Anna Grimsrud, IAS – the International AIDS Society

DSD beyond HIV treatment

Applying differentiated service delivery (DSD) beyond HIV

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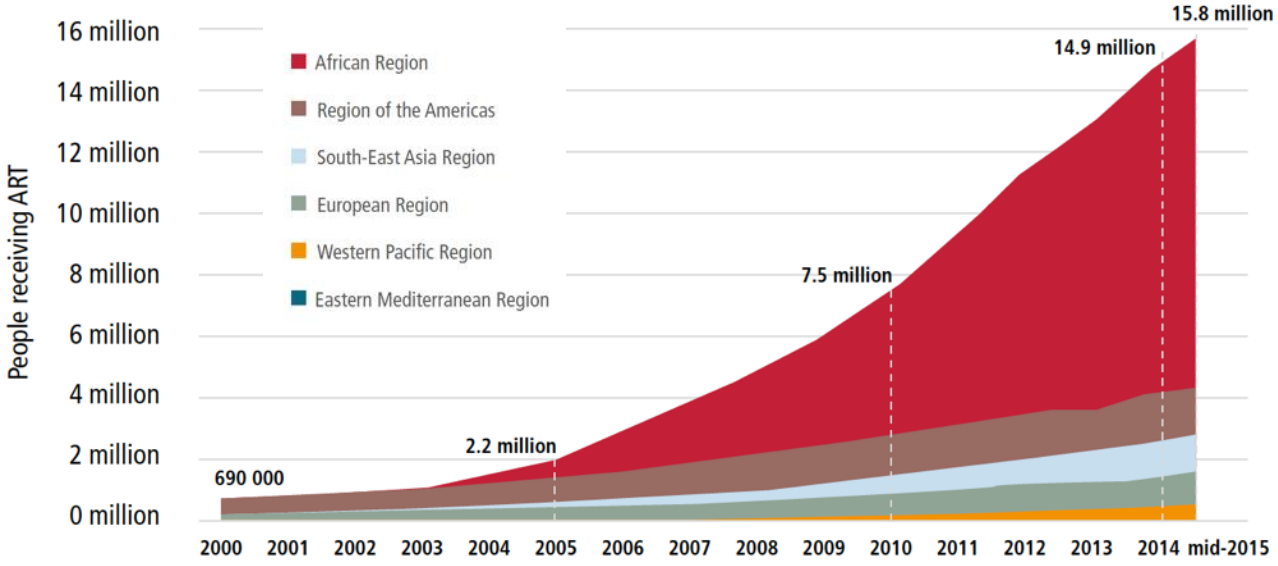
Success of antiretroviral therapy scale up



For the first time in global health history, the world reached a global treatment target prior to the agreed deadline – providing ART to 15 million people by mid-2015

PLOS MEDICINE

OPEN ACCESS

PERSPECTIVE

Simplified ART Delivery Models Are Needed for the Next Phase of Scale Up

- "Ten years ago, the main model for ART delivery was the Western model: specialized and individualized, with patients receiving careful clinical monitoring and drug regimens that were frequently altered according to tolerability, emergence of resistance, and patient preference."

- "Acknowledging the urgency of scaling up treatment for millions of patients in clinical need, innovative approaches to simplified ART delivery were implemented in parallel with (not subsequent to) formal epidemiological assessments."

Ford, Mills. PLoS Med. 2011 Jul;8(7):e1001060


Monthly visits to collect ART
Three-hour trip to clinic: Cost of transport
Long queues at the clinic
Leaving family and activities at home

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Result was DSD

South Africa – Adherence Clubs

Effectiveness of Patient Adherence Groups as a Model of Care for Stable Patients on Antiretroviral Therapy in Khayelitsha, Cape Town, South Africa *Fernandes et al PloS One 2013*

97% of club patients remained in care compared to 85% of other patients.
Club participation reduced loss to care by 57% (HR 0.43 95% CI 0.21-0.91)

South Africa National Roll Out aiming for 100,000 clubs by next year

Mozambique– Community Adherence Groups

RESEARCH ARTICLE

Community ART Support Groups in Mozambique: The Potential of Patients as Partners in Care

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Uganda– TASO's CDDP and CLADs

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Differentiated service delivery is a **person-centred** approach that simplifies and adapts HIV services **across the cascade** to reflect the preferences and expectations of groups of people living with HIV while **reducing unnecessary burdens on the health system.**

