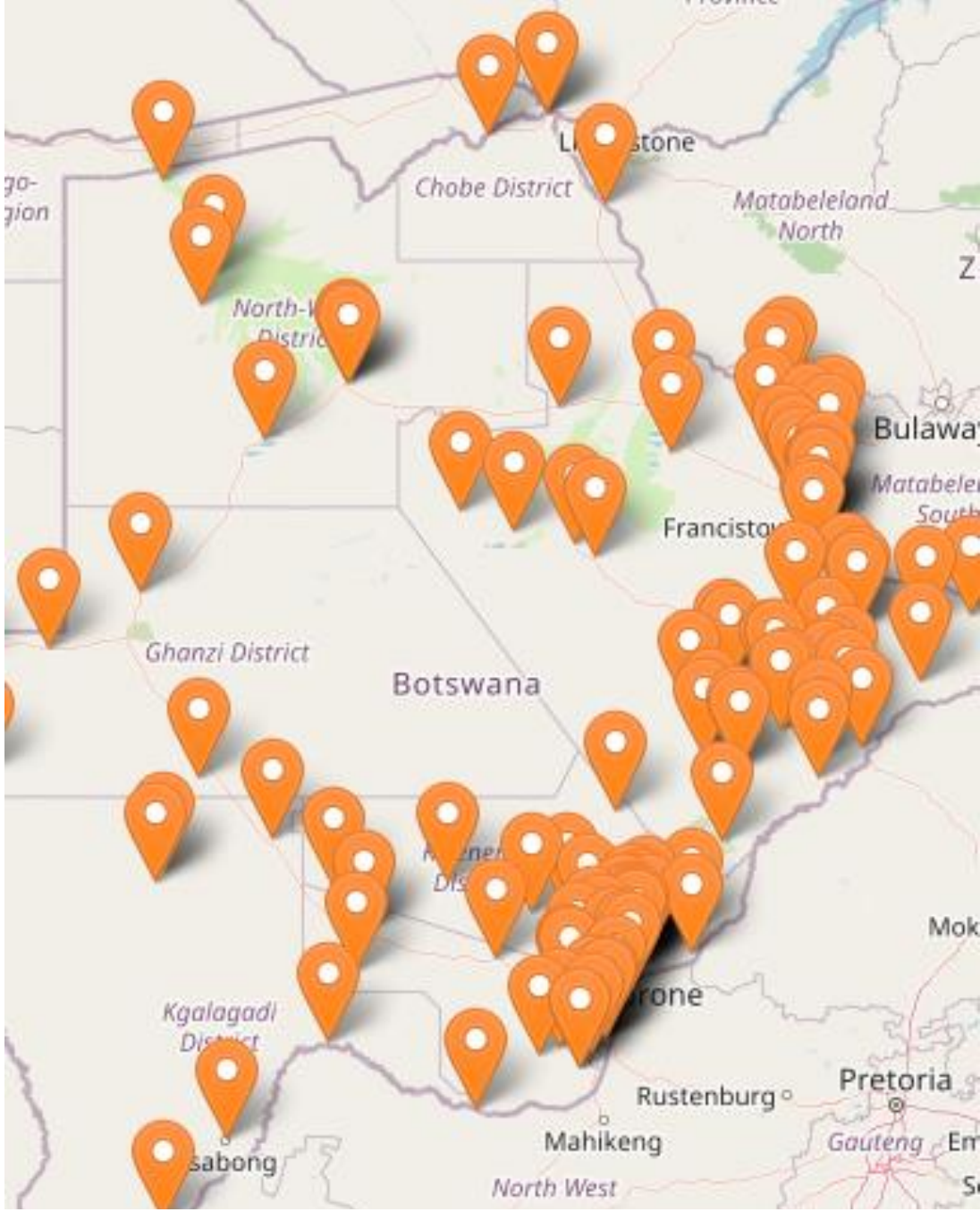

Figure 1: Distribution of Post offices in Botswana

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Methodology

1. Assess acceptability of private pharmacy model to distribute ARVs

(a) Structured exit interviews with people living with HIV from 10 high volume facilities in Gaborone between July –August 2020

- Perspectives on ART distribution through Private Pharmacy (PP)
- Travel times to ART sites and nearest PP
- Waiting times for ARV refills
- Prior use of PP
- Interest in receiving ARV refills through PP
- Willingness to pay and range of fees they were willing to pay

(b) Online questionnaire of pharmacists to assess willingness to distribute ARVs, hours of operation, staff capacity, etc.

