The evolving remit of differentiated ART delivery

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Bill & Melinda Gates Foundation

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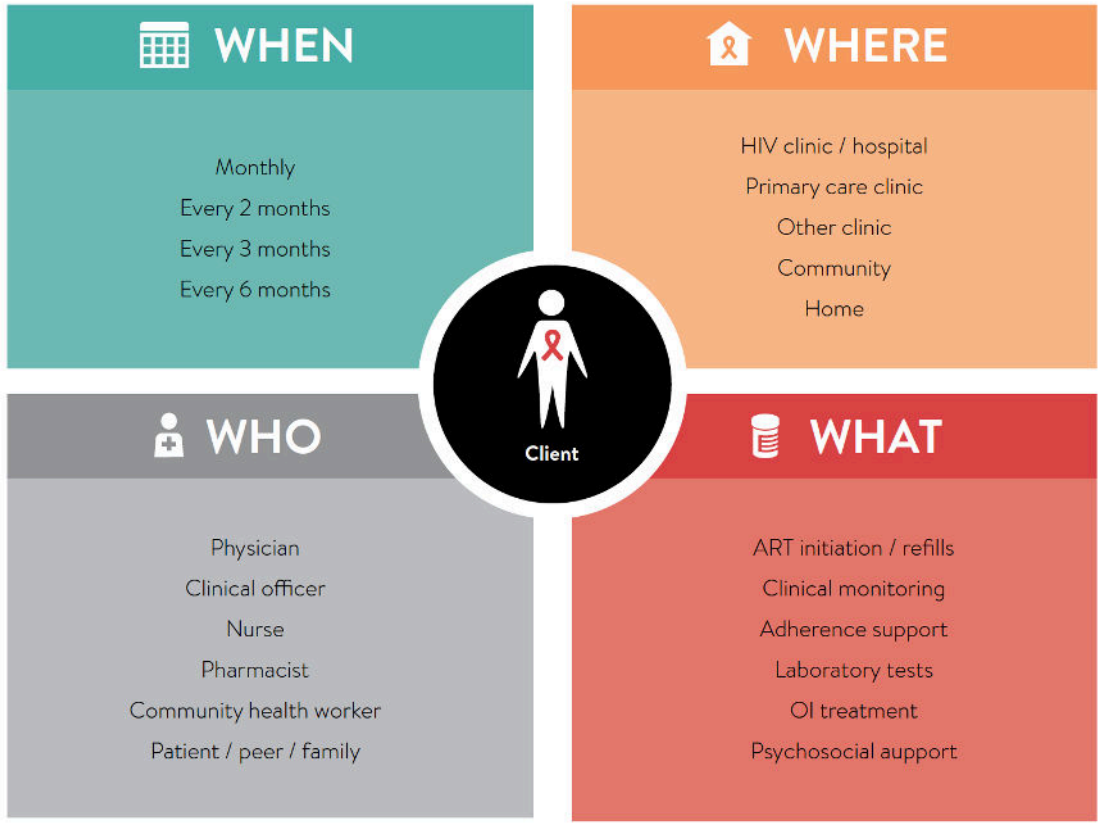
Outline

- **What were the original problems that differentiated ART delivery was meant to solve?**
- To what extent has differentiated ART delivery addressed those problems?
- As the epidemic and the response evolve, what are the emerging challenges that differentiated ART delivery could help address?

Differentiated service delivery (DSD) is an implementation strategy intended to:

- *simplify and adapt* HIV services
- across the *HIV prevention, testing, and treatment cascade*
- to reflect the *preferences, expectations, and needs of people living with and vulnerable to HIV*
- while *reducing unnecessary burdens* on the health system

Differentiated ART delivery



IAS, Differentiated Service Delivery Project

What were the original problems differentiated ART delivery was meant to solve?

CLIENT PERSPECTIVE

- **Why is this line so long?**
- How will I keep my job if I have to spend a day each month at this clinic?
- Why must I queue to see a nurse and then queue at the pharmacy when all I need is my ART refill?
- This place is full of sick people, but I feel healthy. Why should I keep coming?

IAS, Differentiated Service Delivery Project

HEALTH CARE WORKER PERSPECTIVE

- **How am I going to provide quality care to more than 100 people each day?**
- How can we support clients who are ill when we are overwhelmed with the healthy adherent clients?
- Hasn't anyone come up with a better way to deliver ART that does not compromise clinical outcomes?

After defining the problem: what does success look like?

- Primary metrics of success:
  - **Clinical outcomes** of retention and VLS → at least non-inferior?
  - **Cost**
    - to the RoCs → decreased?
    - to the health system → similar?
  - **Experience** of the RoCs + the HCWs → improved?
- Secondary metrics:
  - Health outcomes of people with more complicated conditions (HIV or non-HIV related) → improved?