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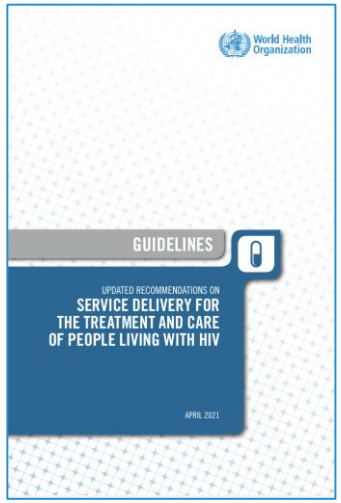
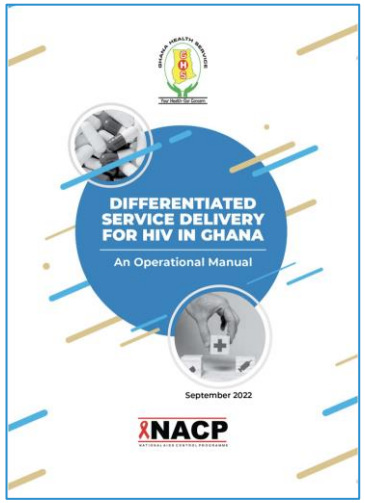
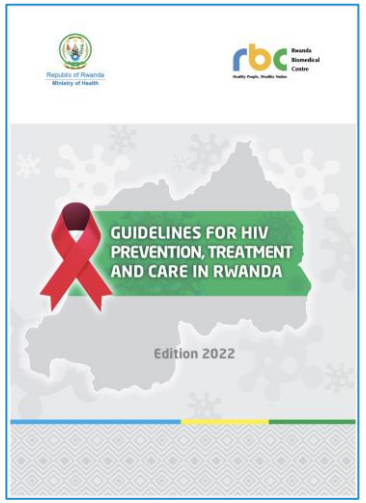
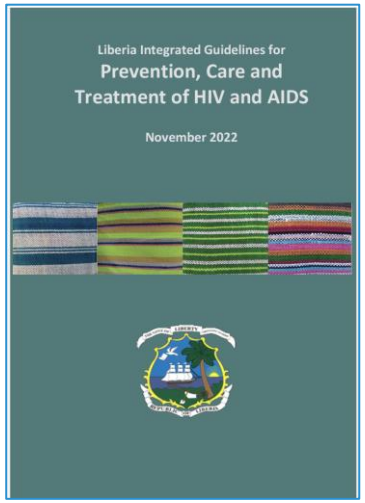
DSD was established in global and national policy along with implementation plans









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»If successful, DSD for HIV has implications for how other chronic diseases are managed and has the potential to change the architecture of healthcare delivery.”

Ehrenkranz et al, Curr Opin HIV AIDS, 2019 Jan;14(1):60-65.

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Differentiated service delivery is a **person-centred** approach that simplifies and adapts **chronic disease** services **across the cascade** to reflect the preferences and expectations of groups of people living with **chronic diseases** while **reducing unnecessary burdens on the health system.**

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Differentiated service delivery is a **person-centred** approach that simplifies and adapts **healthcare** services **across the cascade** to reflect the preferences and expectations of groups of people while **reducing unnecessary burdens on the health system.**

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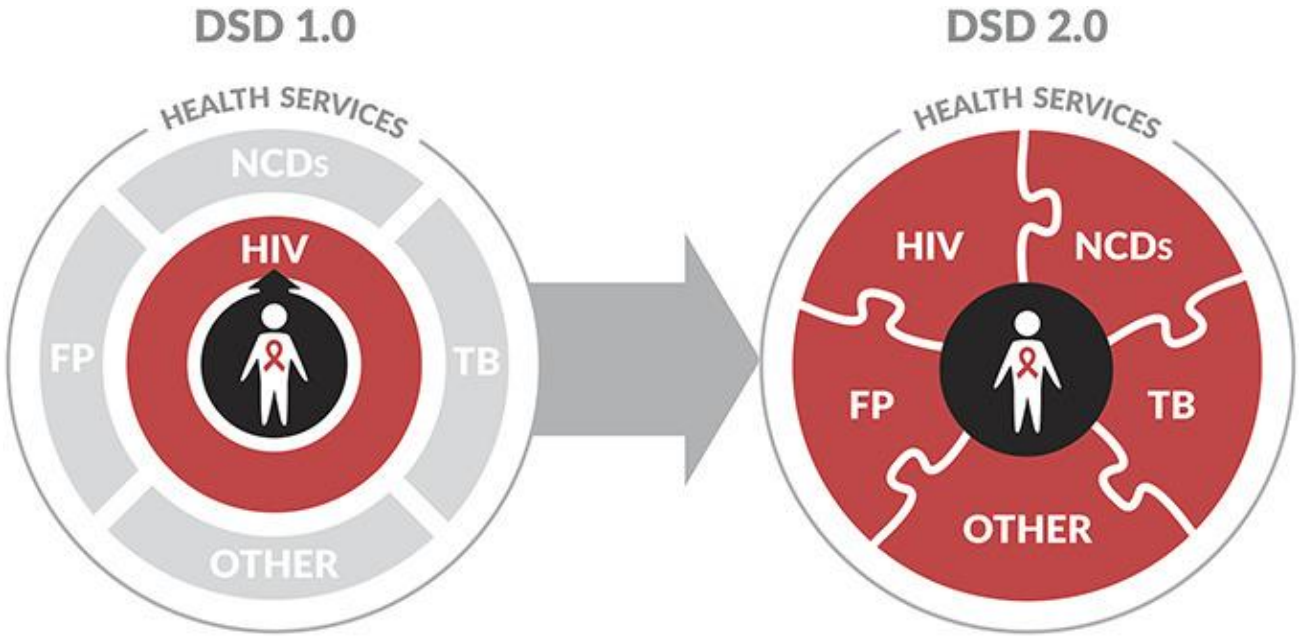
DSD 2.0