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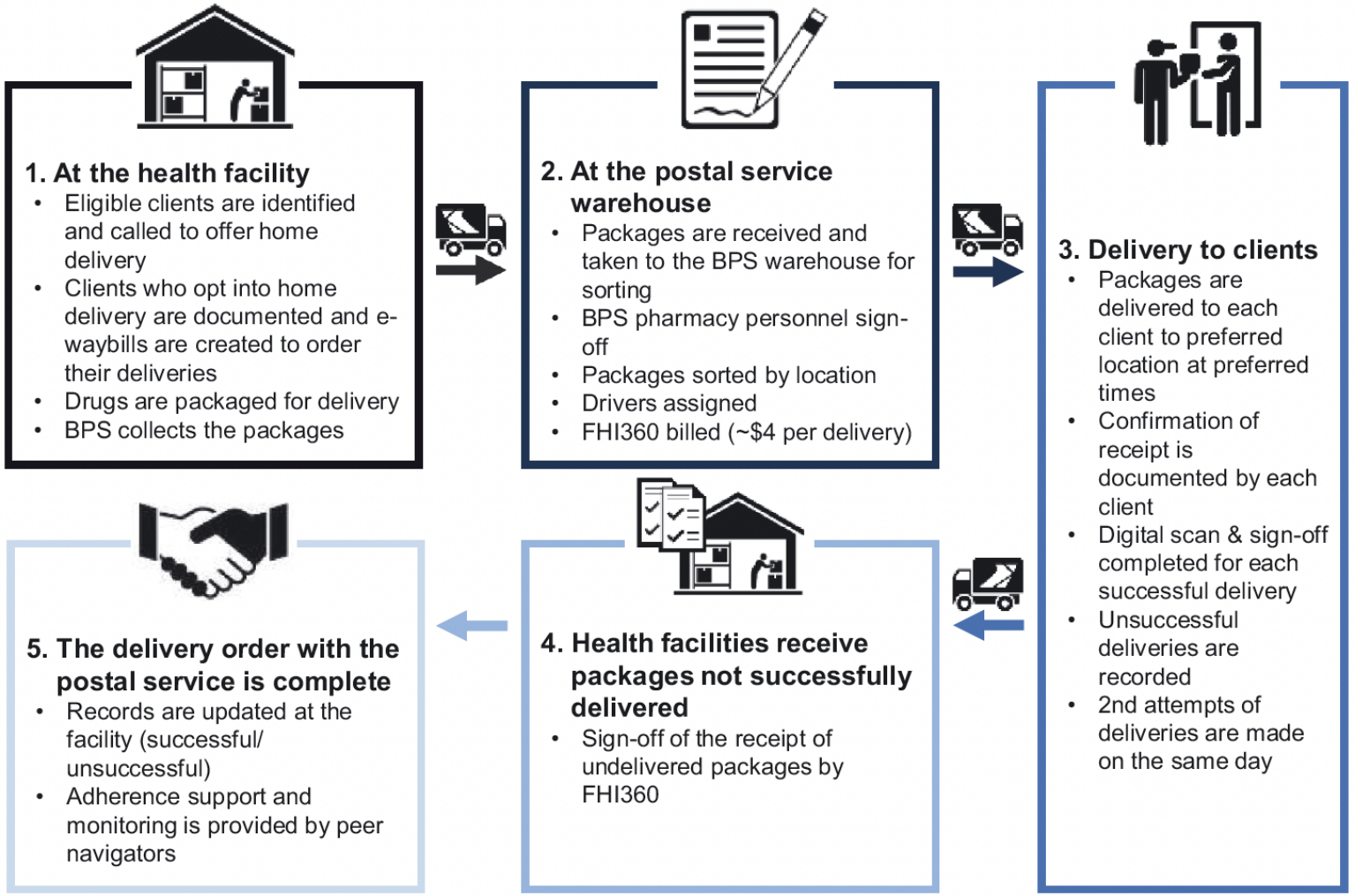
Methodology

2. Piloted home-based ART delivery using courier services



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Results - Acceptability of private pharmacy model to distribute ARVs

Table 4. PLHIV willingness to use private pharmacies for ARV pick-up

Measures	Frequency *n* = 61	%
Number of PLHIV who had used private pharmacies previously	26	42.6
PLHIV willing to use private pharmacies	37	60.7
PLHIV willing to use private pharmacies and pay a dispensing fee	27	44.3
Median dispensing fee PLHIV were willing to pay[a]	BWP50 (~US$4) Range = BWP50–100	

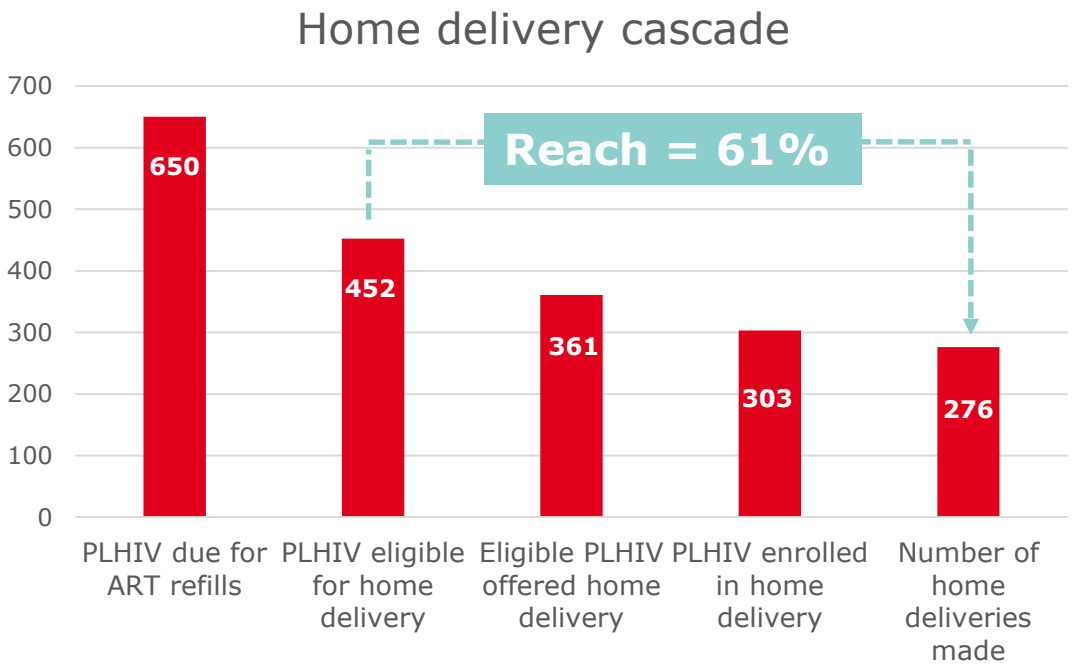
[b]Amongst those willing to pay.
ARV, antiretroviral; PLHIV, people living with HIV.

Results of pharmacy survey

	Frequency *n* = 42	%
Number of private pharmacies willing to dispense ARVs on behalf of public facilities	42	100
Number of pharmacies who would charge a dispensing fee	26	61.9
Days of operation		
Weekdays (Monday–Friday)	42	100
Saturdays	42	100
Sundays and public holidays	33	78.5

ART, antiretrovial therapy; ARVs, antiretrovirals; PLHIV, people living with HIV.

