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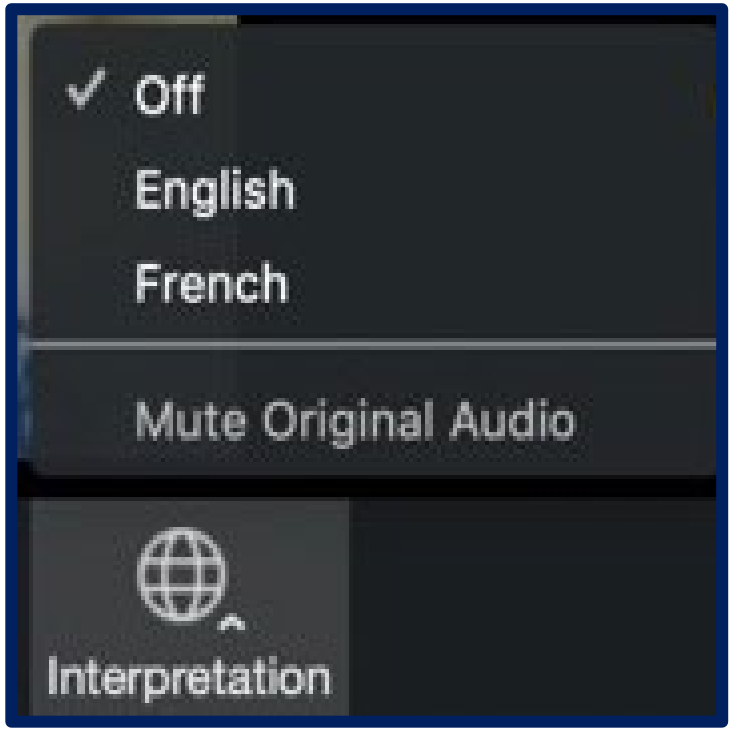
Impact of Differentiated Service delivery on Retention and Viral Load Suppression: The South Africa Experience

HIV Coverage, Quality, and Impact Network

Welcome/Bienvenue!

Martin Msukwa
Regional Clinical Advisor,
ICAP South Africa

- Be sure you have selected the language of your choice using the “Interpretation” menu on the bottom of your screen.
- Assurez-vous d’avoir sélectionné la langue de votre choix à l’aide du menu <<interpretation>> en bas de votre écran Zoom
- Please put your names, countries, organizations into the chat box.
- Nous vous prions de bien vouloir inscrire votre prénom & nom, pays, organisations dans la boîte à discussion



Housekeeping

- 60-minute webinar with four presentations followed by a panel discussion with Q&A
- Slides and recording will be available on the CQUIN website (www.cquin.icap.columbia.edu)
- Please type questions in the Q&A box located on the toolbar at the bottom of your screen
- If you would prefer to speak, please use the “raise hand” function on the toolbar and we will unmute you so that you have control of your microphone
- If you are a French or English speaker, please ask your question in your language of choice and the interpreters will translate as needed

Agenda

TIMING	TOPIC	SPEAKER
0-10 min	Welcome/housekeeping	Martin Msukwa, ICAP South Africa
10-45 min	Presentations	1. Ms. Ida Mokhele, Senior Researcher, AMBIT, South Africa 2. Dr Musa Manganye, DSD Advisor, NDoH, South Africa 3. Dr Liesbet Ohler, Project Medical Referent, Médecins Sans Frontières 4. Ms Ndivhuwo Rambau, Project Coordinator, Ritshidze Project
45-55 min	Questions and Discussion Moderator: Maureen Syowai, ICAP Kenya	
55-60 min	Closing remarks	Maureen Syowai, ICAP Kenya

Presenters

Ms. Ida Mokhele,
Senior Researcher, AMBIT,
South Africa

Dr. Musa Manganye,
DSD Advisor, National
Department of Health
SouthAfrica

Dr. Liesbet Ohler,
Project Medical Referent,
Médecins Sans Frontières
(MSF)

Ms. Ndivhuwo Rambau,
Project Coordinator,
Ritshidze ProjectHealth
South Africa

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Are clients receiving HIV treatment offered a choice of differentiated service delivery models? Evidence from South Africa

Idah Mokhele

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The SENTINEL Study

- **SENTINEL** refers to the study "Outcomes of DSD Models for HIV Treatment at Sentinel Sites"
- **SENTINEL** is an activity of the AMBIT project, whose objective is to estimate the benefits and costs of differentiated service delivery for HIV treatment and testing and identify opportunities for improvement
- Detailed primary data collection at sentinel healthcare sites in Malawi, South Africa, and Zambia
- In South Africa, there are currently 21 sentinel sites in MP, KZN, and GP
- Five domains of SENTINEL explore treatment clients' experiences, providers' experiences and time use, facility resource utilization, and testing clients' experiences.

Sentinel data collected	1.0	2.0*
ART clients surveyed	867	723
Providers surveyed	206	175
Provider-days observed (time/motion)	7	76
Testing clients surveyed	N/A	466
Resource utilization captured (sites)	24	TBD
**data collection for Sentinel 2.0 wrapping up now*		

Why client choice?

- Client-centeredness is a goal of differentiated service delivery (DSD) models for HIV treatment
- Client-centered care can empower clients by
  - Allowing them to choose the model that best meets their needs
  - Providing flexibility to change their choice according to their life circumstances
  - Allowing for seamless re-enrollment in DSD model care after disenrollment based on guideline-specified exclusion criteria
- Guidelines for DSD models recommend that providers give clients a choice about the model of care in which they enrol, but choice is not always offered.
- Reasons for disenrollment from DSD model care based on guideline-specified exclusion criteria are not well documented
- SENTINEL asked clients and providers questions about each of these issues.