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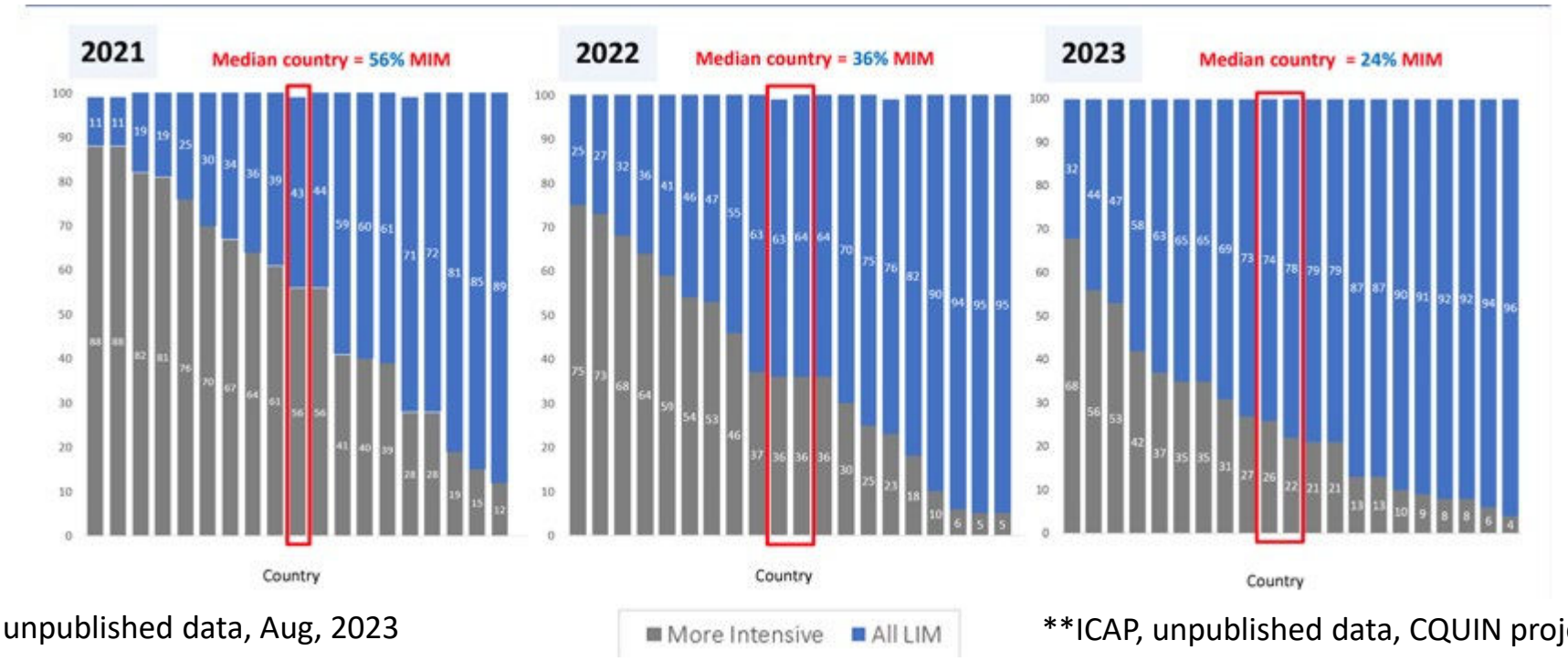
Differentiated ART delivery has scaled rapidly since 2017, accelerated by availability of TLD, of COVID, and all of you!

- 2017: <500,000 ROCs estimated to be in less-intensive models of care
- 2023: >12M ROCs in 25 PEPFAR-supported countries receiving 3 monthly ART refills as "enabler" of less intensive model + >2.5M in LIMs in South Africa*
- Decrease in proportion of people in more intensive models based on CQUIN data**:



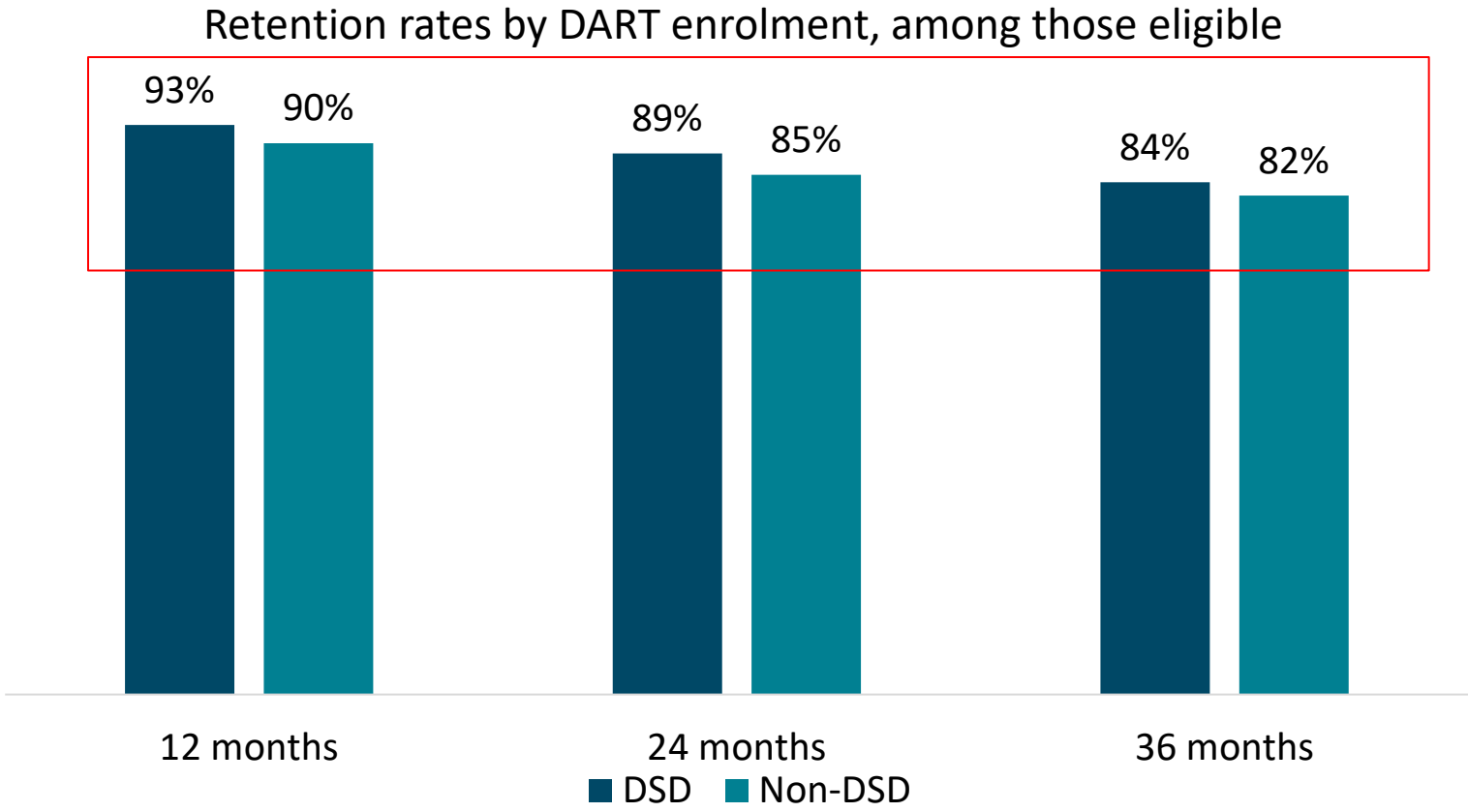
*PEPFAR, unpublished data, Aug, 2023

.+ unpublished S Africa data, Aug 2023

**ICAP, unpublished data, CQUIN project, Nov 2023.

Retention in care higher for those in differentiated ART models after 12, 24 and 36 months

- Analyzed EMR data from South Africa sentinel sites between 2017 and 2023
- Followed a cohort of ART patients who were eligible for a differentiated ART delivery models but may or may not have been enrolled



N's	12 month retention	24 month retention	36 month retention
Enrolled in DART	8,506	6,037	3,507
Non-DSD (eligible, not enrolled)	50,547	30,935	14,973
Total	**59,053**	**36,972**	**18,480**

HE²RO, unpublished data from the AMBIT project using target trial emulation methodology starting follow up at DSD eligibility, Nov 2023.

Viral load suppression is higher for those in DSD models vs. those eligible for DSD

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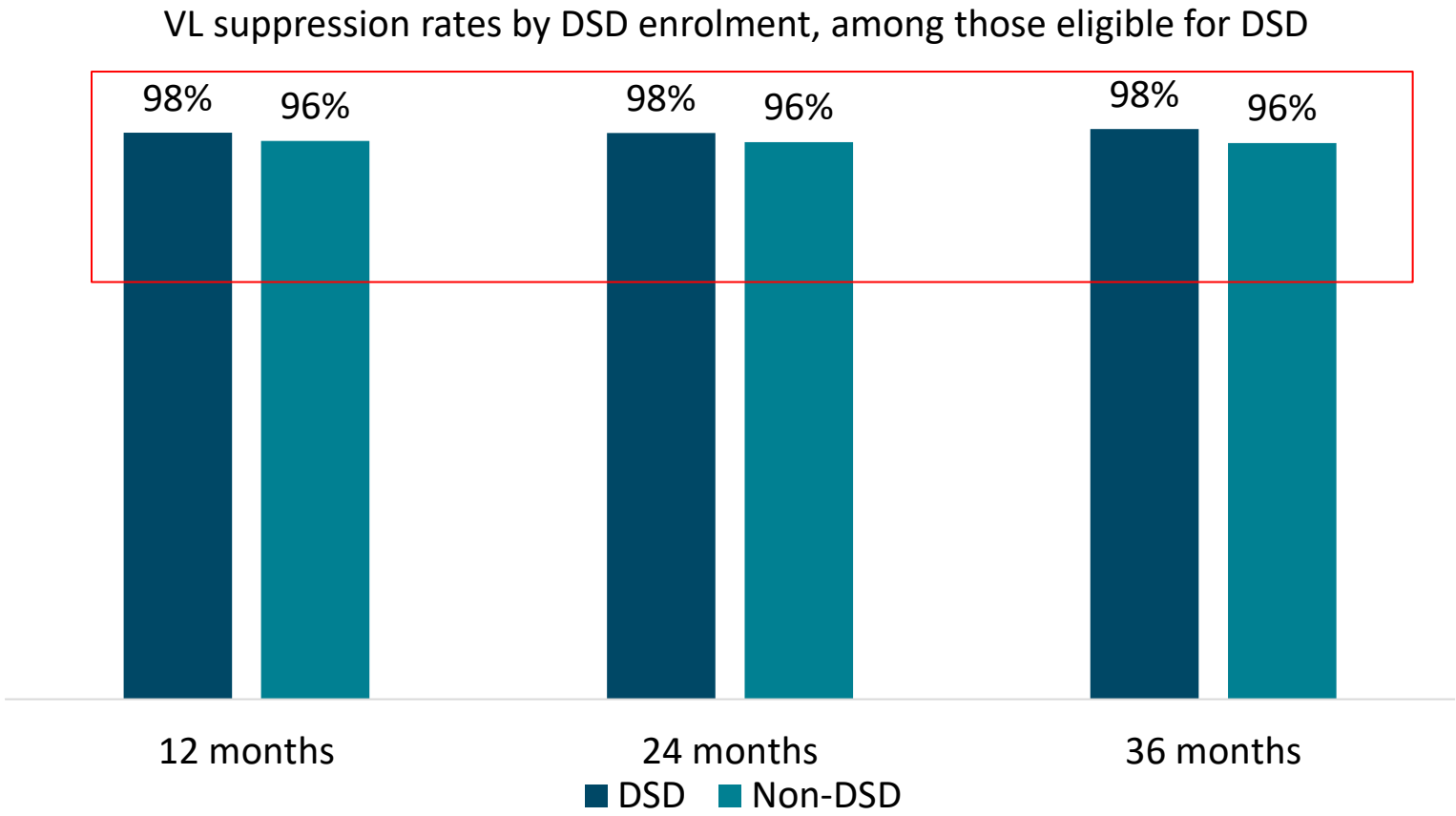
- Followed a cohort of ART patients who were eligible for a differentiated ART delivery models but may or may not have been enrolled