Results – home delivery pilot



- 61% were reached with home deliveries among all eligible people living with HIV
- Among those offered, 83.9% accepted home based ART deliveries
- Females were more likely to enroll for this model than males (AR= 87.2% vs 77.8%)
- No difference in reach between general population members and key population members

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Limitations

- Small sample size and limited geographic coverage and therefore limited generalizability
- Private pharmacies assessed were located in urban area, acceptability may vary in rural areas

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Conclusion

- Use of private pharmacies was acceptable to both PLHIV and private pharmacy providers
- Courier services for ART delivery is a viable alternative for countries with reliable courier services
- Scale up of these models can decongest facilities and safeguard PLHIV and providers against COVID-19

IAS

Acknowledgements

- PLHIV and private pharmacies who participated
- Tebelopele Wellness clinic staff for the HD pilot
- Funders- PEPFAR through USAID
- FHI360, EpiC Project and its partners
- Ministry of Health and Wellness
- Authors

Supporting PrEP access for female sex workers in Zimbabwe during COVID-19 lockdown with community-based delivery, extended PrEP refills and virtual support during COVID-19 lockdown

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Background

Sisters with a Voice

- Sex worker led comprehensive sexual and reproductive health services for sex workers
- Established in 2009 with 61 sites across all 10 provinces in Zimbabwe
- >26 000 sex workers seen at Sisters' clinics in 2020

PrEP programme

- 2016: MoHCC adopts WHO guidelines to include oral PrEP
- 2018: Implementation Plan for HIV Pre-Exposure Prophylaxis in Zimbabwe 2018-2020
- 2019: Sisters with a Voice commences PrEP initiations for sex workers

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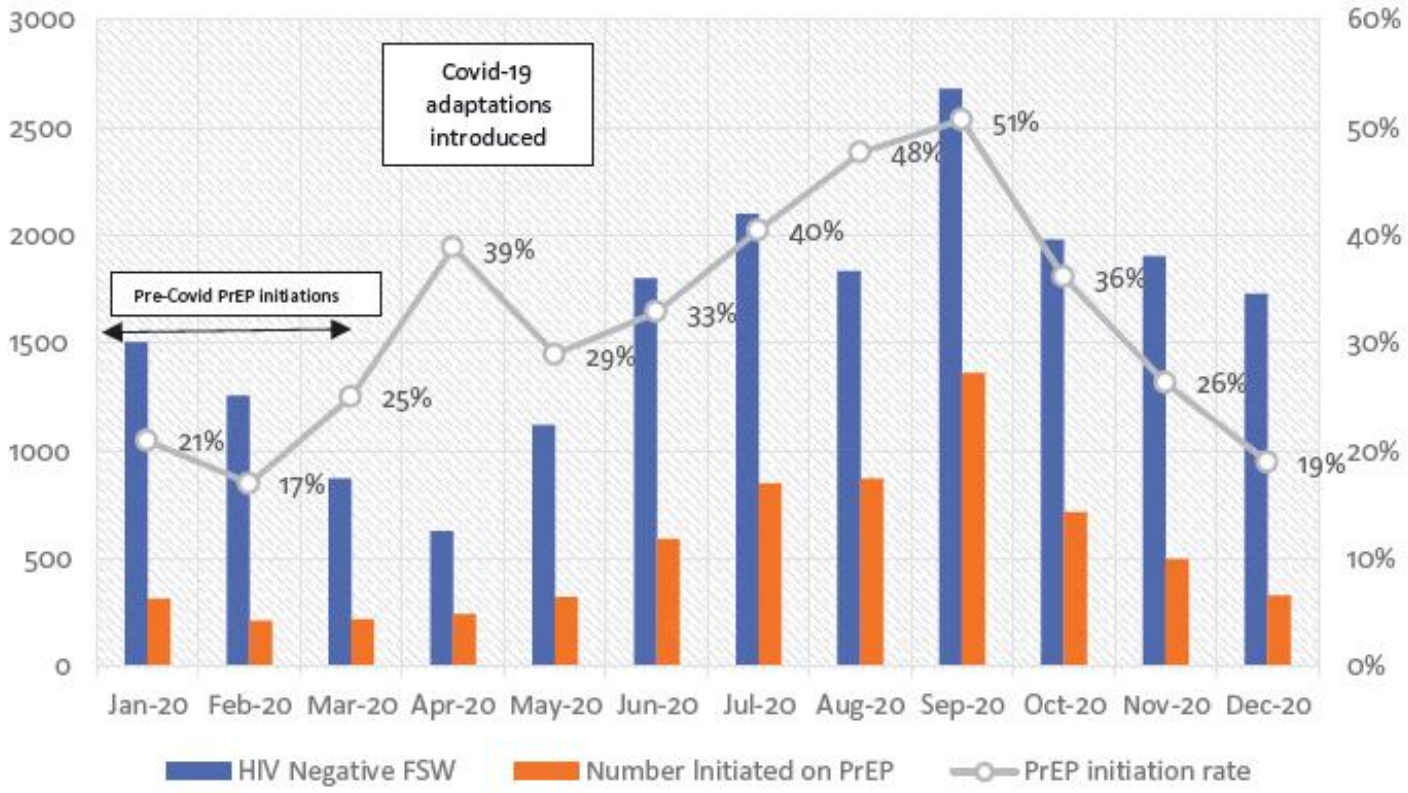
Methodology

- **Hypothesized that peer-led community-based provision of PrEP services influenced** both demand and supply of **PrEP uptake**
- Data collected from all female sex workers receiving services within *Sisters* at facilities and within the community
- **Included aggregated anonymized individual clinic data**
  - 19,407 female sex workers who presented to *Sisters* and tested negative in 2020, including 6,539 female sex workers who initiated on PrEP during 2020
- **Mapped PrEP uptake** among all female sex workers who tested negative at *Sisters* in 2020 (divided into four periods)
  i. Prior to lockdown (January-March 2020)
  i. During severe restrictions (April-June 2020)
  ii. Subsequent to easing of restrictions (July-September 2020)
  iii. During the time of drug stockouts that followed (October-December 2020)

Results (1)