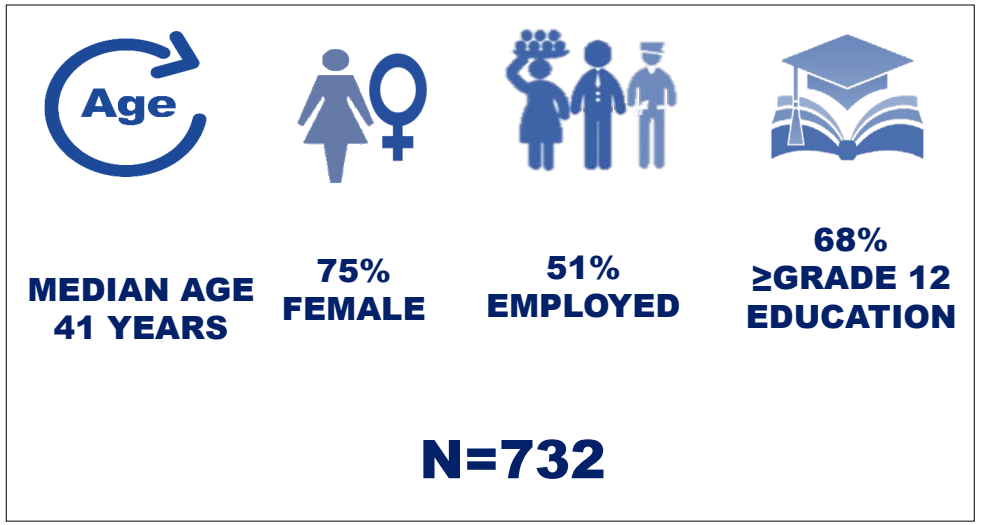
Methods

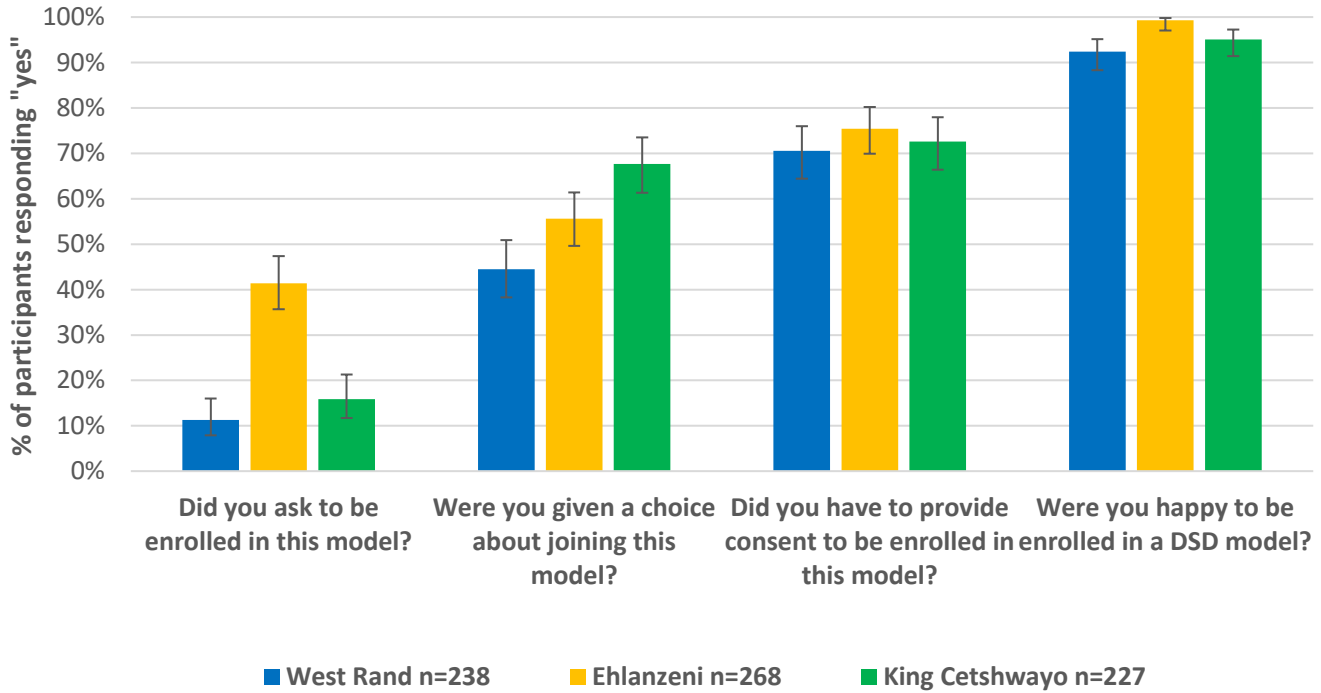
PARAMETER	ART CLIENT SURVEY	PROVIDER SURVEY
STUDY LOCATION	21 public, primary healthcare facilities in each of Ehlanzeni District (Mpumalanga Province), King Cetshwayo District (KwaZulu Natal Province), and West Rand District (Gauteng Province)	
STUDY PERIOD	Sentinel 1.0: Aug 2021 - Feb 2022 & Sentinel 2.0 Sep 2022 to Apr 2023	Sentinel 2.0 Sep 2022 to Apr 2023
STUDY POPULATION	Adults (>18 years) on ART for ≥ 6 months and either 1) enrolled in a DSD model, 2) eligible for but not enrolled in a DSD model, or 3) not eligible for DSD	Health care providers (>18 years) who support DSD implementation
SAMPLE SIZE	Up to 10 individuals/model x up to 5 models/site (maximum n=1050)	Convenience sample of up to 10 providers/facility (maximum n=204)
TOPICS	ART client DSD model choice, prior DSD enrollment, and reasons for disenrollment	Providers' practices in offering choices and information about DSD model participation to clients

ART clients' experiences of DSD models

Characteristic (n, %)	Ehlanzeni	King Cetshwayo	West Rand	Total
N (row percentage)	**268 (37)**	**226 (31)**	**238 (33)**	**732 (100)**
Sentinel 1.0	124 (34)	128 (35)	118 (32)	370 (100)
Sentinel 2.0	120 (33)	144 (40)	98 (27)	362 (100)
ART DSD model				
External pick up point	102 (38)	113 (50)	108 (45)	323 (44)
Facility-based pick up point	103 (38)	103 (46)	108 (45)	314 (43)
Other*	63 (24)	10 (4)	22 (9)	95 (13)
Number of years on ART (self-report) (Median, IQR)	7 (4-10)	6 (4-10)	7 (4-11)	7 (4-10)
1-5 years	81 (30)	85 (38)	67 (28)	259 (32)
5-10 years	121 (45)	79 (35)	105 (44)	332 (41)
≥10 years	66 (25)	62 (27)	66 (28)	213 (27)

**Other ART models include the Pele box/medication lockers, adherence/youth clubs, and home ART delivery*





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Providers' perspectives on client choice regarding DSD model participation

N=115

MEDIAN YEARS IN ROLE 10 YEARS

MEDIAN AGE 43 YEARS

85%

71%

4%

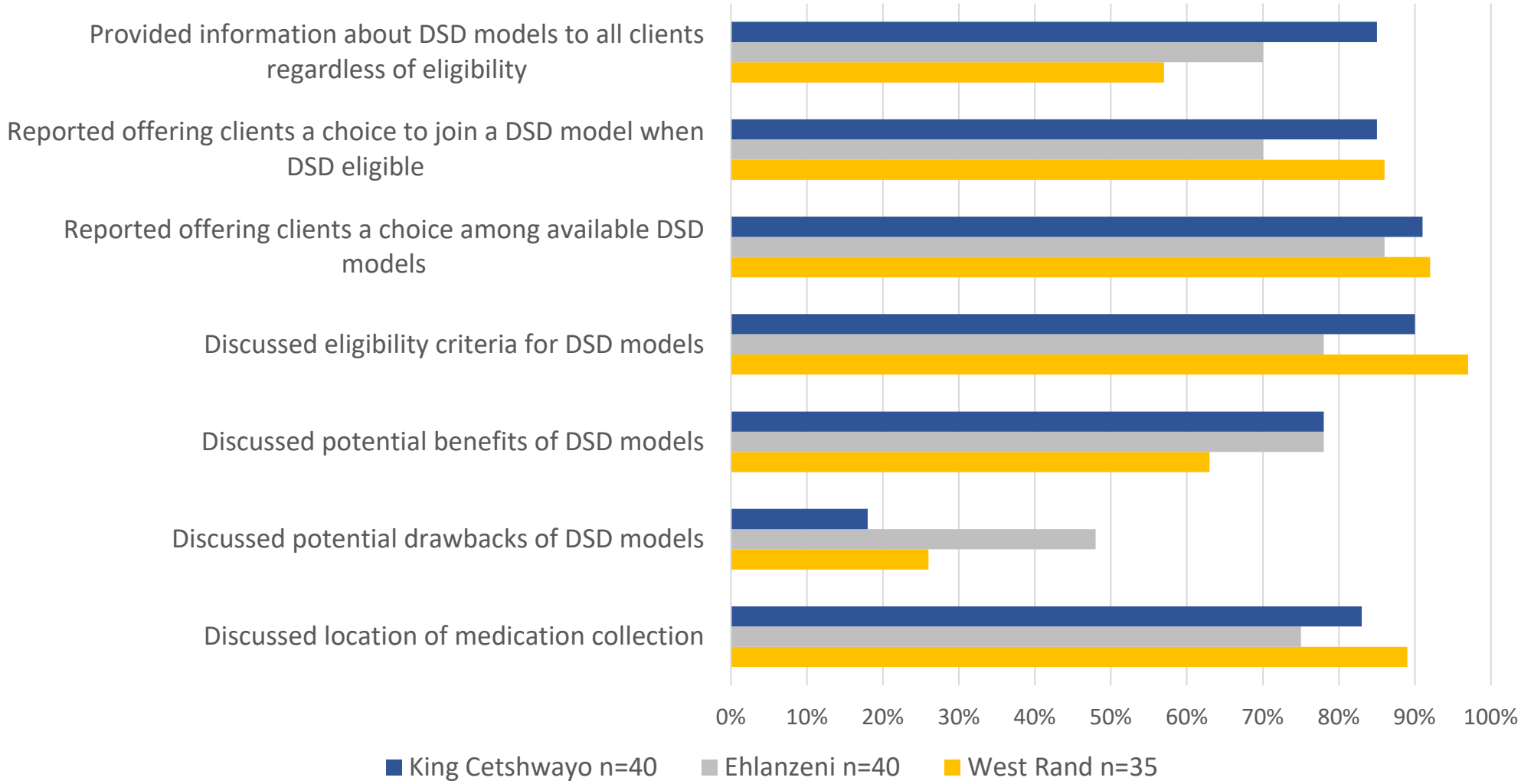
8%

1%

5%

7%

OTHER 4%



Reasons for back-referral to conventional care after differentiated service delivery model enrolment

- We asked clients in conventional care if they had been previously enrolled in a DSD model
- Among those in conventional care who were eligible for DSD models but not enrolled, 22% had been previously enrolled in a DSD model
- Among those currently enrolled in DSD models, 7% had previously been back-referred but were then re-enrolled in DSD model care
- Hypertension and diabetes complications were the most commonly reported health cause for back-referral (22%), followed by a high viral load (7%) and a positive TB screen (5%).
- Pregnancy was the most common reason for back referral among those in the conventional eligible group and women.