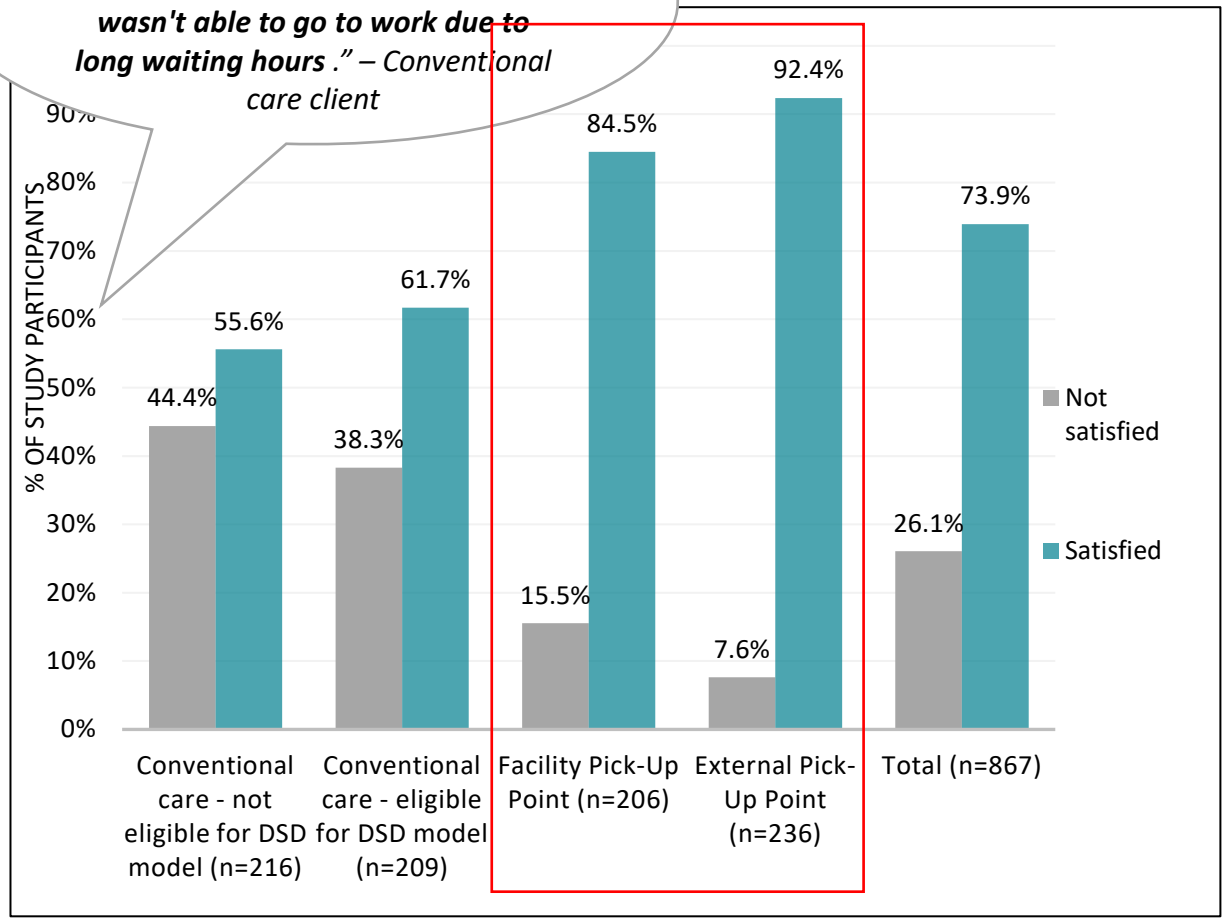
N's	12 month VL suppression	24 month VL suppression	36 month VL suppression
Enrolled in DSD	6,670	4,655	2,610
Non-DSD (eligible, not enrolled)	39,259	22,879	10,657
Total	**45,929**	**27,534**	**13,267**

HE^{2}RO, unpublished data from the AMBIT project using target trial emulation methodology starting follow up at DSD eligibility, Nov 2023.

Clients' self-reported satisfaction with their care is higher in differentiated ART models than in conventional care

- Nearly all clients enrolled in external and facility pick up point models said they were satisfied with their care.
- Satisfaction was substantially lower for those remaining in conventional care.