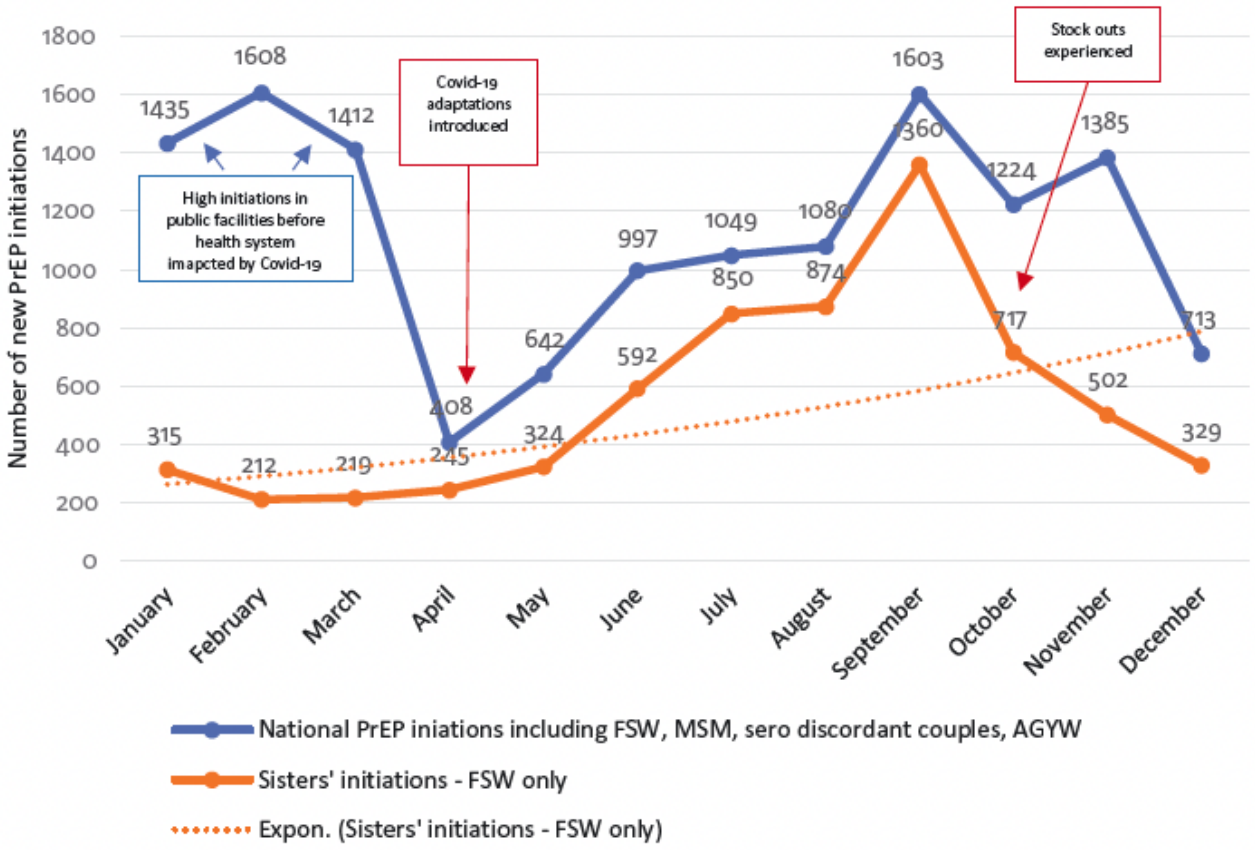
Sisters PrEP initiation rate, 2020



- Before COVID-10, PrEP uptake occurred at rates <25% among female sex workers testing negative at *Sisters*
- Beginning May 2020, PrEP uptake increased monthly peaking at an initiation rate of 51% (n=1,360) in September 2020
- Unexpected rise in demand coincided with national commodity shortages between October and December 2020
- In 2020, 19,407 sex workers tested negative and were screened for PrEP, of 33.7% (n=6,539) initiated PrEP
  - Highest initiations among sex workers aged 20-24 years at 33% (2152/6539)

Results (2)

National and *Sisters* only PrEP initiations, 2020



- *Sisters* contribution increased to 63% between April and December 2020, compared with a contribution of 16% between January and March 2020 prior to adaptations within *Sisters*.

- Retention at one month was 40% (n=2,269), 27% (n=1,509) at three months and 14% (n=803) at six months (PrEP continuation data was only available for 5653 SW)

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Adaptations to PrEP programme in 2020 in response to COVID-19

	PrEP screening, initiation and early follow-up (0-3 months)			PrEP continuation (+3 months)	
	Screening	**PrEP initiation visit**	**Initial follow-up**	**PrEP refill**	**Routine clinical follow-up**
WHEN	At entry point, first clinic/DIC visit	First visit	One month visit, ***virtual follow up at 1 week for side effects/adverse events***	***Every 3 months*** if tolerating well	***Every 3 months, SW receive virtual support for monthly check ins***
WHERE	• Clinic • Drop in centre • ***Community***	• Clinic • Drop in centre • ***Community***	• Clinic • Drop in centre • ***Community/home***	• Clinic • Drop in centre • ***Community/home***	• Clinic • Drop in centre • ***Community/home***
WHO	Nurses, outreach teams	Nurses, ***outreach teams***	Nurses, ***outreach teams***	Nurses, ***outreach teams***	Nurses, ***outreach teams***
WHAT	Counselling on combination HIV prevention, HIV testing, eligibility screening, adherence counselling	Counselling on combination HIV prevention, adherence, STI, ARV side effects, eligibility screening	Counselling on combination HIV prevention, adherence, STI, ARV side effects, HIV testing	Counselling on combination HIV prevention, adherence, STI, ARV side effects, testing every 3 months	Counselling on combination HIV prevention, substantial risk screening adherence, assess for signs of of acute HIV, STI, ARV side effects

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Summary of adaptations to PrEP in 2020

DSD for PrEP was **scaled up** during COVID-19 with increasing interest in and uptake of PrEP among sex workers

- **Empowered community cadres** to educate peers and create demand for PrEP
- **Increased number of PrEP access points** with teams of a clinician, outreach worker, community cadre – to deliver community-based PrEP services
- **Scaled up of telehealth** with support for side effects and adherence counselling provided via phone and WhatsApp
- **Increased virtual peer support** through WhatsApp broadcast lists and groups to addresses PrEP myths, encourage uptake and adherence, and check concerns
- **Enabled multi-month dispensing (MMD) of PrEP** with PrEP refills provided for three months at a time, waiving the initial requirement for monthly clinic visits

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Strengths and limitations

- Greater risk perception by sex workers during COVID-19 may also have increased sex workers' openness to PrEP as an alternative prevention strategy

- Lower mobility during COVID-19 lockdowns with inter- and intra-city travel restricted, sex workers were unable to migrate out of Zimbabwe or move between locations in search of work.