Need a more person-centered approach

Acknowledge health needs beyond just HIV



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

"…An initial focus could be on PLHIV, but DSD 2.0 provides a platform for offering any longitudinal or chronic care service to the general population"

Ehrenkranz et al, 2021, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7803437/

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But also…

- How can the DSD approach be applied to support other chronic conditions and prevention needs (family planning, PrEP, TB preventive therapy…)?

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In other words

- It’s not (just) about integration
- But how can the principles of DSD be used to support service delivery for chronic conditions and other ongoing prevention needs

"…HIV programmes have transitioned from providing a 'one-size fits all' approach to ART delivery, recognizing the diversity of client needs in the era of 'treat all'. One such approach is differentiated service delivery (DSD)…The principles of DSD were not developed to be exclusive to HIV, but with the vision that DSD could support chronic disease management across the cascade of care."

Bygrave et al, Curr Opin HIV AIDS. 2020 Jul;15(4):256-260.

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Key enablers of DSD for HIV treatment

- Non-toxic regimen
- Simplified clinical guidance
  - one regimen across populations
- Fixed dose combinations supporting adherence and simplifying supply chain
- Clinical monitoring & reliable adherence measure
  - viral load (VL) monitoring
- Cohort monitoring
  - to demonstrate impact on retention and control

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Key enablers of DSD for HIV treatment

- Non-toxic regimen ~ HTN ~ FP
- Simplified clinical guidance ~ HTN √ FP
  - one regimen across populations
- Fixed dose combinations supporting adherence and simplifying supply chain ~ HTN √ FP
- Clinical monitoring & reliable adherence measure √ HTN X FP
  - viral load (VL) monitoring
- Cohort monitoring
  - to demonstrate impact on retention and control ~ HTN X FP

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Key enablers of DSD for HIV treatment

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  - to demonstrate impact on retention and control

Martin Muddu

Yvette Kisaka

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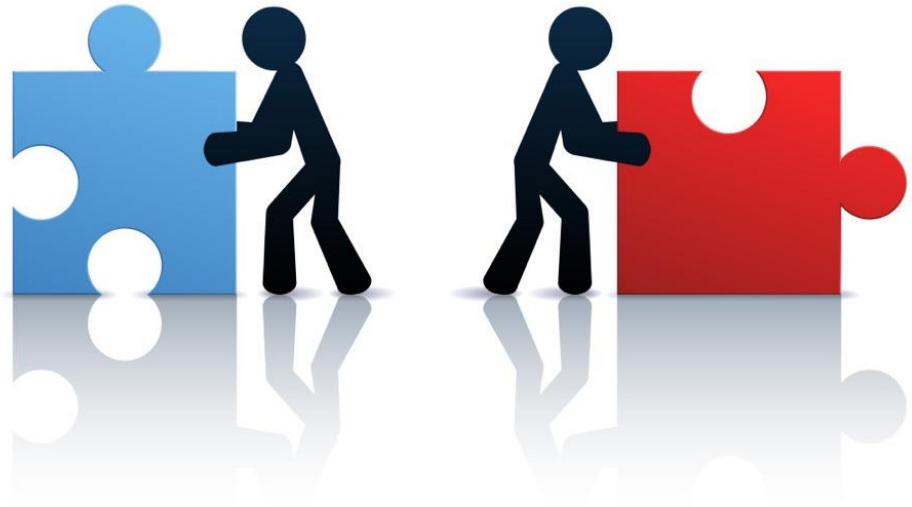
Separation of drug delivery from clinical care enables DSD

- And provides opportunities for community delivery of chronic medications



At a refill visit, the client does not need to see a clinician

Requires strong treatment literacy of symptoms and signs to attend clinic any time between appointments
→ self-management