*"The waiting time is too long since I was taken out of facility pick-up point, so I am not satisfied **as I wasn't able to go to work due to long waiting hours** ." – Conventional care client*



Because it makes my life easier... I would rate them 100%.—Facility pickup point client

"I am not satisfied because I felt comfortable coming to the clinic." –External pickup point client

HE²RO, AMBIT Policy brief, Jun 2023, https://sites.bu.edu/ambit/project-documents/

Providers described positive changes to their work environments from implementing differentiated ART delivery models

PROVIDER EXPERIENCES:
WORKLOAD, TIME USE, AND RESPONSIBILITIES

	Operations managers	Nurses	Counsellors & CHWs	Other
Has differentiation made your job harder or easier?				
Harder	7%	8%	4%	3%
Easier	86%	76%	70%	86%
No change	7%	16%	26%	10%
Perceived changes to workload in previous year (Yes)	71%	49%	30%	38%
More **free time** after (Yes)	64%	60%	52%	62%

"There's a **decrease in workload** and patient management by our nurses. **Stress level has also decreased** due to CCMDD in this facility because we only interact with fewer patients instead of full environment every day." - Nurse

"**In my extra time**, I order medication, do general administration work and pack my medication in the cupboard." –Nurse

"Pressure to test and treat has increased the workload and **those on treatment must be enrolled on CCMDD and there are few providers with credentials to enroll** patients on to the system." –Nurse

Costs have decreased for RoCs and stayed similar or slightly increased for the health system (data from field studies)

Gates Open Research

Gates Open Research 2022, 5:177 Last updated: 09 MAR 2022

Check for updates

RESEARCH ARTICLE

REVISED **Do differentiated service delivery models for HIV treatment in sub-Saharan Africa save money? Synthesis of evidence from field studies conducted in sub-Saharan Africa in 2017-2019 [version 2; peer review: 2 approved]**

Sydney Rosen[1,2], Brooke Nichols[1,2], Teresa Guthrie[2], Mariet Benade[1], Salome Kuchukhidze[1], Lawrence Long[1,2]

Client costs

- as much as halved by participating in a less intensive model of care
- clients saved 1-2 visits/year

Average facility cost/client/year

- were largely similar between less intensive and conventional care models with a mean annual cost per patient of +/- 10%
- 6MMD models were slightly less expensive for each patient treated
- up to 90% of the mean cost/patient at the facility level included fixed costs of ART, non-ARV medications, lab tests, and infrastructure

Bottom line: Differentiated ART delivery appears to address the problems it was meant to solve (for people who are established in care).

- ✓ **Clinical outcomes** of retention and VLS improved
- ✓ Improvements in the **experience** of the RoCs + the HCWs
- ✓ **RoCs saved significant money and time**
- ✓ **Health systems costs similar** (and achieved better outcomes)

Outstanding questions:

- Does increased use of less intensive models lead to improved outcomes for people with more complicated conditions – advanced HIV disease, persistent viremia, uncontrolled diabetes, etc?

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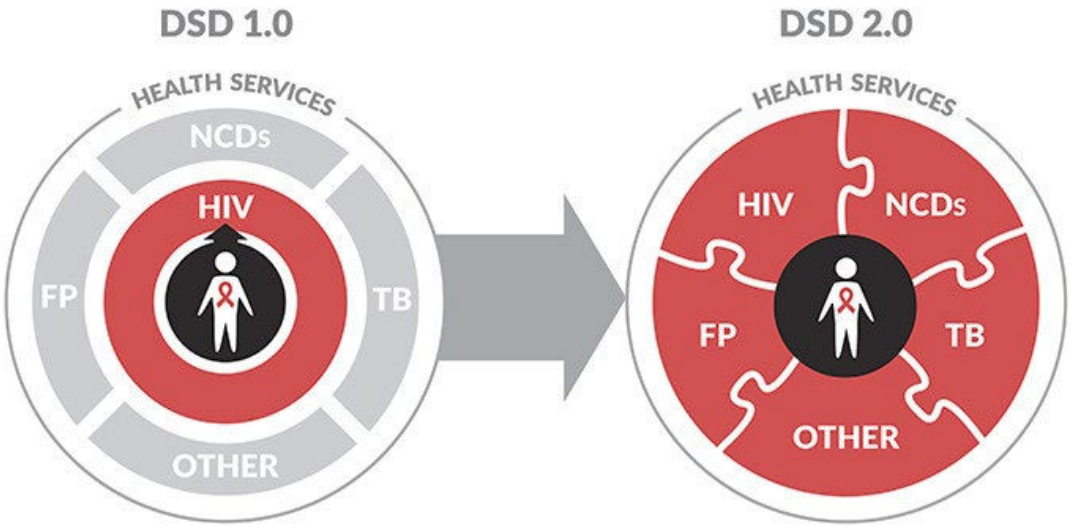
Differentiated ART delivery programs: unfinished business

- About 30% of **adults** who are established in care are **not enrolled** in a less intensive model*
- Despite WHO guidance, **pregnant** women, people with **controlled NCDs**, people on **2nd line** ART* are often considered "unstable" and ineligible
- **Children** have been left behind
- Access to **advanced HIV disease services**
- Missed opportunities to deliver other longitudinal care with ART: **FP, htn, diabetes, TPT**