ART clients' reasons for back-referral to conventional care after DSD model enrolment (n=867)

Variable	Conventional care - Eligible but not enrolled	Conventional care -Not eligible and not enrolled	Enrolled in DSD Model
No prior DSD enrollment	162 (78)	166 (77)	411 (93)
Prior DSD Enrollment	45 (22)	50 (23)	33 (7)
Reason for back transfer among those with prior DSD enrollment:			
Ill health (total) (*see below for reasons*)	11 (24)	26 (52)	16 (48)
Pregnancy	12 (27)	12 (24)	5 (15)
Missed a visit or ARV dose	4 (9)	4 (8)	2 (6)
COVID	3 (7)	1 (2)	-
Blood draw	3 (7)	3 (6)	2 (6)
Don't know why	4 (9)	1 (2)	2 (6)
Other	8 (18)	2 (4)	4 (12)
Reasons for ill health (out of total ill health)			
Hypertension or diabetes complication	7 (16)	13 (26)	8 (24)
Unsuppressed viral load	2 (40	6 (12)	1 (3)
Screened positive for TB	1 (20	2 (4)	3 (9)
Not specified	1 (2)	5 (10)	4 (12)

Discussion & conclusions

- About 40% of clients surveyed were not offered a choice to enrol in a DSD model
- The importance of choice in influencing outcomes is unclear and should be examined
- Clients need a better understanding of DSD models so that they are empowered to ask for DSD model enrolment or change models when their circumstances change
- Most back-referrals to standard-of-care were for valid reasons
- However, there seems to be a gap in the system for re-enrolling eligible clients back into DSD models
- There is more work to be done for DSD model care to be truly client-centred
- Updated guidelines should help address some of these challenges by clarifying points of confusion among providers by addressing topics like whom to enrol, re-engagement, and choice among ART clients

Successes and challenges

Challenges

- Logistical challenges in accessing study sites for data collection (floods in KZN, civil unrest)
- TIER.net data access and linkage to survey data
- Limitations in site staff availability to participate in study

Successes

- Establishing Sentinel sites for more annual rounds of data collection
- Being able to compare data collected across time
- Linking of TIER.net data to survey data (SENTINEL 2.0)
- Dissemination of AMBIT data to provinces
- AMBIT data identified as data source for measuring impact on the CQUIN staging dashboard in all three focus countries

Next steps

Round 3 of Sentinel data collection coming August 2023

Supplement objective 1: Expand AMBIT studies and fill data gaps

1.1 Fill in gaps in data pertaining to out-of-facility DSD model interactions and DSD interactions for comorbid conditions and integrated care

1.2 Add a fourth district to Sentinel-South Africa to increase potential to assess facility-level outcomes and provide access to an additional district data set

Supplement objective 2: New areas of focus

2.1 DSD models and transitions

2.2 Providers' behavioural obstacles to DSD use and potential behavioural interventions

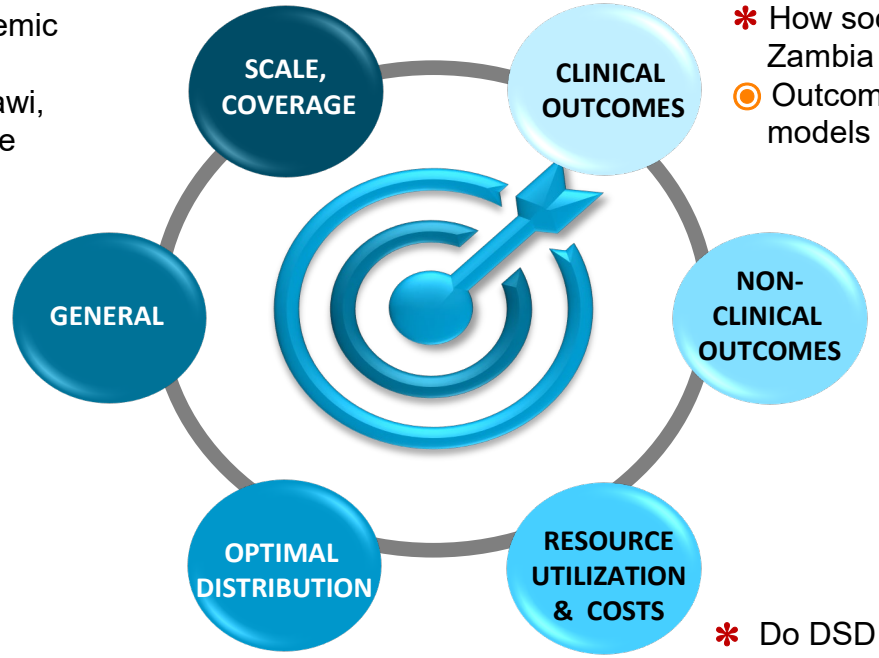
2.3 Role of patient choice in DSD outcomes

Additional priority project(s) as identified by NDoH

AMBIT ACHIEVEMENTS AND DISSEMINATION TO DATE (APRIL 2023)

- ✻ Changes in HIV differentiated care utilization during the COVID-19 pandemic in Zambia
- ✻ DSD models for HIV treatment in Malawi, South Africa, and Zambia: A landscape analysis

- ✻ The revolving door of HIV care: Revising the care cascade to achieve the 95-95-95 goals
- ✻ Models of service delivery for optimizing a patient's first six months on ART: an applied research agenda



- † ADAPT model in Excel
- ◉ Presentation of results to ministries of health in Zambia and Malawi;
- ◉ Modeling the optimal distribution of DSD models for HIV treatment in Zambia

- ✻ Retention and viral suppression in HIV treatment DSD models in sub-Saharan Africa: systematic review
- ◉ Retention viral suppression in DSD models for HIV treatment compared to conventional care in South Africa
- ✻ Attrition from HIV treatment after enrollment in a DSD model in Zambia
- ✻ How soon should patients be eligible for DSD models? Evidence from Zambia
- ◉ Outcomes for South African second-line ART clients enrolled in DSD models compared to conventional care

- ◉ No differences in perceived quality of care between DSD models and conventional care in South Africa
- ◉ Effect of DSD models for HIV treatment on healthcare providers' job satisfaction and workloads in Malawi, Zambia, and South Africa
- ◉ Does 6-month dispensing change patients' concerns and obstacles in seeking ART?
- ◉ Are providers offering clients a choice of models?

- ✻ Do DSD models in sub-Saharan Africa save money? Evidence from studies conducted in 2017-2019
- ◉ Healthcare providers' use of time varies patient enrollment in DSD models in sub-Saharan Africa: a time-and-motion analysis
- ◉ Costs to patients in DSD models versus conventional care.
- Ω Costs and benefits of DSD models to patients and providers.

✻ Published Paper Ω Project Report † Tool ◉ Presentation/abstract

Thank you!