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Next steps

- Adapted PrEP distribution model remains in place in 2021 -> identify lessons for future implementation and potential relevance to other settings following commodity supply restoration
- Document the peer-led, community-based PrEP service delivery model -> effective and adopted for long-term use
- Improve quality of service and support provided
- Improve continuation rates

Differentiated service delivery for HIV during COVID-19: Lessons and opportunities

Launch of the JIAS supplement

27 October 2021 webinar

Changes in utilization of DSD for HIV treatment during COVID-19 in Zambia

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Acknowledgements to the Bill & Melinda Gates Foundation and Zambia Ministry of Health

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Background

- The onset of the COVID-19 pandemic in early 2020 increased the importance of differentiated service delivery for HIV treatment patients, as DSD models can minimize the need for in-person interaction between patients and providers.
- In March 2020, the Zambian Ministry of Health urgently promoted the expansion of 3- and 6- multi-month dispensing for patients on antiretroviral treatment (ART).
- We used national electronic medical record data to chart the expansion of DSD model participation during the pandemic.

AIM: Evaluate the extent to which DSD coverage and ART dispensing intervals changed during the first year of the COVID-19 pandemic in Zambia

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Methodology

- **Data source**: 266,580 patient data from SmartCare, Zambia's electronic medical record system, for 791 health facilities (across 93 districts and 10 Provinces) representing about 3/4 of all ART patients nationally.
- **Time period**: January 2019 to November 2020
- **Analysis**: To assess the rate of increase of the cumulative numbers of patients enrolled in DSD models before/after March 2020 using interrupted time series analyses
- **DSD models included:**
  - Fast track (1-2 month refills, 3 month refills, 4-6 month refills)
  - Multi-month dispensing (MMD) (3 months or 4-6 months)
  - Community adherence group (CAG)
  - Home ART delivery
  - Other (before/after hours and weekend clinics, community pharmacy, health post, scholar, rural/urban adherence groups, mobile ART distribution)

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Methodology (2)

- We compared the change in slope between the cumulative number of clients enrolled in DSD before and after March 1st, 2020.

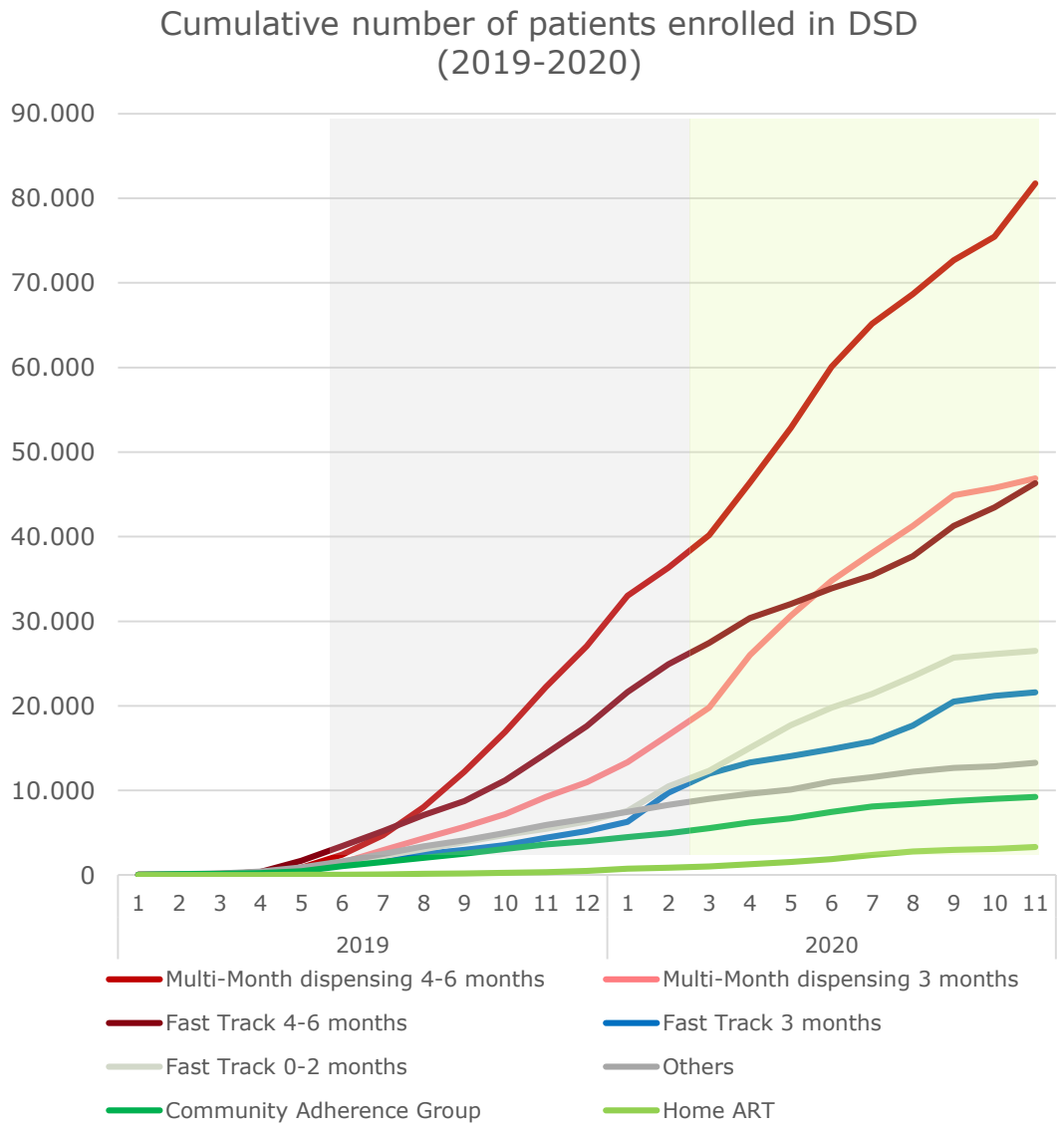
- Segmented regression model:

$$[\![DSD]\!]_t=\beta_0+[\![\beta_1\ time+\ \beta_2\ covid]\!]_t+\ [\![\ \beta_3\ time\cdot covid]\!]_t$$

  - time is in months
  - covid is a dummy variable indicating whether the current time is pre- or post-covid.
  - DSD (outcome) is the cumulative number of clients enrolled in DSD at time t.
  - β_3 indicates the slope change following the intervention