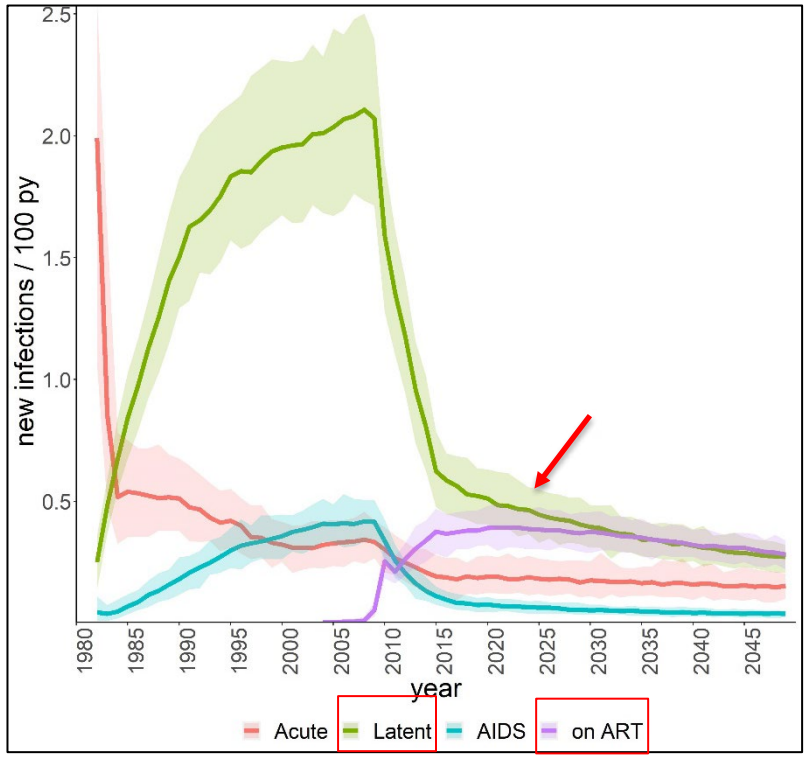


J Acquir Immune Defic Syndr. 2021 Feb 1;86(2):147-152.

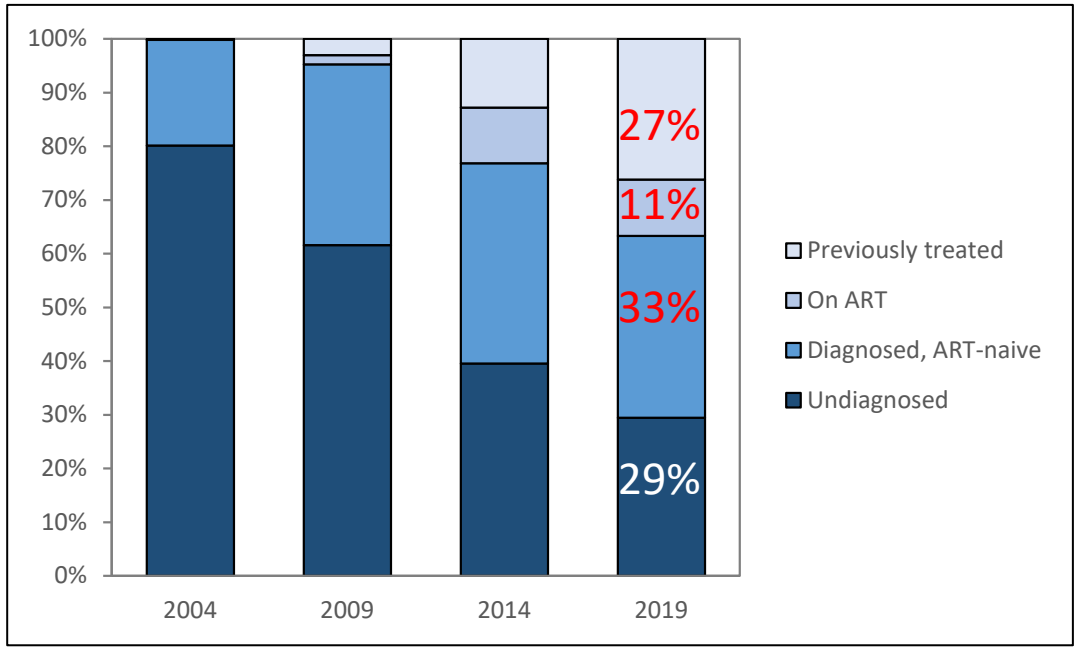
*CQUIN, unpublished data, Nov, 2023

As reach 95-95-95 goals, people who are known to the health care system and have had HIV for more than 1 year will increasingly be the source of new HIV infections