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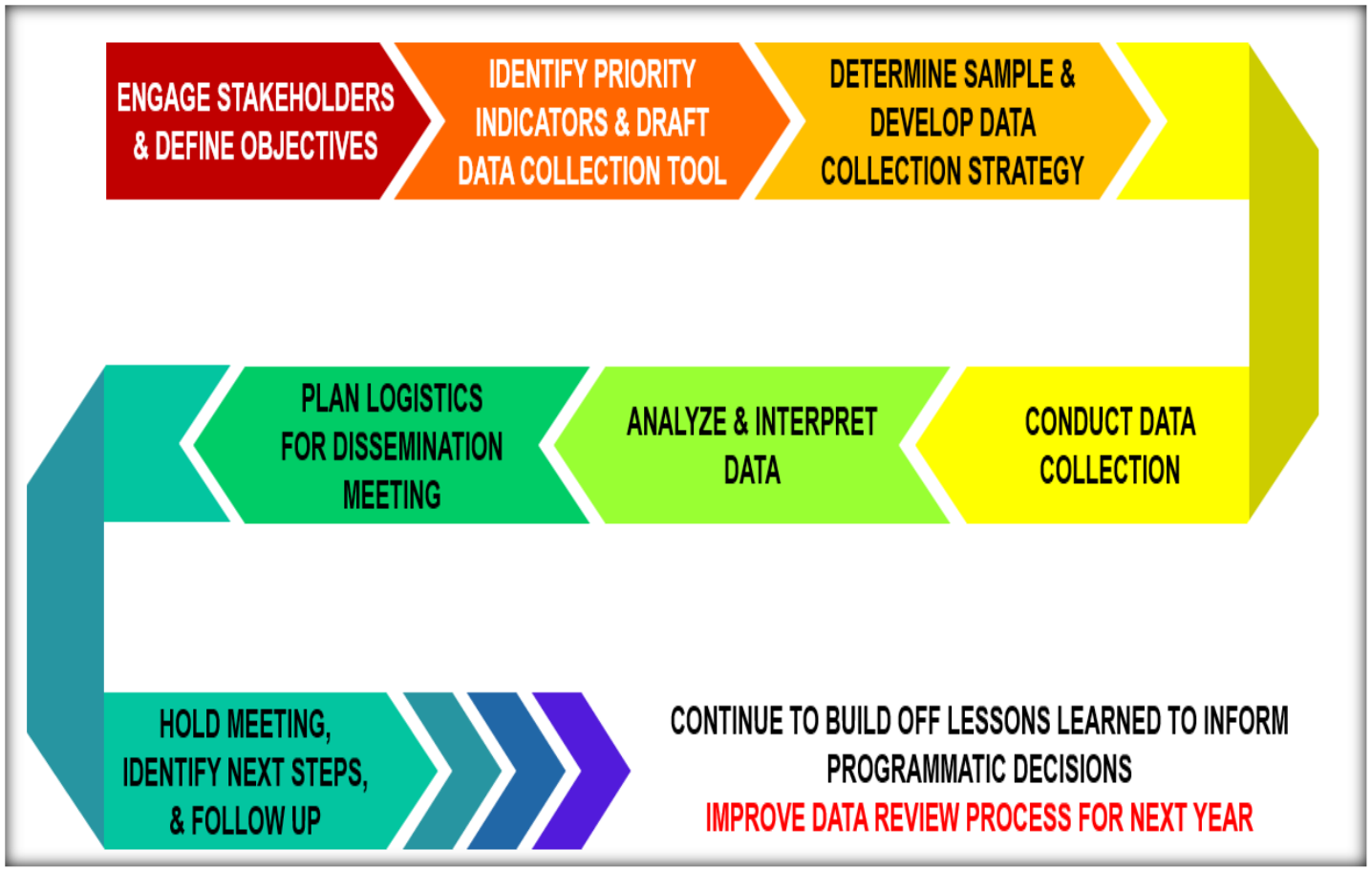
Differentiated Service Delivery Performance Review (DPR) in KwaZulu Natal Province, South Africa

Dr Musa Manganye, PhD
South Africa National Department of Health

HIV Coverage, Quality, and Impact Network

The DPR Approach



RSA adapted the CQUIN DPR model:

- Cooperative, team-based approach
- Focused on defined geographic area
- Specialized data collection tool
- Abstraction of facility-held data
- Feedback of results to facility level
- Dissemination workshop to share lessons and best practices
- Development of action plans to address gaps

https://cquin.icap.columbia.edu/network-focus-areas/monitoring-and-evaluation-of-dsd/

DPR Roadmap

START

01
BRIEFING & ORIENTATION

PART A
04 November 2021

PART B
08 -11 Nov 2021

02
DATA COLLECTION

14 -18 Feb 2022

PART C
March 2022

03
DATA ANALYSIS & VISUALIZATION

PART D
19 – 20 April 2022

04
DISSEMINATION

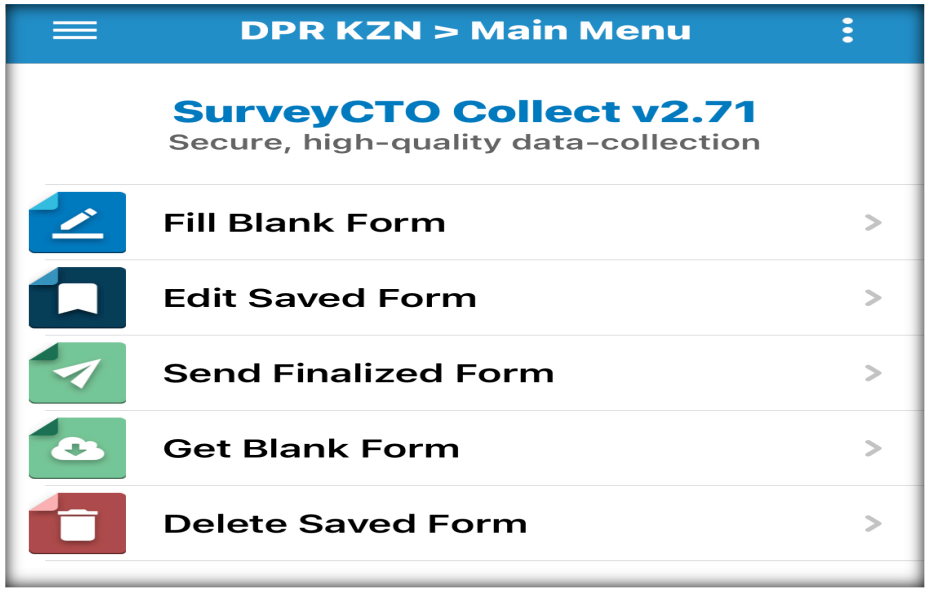
FINISH

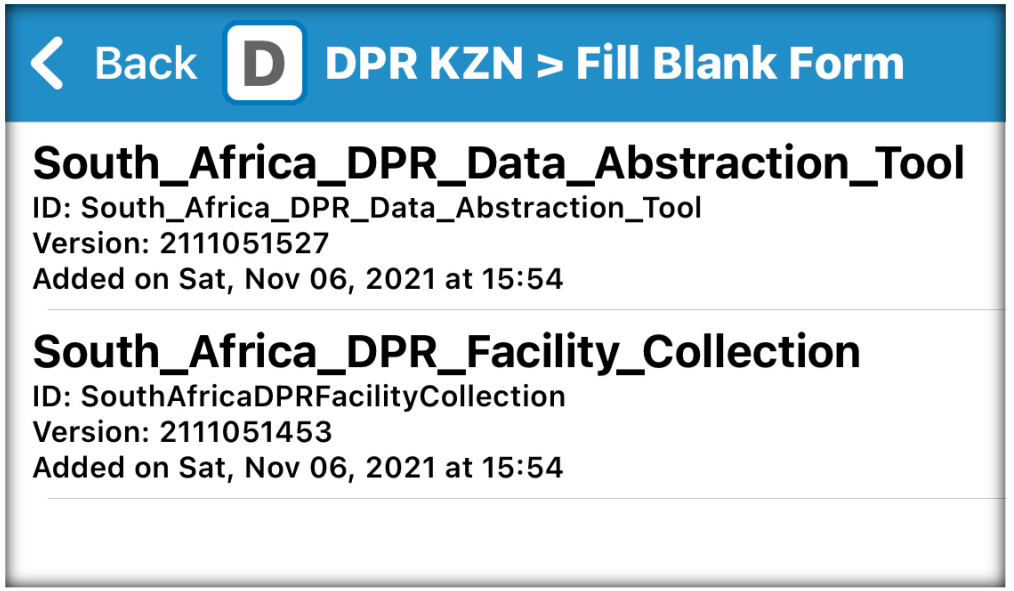
A summary of the methodology used

Parameter	Criteria
Geographical Area	KwaZulu Natal Province • Harry Gwala, King Cetshwayo, UGu, uMgungundlovu, uThukela, Zululand
Health facility sample	• High Volume facilities (DMOC register Pilot facilities) • Graduated Districts and non-Graduated Districts for HIV 90 – 90 – 90 targets • Urban and Rural mix facilities • Facilities with District Support Partners – to solicit data collection support • Availability of 6-, 12- & 24-months ART cohorts
Patient cohorts	• ART cohorts: 6, 12 & 24 Months (1560 Files abstracted)
Data abstraction	• SurveyCTO, automated data visualizations using MS Power BI (Business Intelligence)
Data collectors Teams	• 3 Teams comprising of National Department of Health Officials, Operation Phuthuma, Province, Districts, Sub-Districts, & DSPs.
Data sources	• Tier.Net (Electronic); CCMDD SyNCH (Electronic); DMOC Register (Paper Based); Patients Clinical Folders / Files (Paper Based)
Data collection period	• November 8 – 12, 2021 & 14 – 18 February 2022