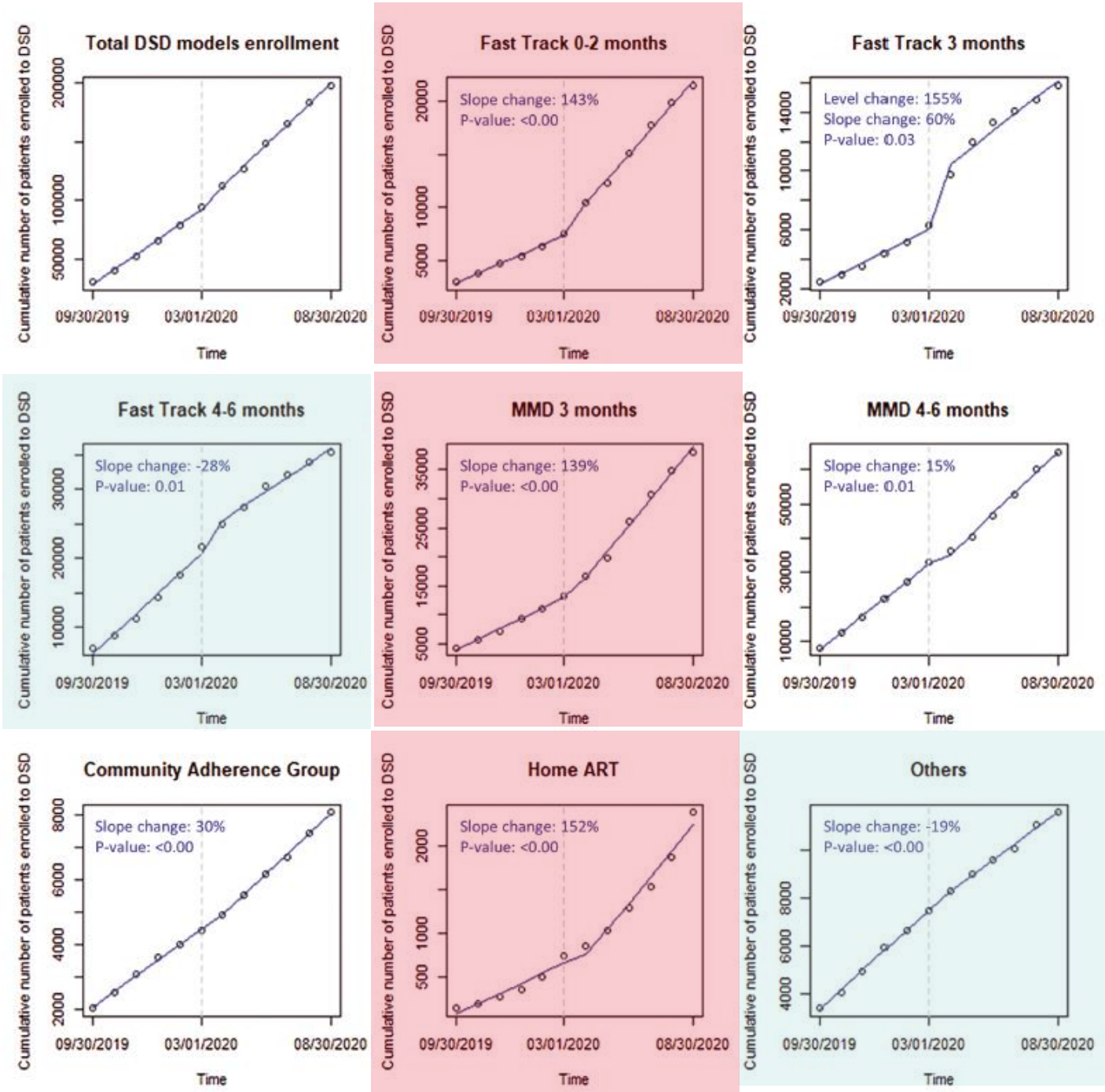
Results

- The number of patients enrolled in a DSD model gradually increased over 2019-2020 (especially MMD and fast track)
- While the number of patients served by the home ART delivery model is modest, it increased most rapidly during this period (240%), while participation in community adherence groups (CAGs) increased the least (18%).
- Proportion of patients receiving 6-month dispensing fell from 57% to 49%; proportion receiving 1, 2 or 3-month refills rose.



Results (2)

- Participation in home ART delivery, fast track 1-2 month, and multi-month dispensing for 3 months significantly increased.
- Participation in fast track 4-6 month and other models significantly decreased.
- Fast track 3 month non-significantly increased.



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Strengths and limitations

- COVID-19 pandemic showed accelerated new participation in most DSD models
  - Increases were less for the 4-6-month fast-track and 'other' models.
- We relied entirely on routinely collected medical record data from the SmartCare system
  - Covers ~three quarters of Zambia's ART facilities.
- This analysis does not illustrate how and why the introduction of COVID-19 resulted in different scale-up patterns by DSD models and whether and to what extent the temporal changes may differ by setting.

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Conclusions

- Further research is needed to examine how this rapid acceleration of different DSD model uptake has affected overall initiation and retention in care of the entire ART cohort, including patients not meeting criteria for stability.

- Efforts to eliminate obstacles to longer dispensing intervals should be prioritized to achieve the expected benefits of DSD models and minimize COVID-19 risk.
  - To continue to support 6-month dispensing, a secure supply chain will remain essential.
    - PEPFAR data -> increase in 3-6 month dispensing from 46% (Dec 2019) to 69% (June 2020)
  - As the government is now recommending relaxation of eligibility criteria for multi-month dispensing, evaluating the impact of this evolution in DSD guidelines will be a high priority for the coming years.