Modeled sources of HIV transmission
1980-2045, Eswatini



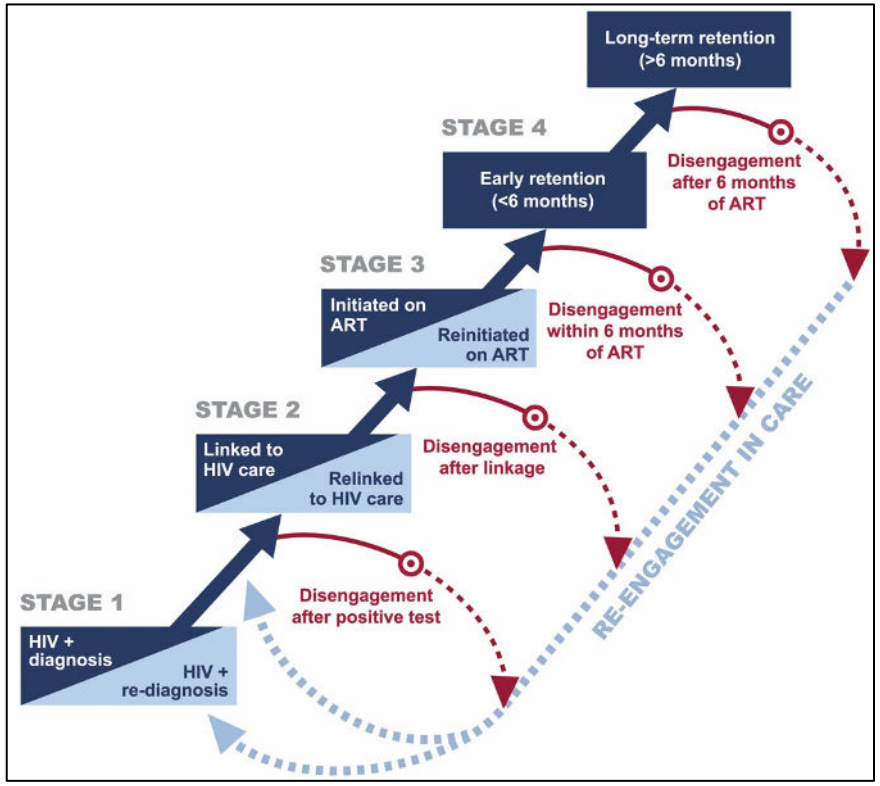
Modeled sources of HIV transmission
2004-2019, South Africa



L Johnson, 2021

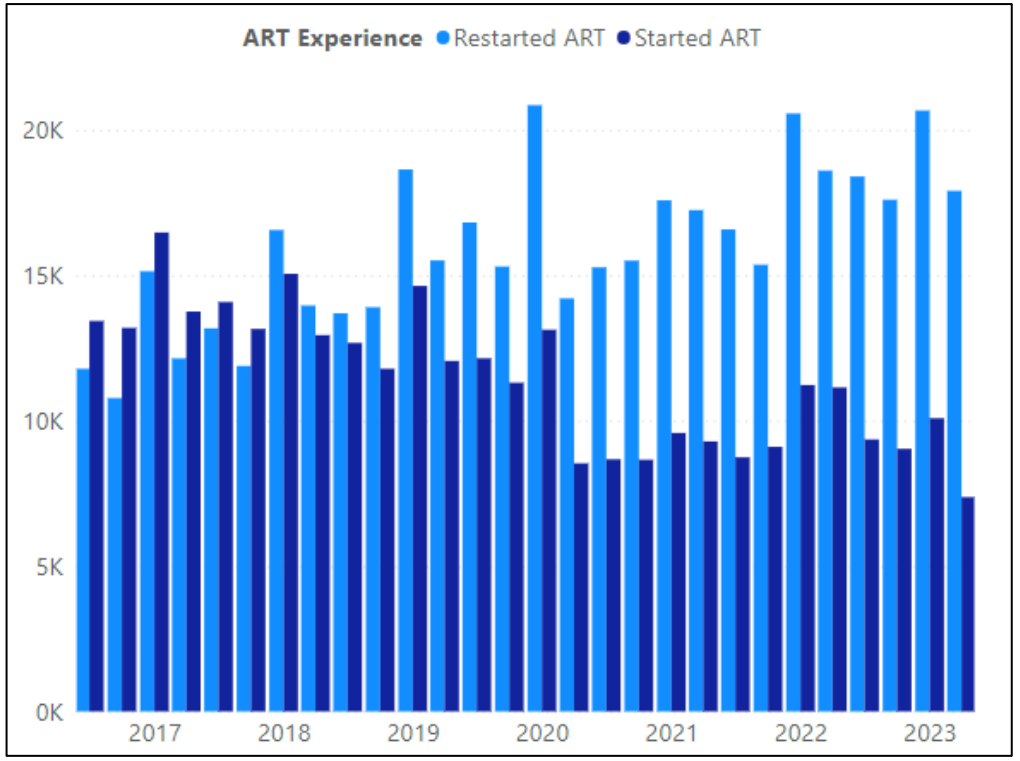
Unpublished data, A Akullian, PhD, Institute for Disease Modeling, 2023

These ROC are cycling in and out of care



https://doi.org/10.1371/journal.pmed.1003651

ART experience at initiation, W Cape, SA: 2017-2023



Western Cape Data Centre, unpublished data, Aug 2023

People have different reasons for disengaging and re-engaging, but for many, it is a natural part of a care journey

- Many providers think people who disengage are are being “silly”, “stubborn” or irrational
- But disengagement can appear quite rational to a ROC
- Associated with an anticipated or experienced negative clinic visit
- Even so, majority of disengaged ROC will return to care on their own.

Credit to PSI, Mpilo Project for these insights.

1

For returning patients, the *first return visit experience* is critical

Welcoming, supportive and empathetic

Clear facility visit flow focused on a positive patient experience

2

***Not all patients* late for scheduled appointments are re-engaging patients**

Only if they are 28 days after a scheduled appointment
OR
silent transfer from another facility

3

All re-engaging patients *DO NOT have* the same service delivery needs

Easier access to treatment

Psychosocial support

Clinical management

Differentiation is critical → move away from a one-size-fits-all approach to returning patients