Data abstraction tool

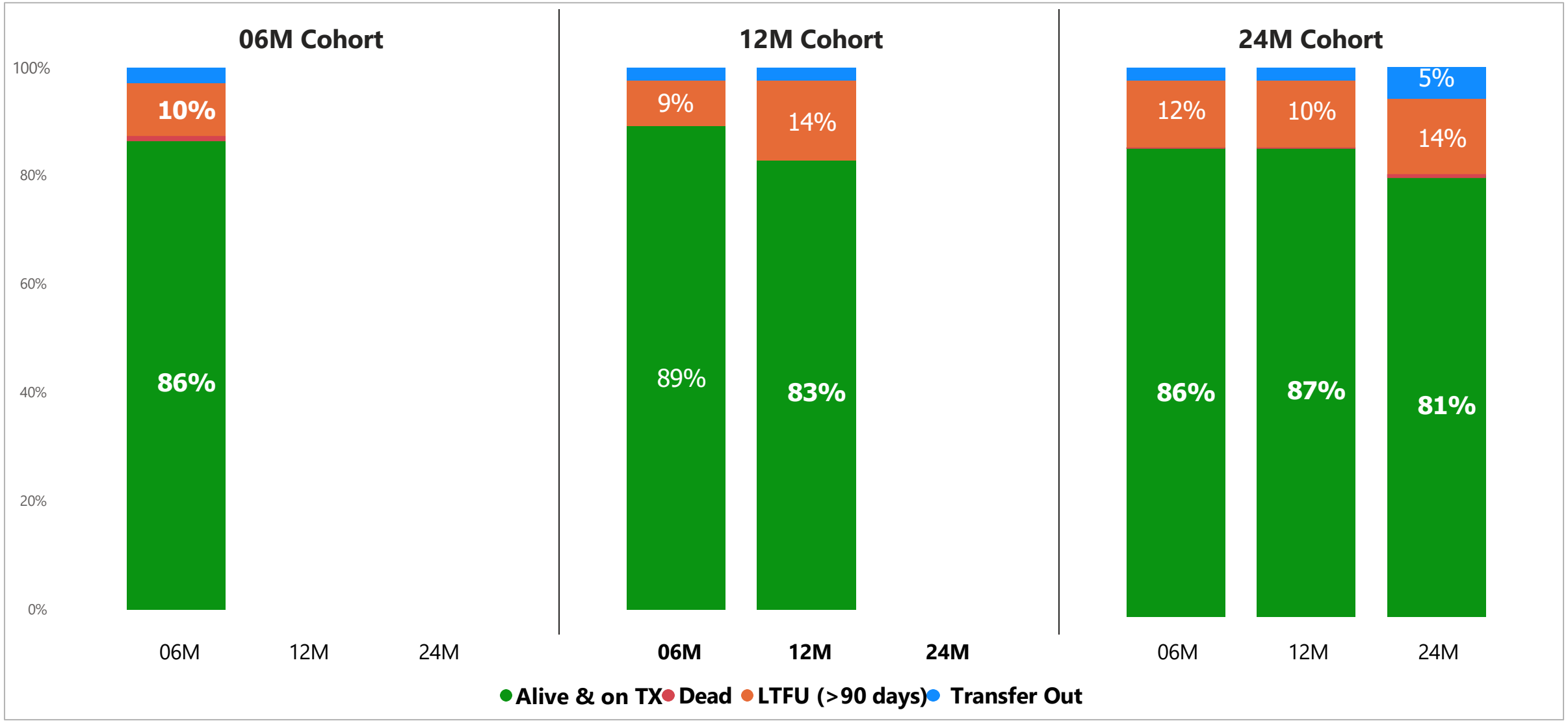
- Abstraction of patient-level data for defined data elements
- Customized to national data sources and DPR objectives
- Standardized collection of key data elements
- Setting up the data collection tool onto the tablets to collection data as the SurveyCTO)