Silver linings: How COVID-19 expedited differentiated service delivery for HIV

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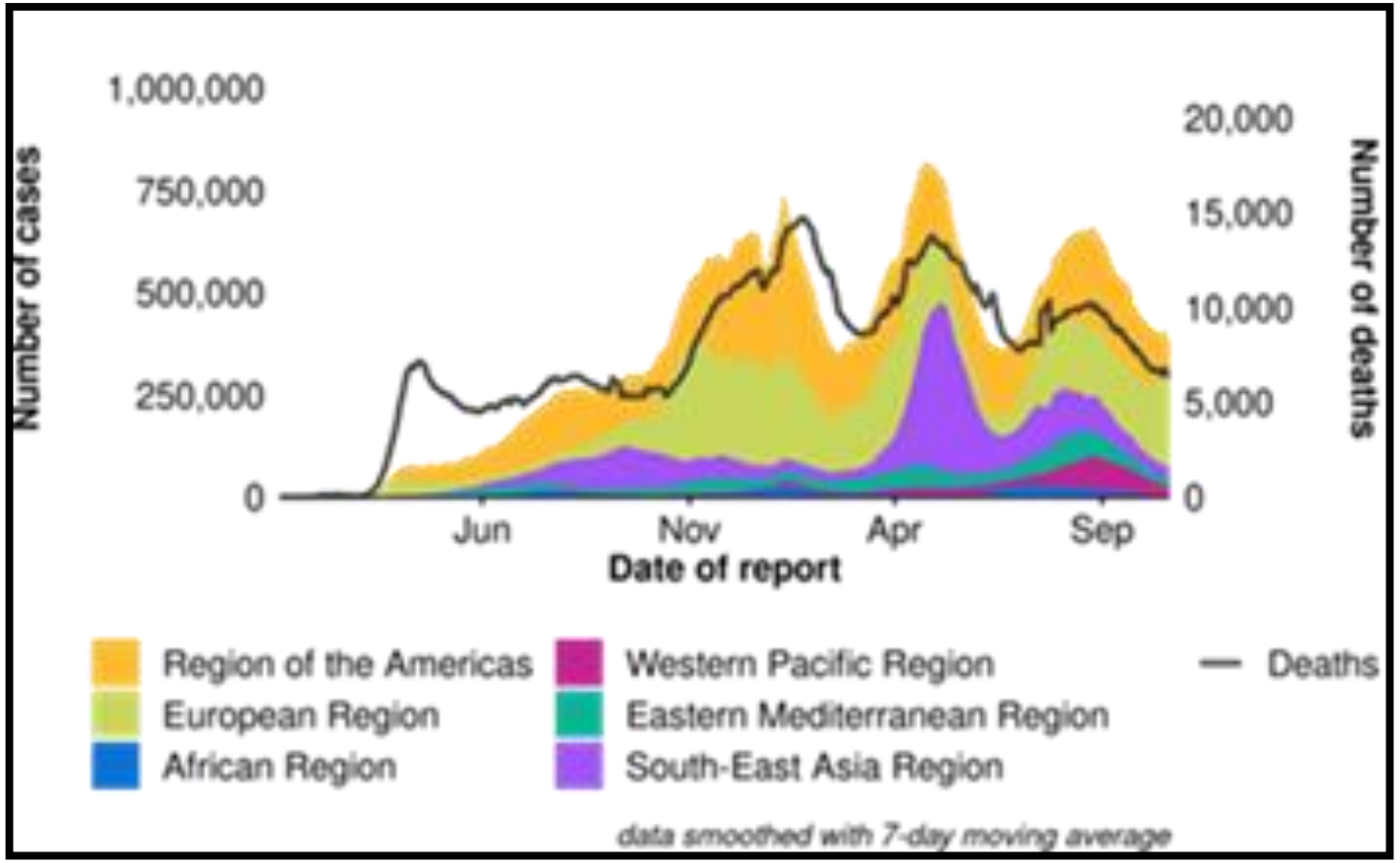
The remarkable and continuing toll from COVID-19

In the rush to return to normal, use this time to consider which parts of normal are worth rushing back to."
– Dave Hollis, author



WHO, Oct 20, 2021

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“Silver linings” on the path to person-centered HIV services

1. Virtual support on mobile phones can accelerate ART initiation and facilitate monitoring in facilities and communities

2. Expanded concept of eligibility for less intensive models to include people with as little as 6m on ART, children <15 and those on second-line regimens

3. Extended ART refill durations (and maybe extended duration between clinical visits) to 6+ months should be a new standard of care

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"Silver linings" on the path to person-centered HIV services (cont'd)

4. COVID-19 has emphasized the importance of expanding access to community-based services

5. DSD for HIV is also relevant in more highly resourced settings

6. DSD is applicable for HIV prevention and other vertical programs

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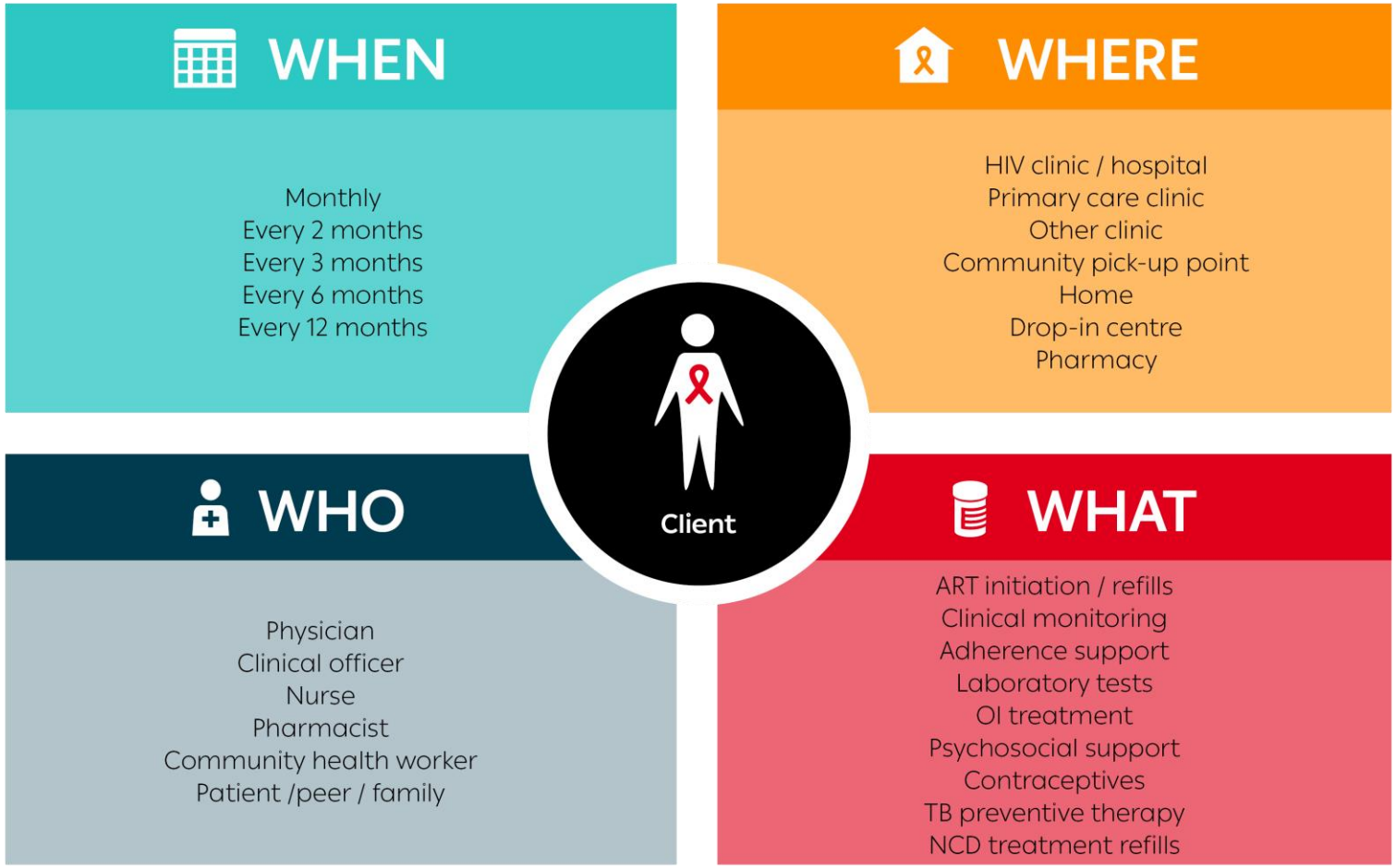
Building blocks of service delivery