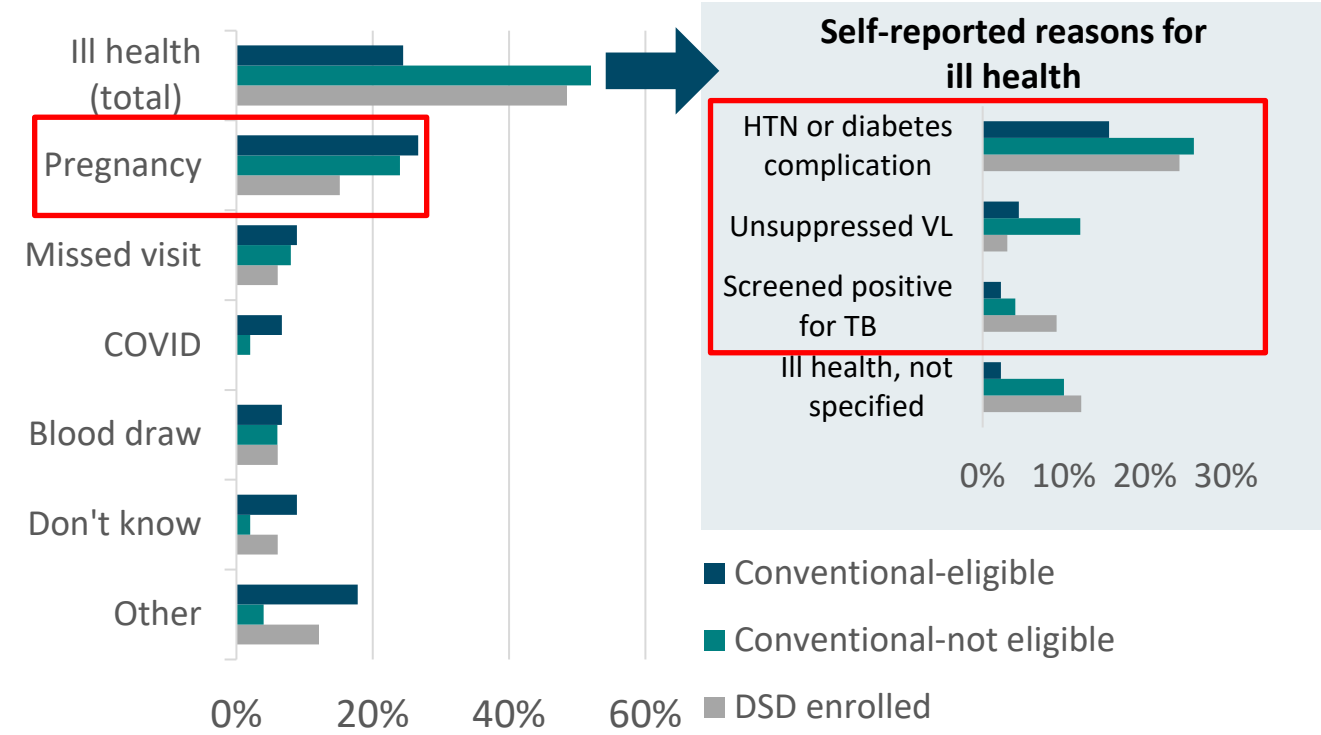
Credit to IAS, Differentiated Service Delivery Project for these insights.

Well-intentioned clinical guidelines can create barriers to access when people are back-referred out of less-intensive models

Reasons for back-referral to conventional care after enrollment in a less-intensive model of ART delivery, SA

- **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

Characteristic (n, %)	Conventional care - eligible for DSD but not enrolled	Conventional care - not eligible for DSD	Enrolled in DSD
No prior DSD enrollment	162 (78)	166 (77)	411 (93)
Prior DSD Enrollment	45 (22)	50 (23)	33 (7)



Engagement/disengagement is an emerging challenge for differentiated ART delivery and epidemic control. There are few nationally scaled best practices. To address it:

1. Continue to scale up/improve **models of differentiated ART delivery** to match clients' needs
2. Address "simpler" challenges that could decrease disengagement/increase re-engagement:
   - Adapt guidelines to facilitate **easier return to less intensive ART delivery** models following pregnancy, NCD complication, TB, interruption in care
   - Make it easier to collect/provide **emergency refills** outside of a home clinic
   - **Ease administrative requirements** to initiate temporary or permanent transfers between facilities
   - **Prioritize tracking resources –** eg, for people who are disengaged for ~ >28d and/or people with a known history of a low CD4

Cont'd – how to encourage (re)engagement

3. Implement or strengthen programming that can change the cost/benefit of staying engaged and hastening re-engagement

- Use **feedback from ROC and providers** to improve programming
- Scale differentiated "**welcome back**" programs that address ROC needs: psychosocial support, clinical management, access to care
- Improve **treatment literacy** programs that use differentiated approaches to educate ROC with different needs on benefits of ART and what to expect
- **Innovate** new means to identify and serve people at risk of disengagement, especially during the critical first 6m of care

CONCLUSION: How has the remit for differentiated ART delivery evolved since 2017?

Significant progress in providing ART for adults who are established in care through less intensive models with positive outcomes.

But there is **unfinished business**:

- Up to 30% of *adults* who are established in care who are not enrolled in a less intensive model
- Despite WHO guidance, *pregnant* women, people with *controlled NCDs*, people on *2nd line ART* are often considered "unstable" and ineligible
- *Children* have been left behind
- Missed opportunities to *integrate* other longitudinal care with ART: FP, htn, diabetes, TPT

And there is critical **new business**:

- *Developing differentiated approaches to re-engagement* -- essential for achieving epidemic control as people who are ART experienced become the most likely sources of new infections going forward

Acknowledgements

HE²RO/AMBIT

ICAP/CQUIN

IAS Differentiated Service Delivery Project

PSI/Coach Mpilo Project

Western Cape Data Centre

Thank you!