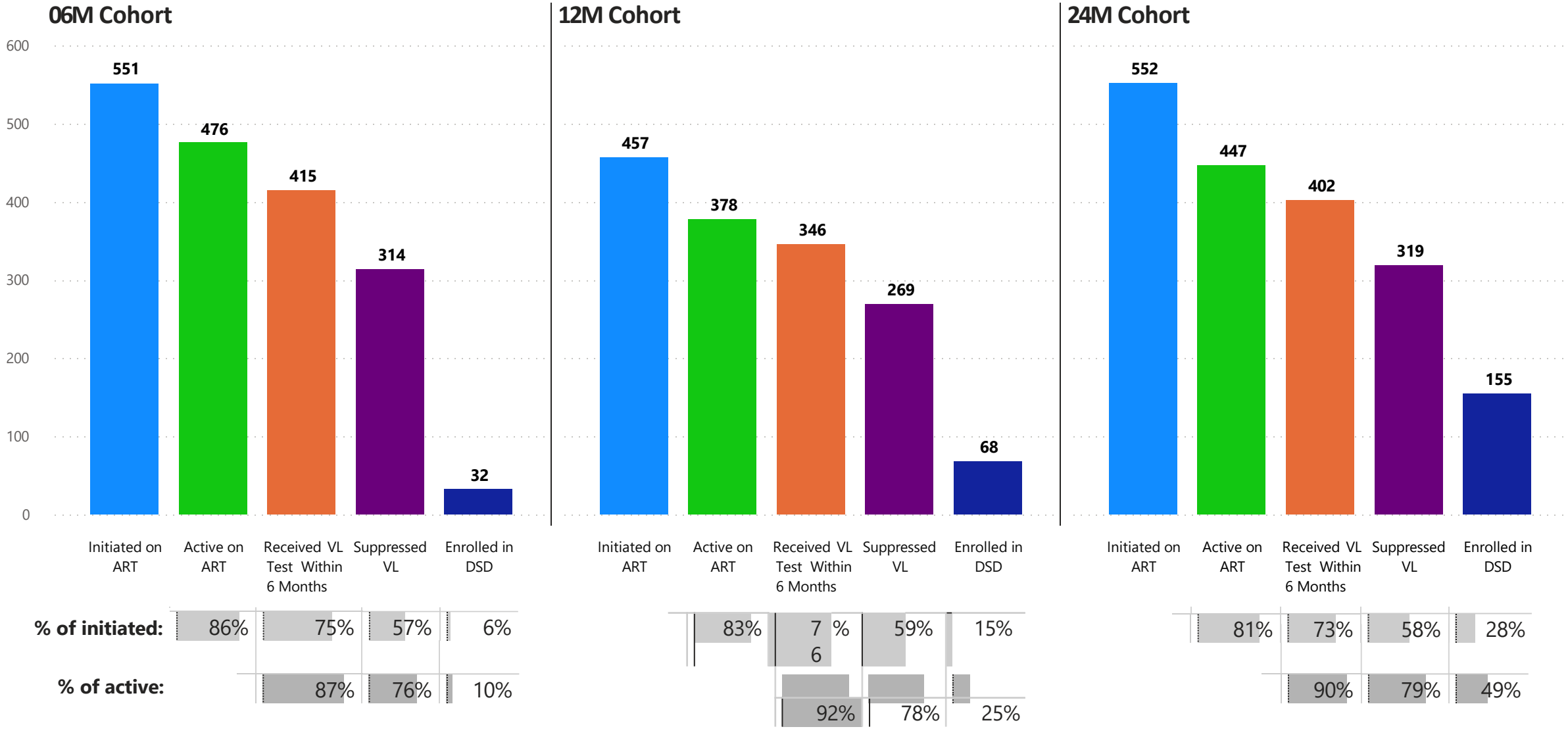


DPR Results

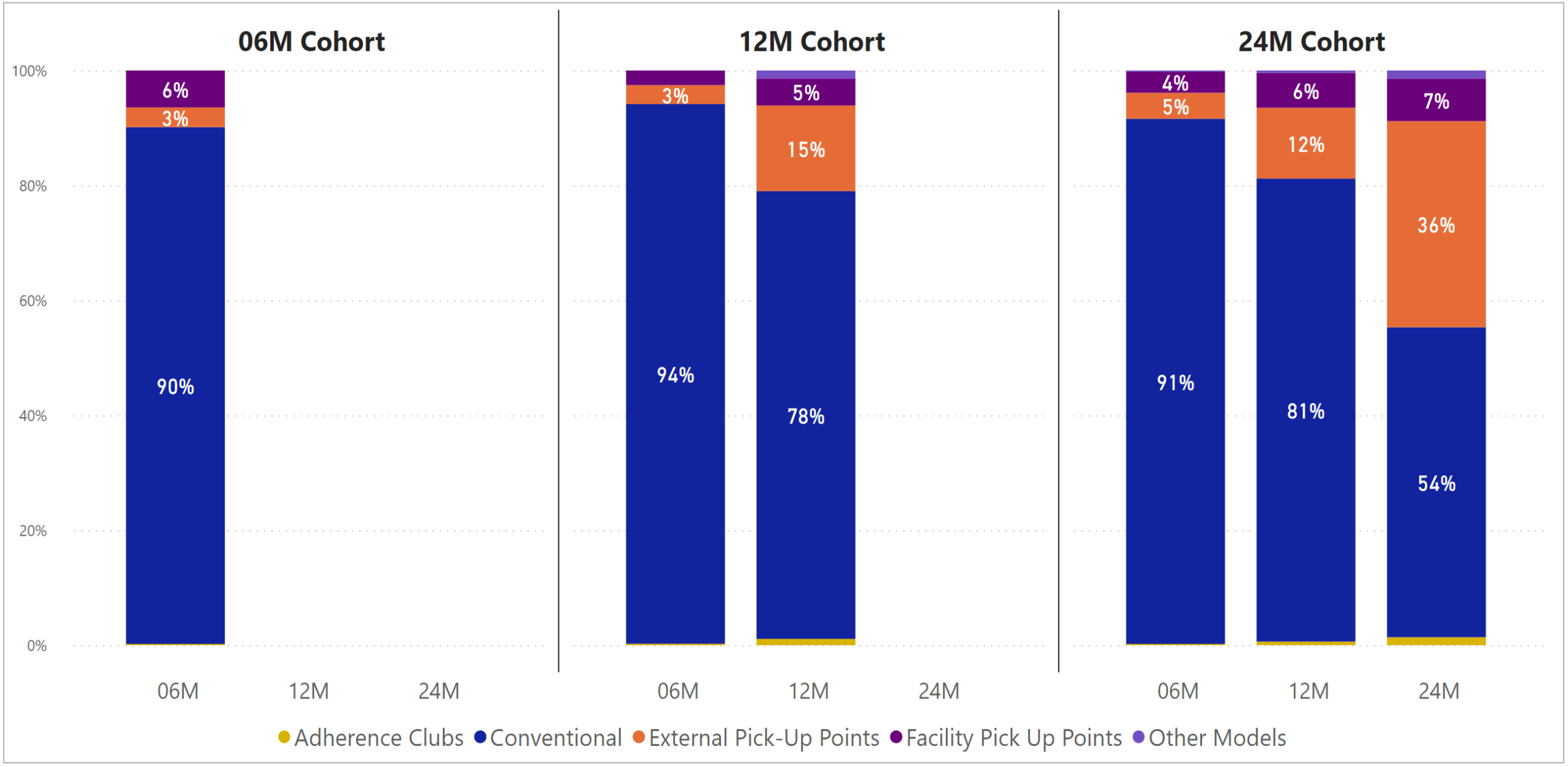
RECIPIENT OF CARE OUTCOMES BY COHORT AND TIME POINT



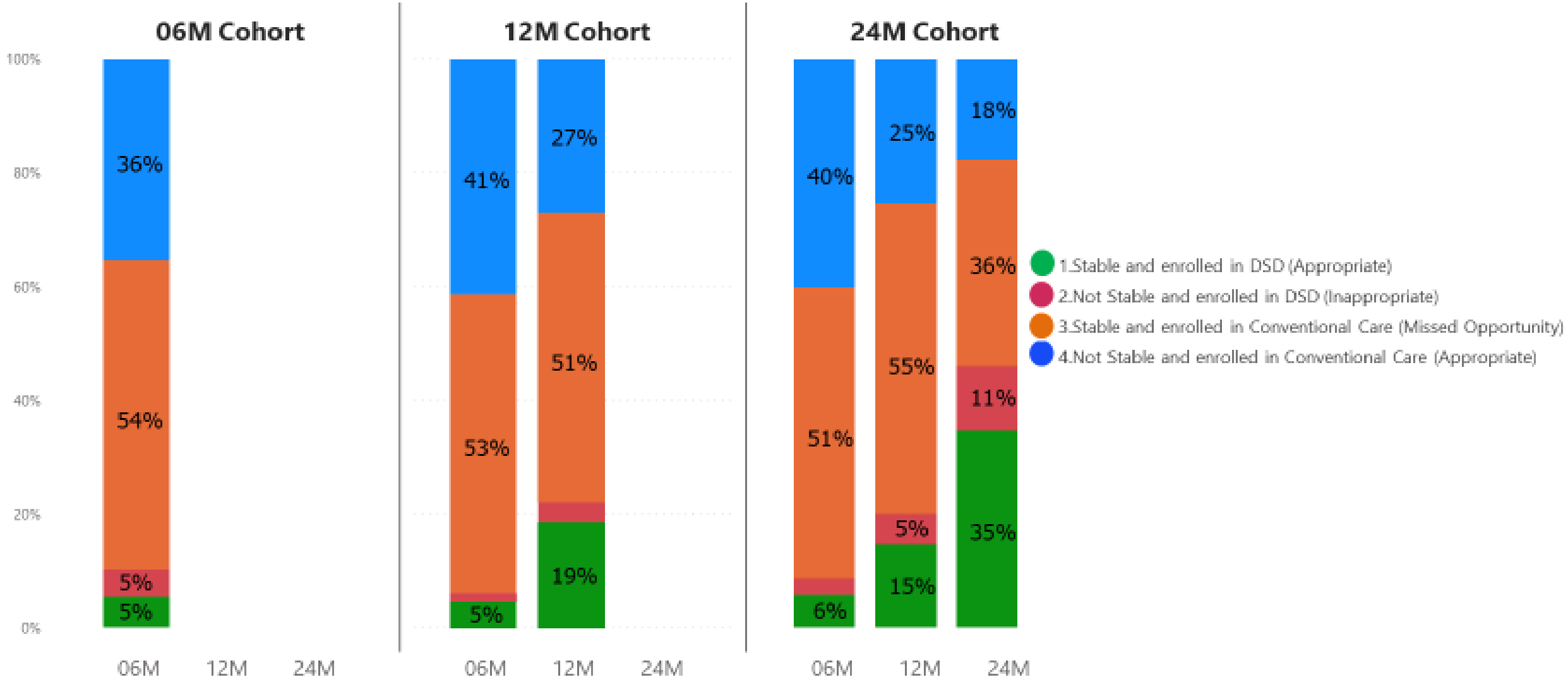
HIV CARE CASCADE BY COHORT



ART MODEL BY COHORT AND TIME POINT



MODEL APPROPRIATENESS BY COHORT



Conclusion

- The DPR provided important information about DMOC scale-up that was not available via routinely-collected data sources
  - Use of DPR data for decision making and QI initiatives in KZN is a priority
  - Can also inform subnational DSD capability maturity model self-assessments and AHD capability maturity model self- assessments
- The exercise built local capacity for follow-up DPRs
  - Call for ongoing periodic DMOC Performance Reviews / DPRs to closely monitor DMOC scale up and optimization
- Initial support (financial and technical) was provided by ICAP through the CQUIN project – now need to partner with DOH, PEPFAR, Global Fund to cost share and support additional DPRs.