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DSD Research/evaluation priorities

- **Routine evaluations + implementation science studies:**
  - Virtual support for adherence and documentation?
  - Earlier access to less intensive models for more people?
    - Annual clinical visits?
    - Annual refill visits?
  - How to support re-engagement in care?
  - How to differentiate models for delivering PrEP?
  - How to integrate of DSD among HIV and other vertical programs?

- **Key indicators**
  - Clinical outcomes, individual and HCW experience, costs to patient and health system

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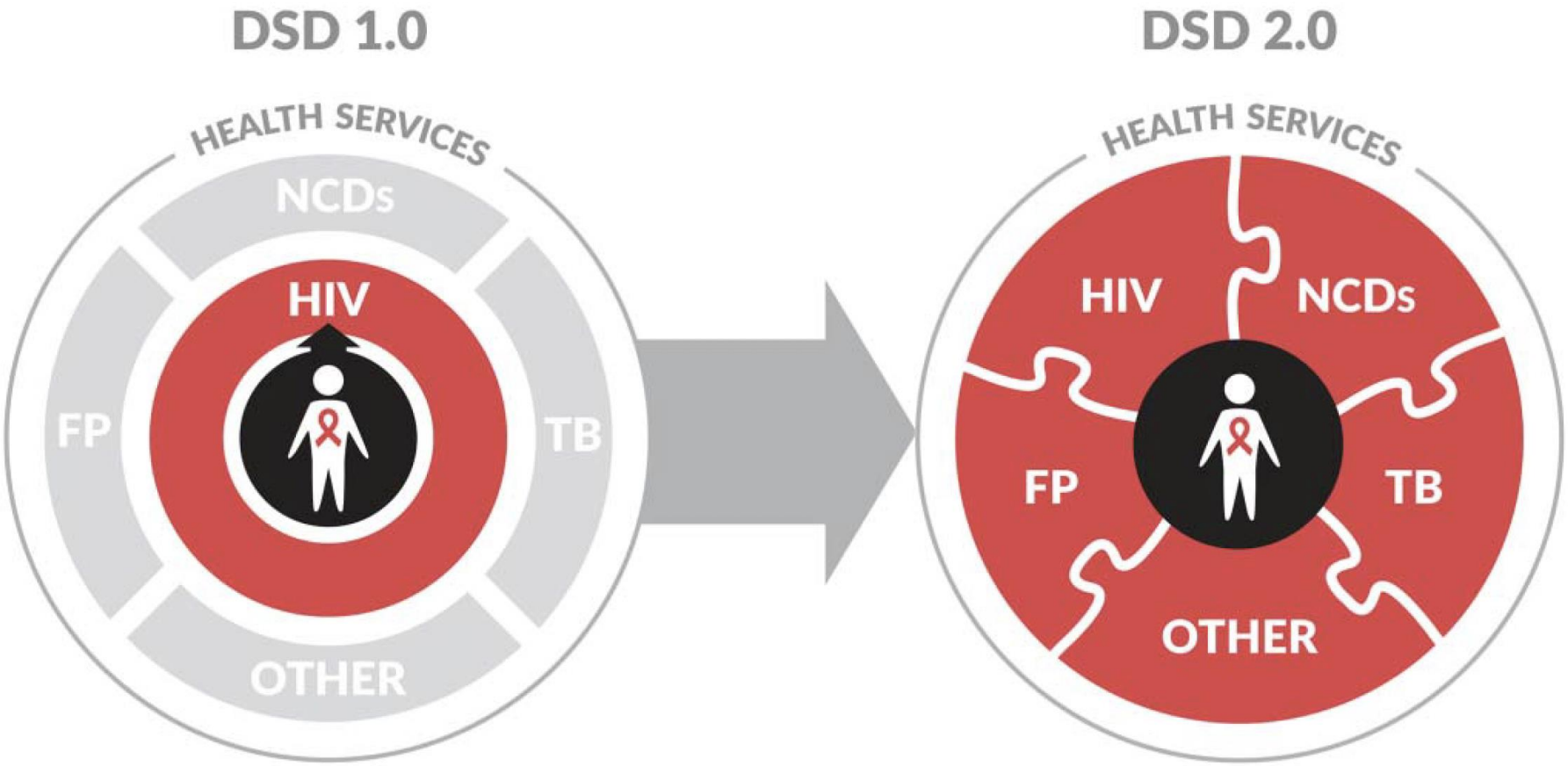
More “Silver linings” to come?



Ehrenkranz, et al. JAIDS, 2021