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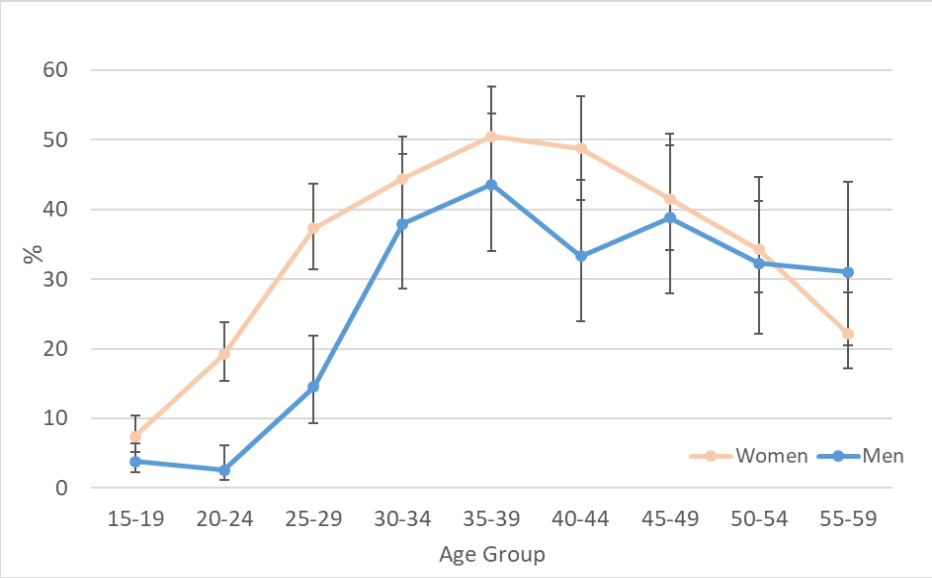
Retention in care among adults in differentiated models of HIV care in KZN, SA

Liesbet Ohler, MSF

HIV **Coverage, Quality, and Impact Network**

Background

- MSF has supported the “Bending the Curves” HIV/TB program in Eshowe/Mbongolwane since 2011
- 2 hospitals and 10 PHC clinics
- HIV prevalence in service area* is **26.4%** among adults 15-59 years
  - Highest prevalence in women 35-39 years: **50.5%**



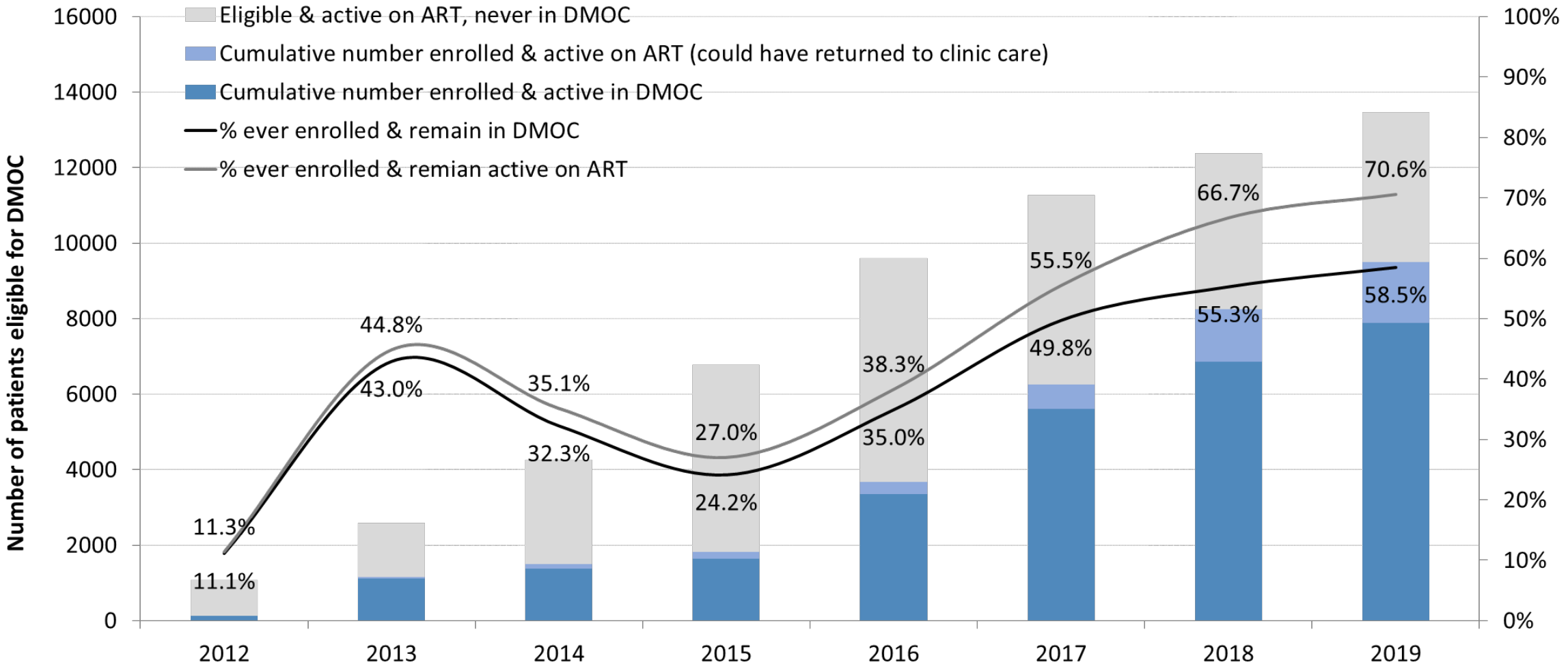
*Umlalazi, ward 1 -14, King Cetshwayo District

Rural and semi-urban area

Differentiated Models of HIV Care (DMOC) in SA

	Community ART group (CAG)	Adherence Club (AC)	Spaced Fast Lane appointments (SFLA)	Community pick up points (PuP)
DMOC model initiation	01/01/2012	01/01/2012	01/01/2016	01/01/2016
Management	Patient-managed Supported by a community health worker	Provider-managed Facilitated by a lay counselor, or a community health worker	Individual	Individual
Composition	4-6 patients	25-30 patients	Individual	Individual
Frequency of ART prescriptions	Monthly	Every 6 months	Every 6 months	Every 6 months
Frequency of ART medication refill	Monthly	Every 2 months	Every 2 months	Every 2 months
Location/place of refill	Picked up at the facility, by one of CAG member	Distributed by a facilitator at club meeting	At clinic pharmacy or other clinic location	At dedicated community location
Clinical assessment	Every 12 months	Every 12 months	Every 12 months	Every 12 months
Counseling	Group counseling or individual sessions	Every club meeting or upon request		

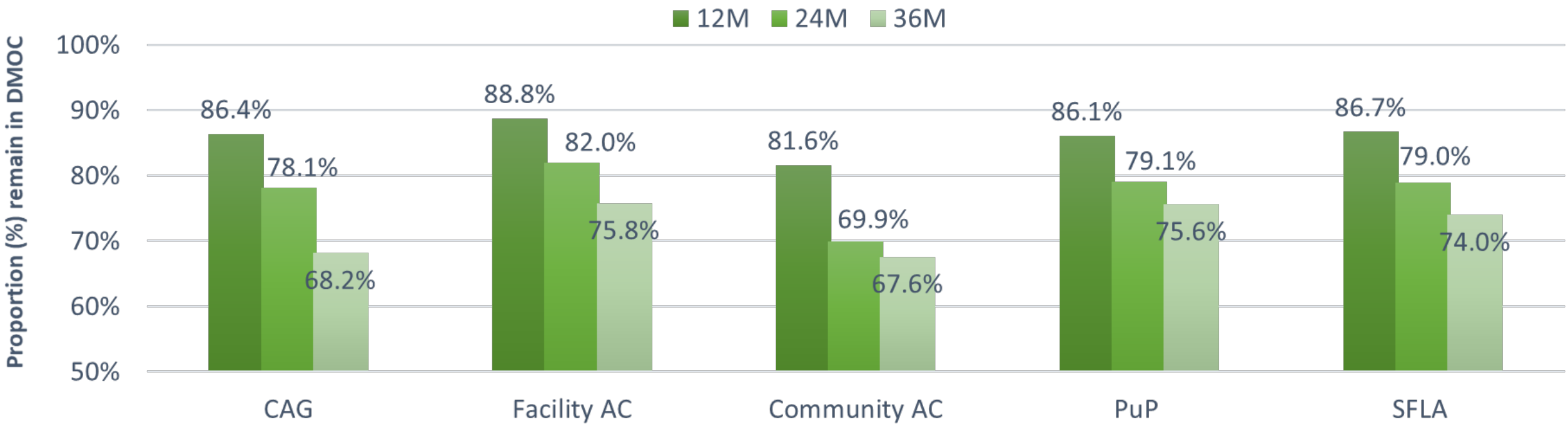
DMOC coverage among eligible adults on ART



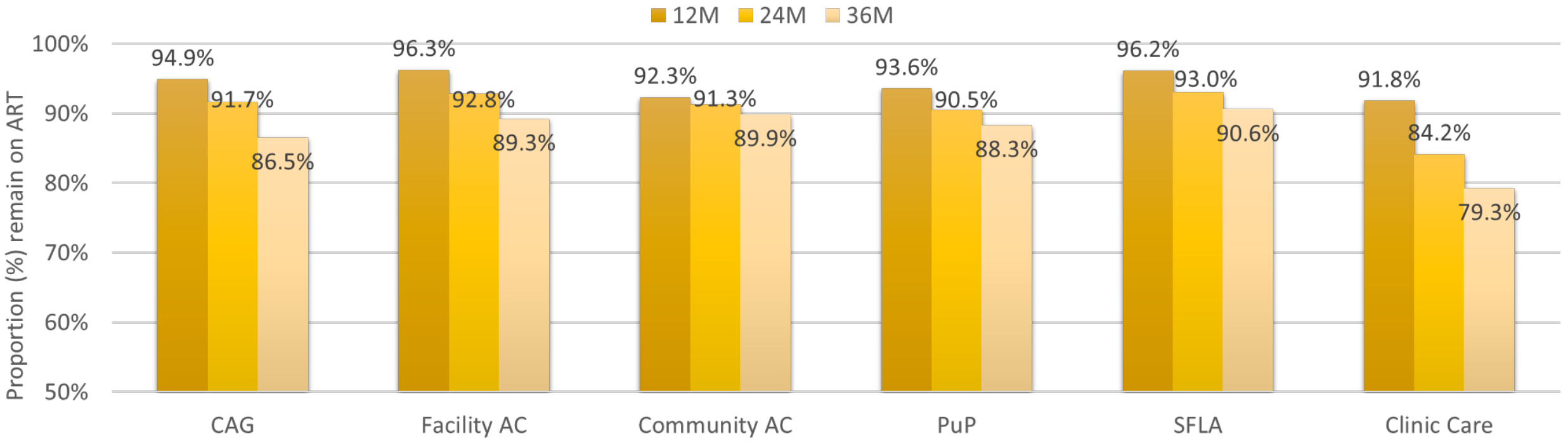
Baseline characteristics

	CAG	Facility AC	Community AC	PuP	SFLA	Clinic Care
	N=178	N=3482	N=104	N=3616	N=2101	N=4202
Characteristics at time of DMOC enrollment						
Age in years, (median, IQR)	41 (32-49)	39 (32-48)	44 (37-53)	38 (31-47)	40 (34-49)	38 (31-46)
Male (N, %)	38 (21.3%)	719 (20.6%)	35 (33.7%)	945 (26.1%)	613 (29.2%)	1287 (30.6%)
Time on ART, years (median, IQR)	3.3 (2-5.3)	2.9 (1.5-5.1)	3.6 (1.7-5.9)	3.4 (2-5.9)	5.0 (3.0-7.2)	4 (2-6)
CD4 prior enrollment (last known)						
CD4>=200 cells/mL	166 (93.3%)	3210 (93.0%)	92 (90.2%)	3443 (95.9%)	1977 (94.9%)	3692 (90.3%)
CD4<200 cells/mL	12 (6.7%)	243 (7.0%)	10 (9.8%)	147 (4.1%)	106 (5.1%)	395 (9.7%)
Not done	0	29	2	26	18	115
VL prior enrollment						
VL<400 copies/ml	158 (91.3%)	3207 (93.6%)	89 (90.8%)	3517 (98.8%)	2040 (98.3%)	3757 (96.3%)
VL>=400 copies/ml	15 (8.7%)	219 (6.4%)	9 (9.2%)	43 (1.2%)	36 (1.7%)	143 (3.7%)
Not Done (missing data)	5	56	6	56	25	302
ART regimen						
First Line ART	162 (91%)	3325 (95.5%)	94 (90.4%)	3463 (95.8%)	1944 (92.5%)	3927 (93.5%)
Second line ART	16 (9.0%)	157 (4.5%)	10 (9.6%)	153 (4.2%)	157 (7.5%)	275 (6.5%)
Not meeting eligibility criteria at initiation	30 (16.9%)	604 (17.3%)	16 (15.4%)	246 (6.8%)	79 (3.8%)	

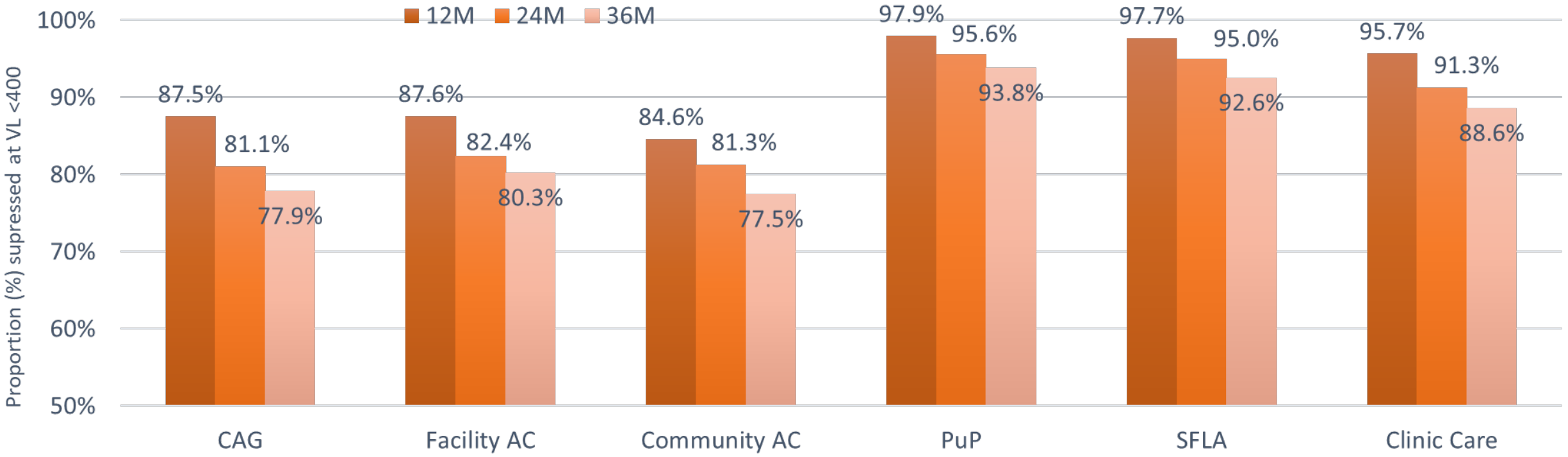
Retention in DMOC



Retention on ART



Viral suppression



Conclusions

- At scale implementation of DSD models is feasible
- The results emphasize the importance of implementing alternative DSD models
- Findings suggest comparable outcomes among people enrolled in DSD models and people in standard clinic care, with benefits in terms of ART retention for all DSD and benefits in VL suppression among those participating in PuP and SFLA
- Further research is needed to explore recipients of care preferences in choosing and/or remaining in a specific DSD model
- Further evaluation is also needed to assess cost-effectiveness of DSD models in comparison with standard of care at the clinic

Thank you!

Presenters

Ms. Ida Mokhele,
Senior Researcher, AMBIT,
South Africa

Dr. Musa Manganye,
DSD Advisor, National
Department of Health
SouthAfrica

Dr. Liesbet Ohler,
Project Medical Referent,
Médecins Sans Frontières
(MSF)

Ms. Ndivhuwo Rambau,
Project Coordinator,
Ritshidze ProjectHealth
South Africa

Q&A Moderator

Maureen Syowai
CQUIN Deputy Director (Technical)
ICAP Kenya

Panelist Q&A

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South Africa

Slides and recordings from today's session will be posted on the CQUIN website:
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Join us on 6th June for the next CQUIN webinar:
"Integration of non-HIV services into differentiated service delivery models"

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Thank you!