Adapt the building blocks for the clinical visit and for the refill visit

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Clinical visits can be less frequent than refill-only visits

METHODS		Oral pill	Sub-cut self-injectable	IM injectable
WHEN Service frequency	Clinical review	*3-monthly*	*Annual*	*3-monthly*
	Script length	*6-monthly*	*Annual*	*3-monthly*
	MMD	*3-monthly* * 6-12 monthly if travelling*	*4 units*	*1 unit*
WHERE Service location	In facility/ In Community/ Both	*Facility FP services and outreach clinics Community & Home*	*FP services & outreach clinics Community & Home*	*Facility services & outreach clinics*
WHO Service provider	Cadre	*Nurses/HSAs/CBDAs*	*Nurses/HSAs*	*Nurses/clinicians/ HSA*
	Self-administered	*Yes*	*Yes*	*No*
WHAT Service package	Added/integrated	*Integrated with other services*	*Client calendar Pregnancy self-test Call line*	*Integrated with ot her services*

Juliana Kanyengambeta

- And for NCDs, separation can support where there are supply chain and other challenges to receiving multi-month dispensing

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Where to next for DSD for HIV treatment

Enhance the enablers further – particularly earlier access (improving early retention)

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FIRST YEAR VISIT SCHEDULE

	M0	W2	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	No. of visits
*Angola	●	● [18]	●	A	A	A	●	V	●		A			V D	11
*Eswatini	●	●	●	●	●	●	●	V			A			V D [19]	10
*Ethiopia	●	●	●	●	●	●	●	V [20]			●			V D	10
*Ghana	●	●	●	●	●	●		V		D				V [21]	9
Kenya	●	●	●	●	V [22]	●		D						V	8
*Lesotho	●	●	●		●			V [23]			●			V D	7
*Liberia	●	●	●	●	●	●	●	V			●			V D	9
Malawi	●		●	●	●			V [24]			D				6
Mozambique	●		●	●	●			V [25]			D				6
*Namibia	●	●		●	●	A	A	V	A	A	●	A	A	V D [26]	13
Rwanda	●		●	●	●		V	D [27]						V	7
South Africa	●		●		V	D			A			V			6
*Uganda	●		●	●	●			V			●			V D [28]	7
*Zambia (policy 1, policy 2)	●	●	●		●			V			●			V D [29]	7
*Zimbabwe	●		●		●			V			●			V D [30]	6

Version: June 2024
www.differentiatedservicedelivery.org

Key

- Clinical visit
- A — ART refill only visit
- A — ART refill only visit in certain DSD models
- V — Viral load testing
- D — Possible DSD enrolment
- Eligible for DSD

- Of the 15 countries, eight require 6-7 visits, three require 8-9 visits and four require 10-13 visits in the first year of ART
- In 12 countries, the first viral load is recommended at month six.
- Access to less-intensive DSD models is feasible only from month 12 in nine countries, provided the second viral load assessment result is not also required.

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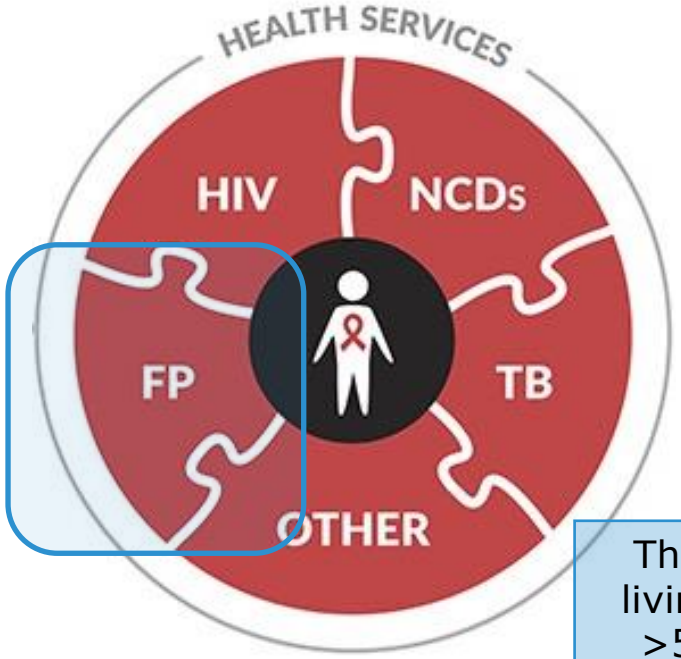
Consider the health needs of people living with HIV…

Family planning needs of people living with HIV



The number of people living with HIV who are >50 years of age has increased from 5.6 million in 2015 to 9.4 million in 2022. [UNAIDS]

Aging population living with HIV needs

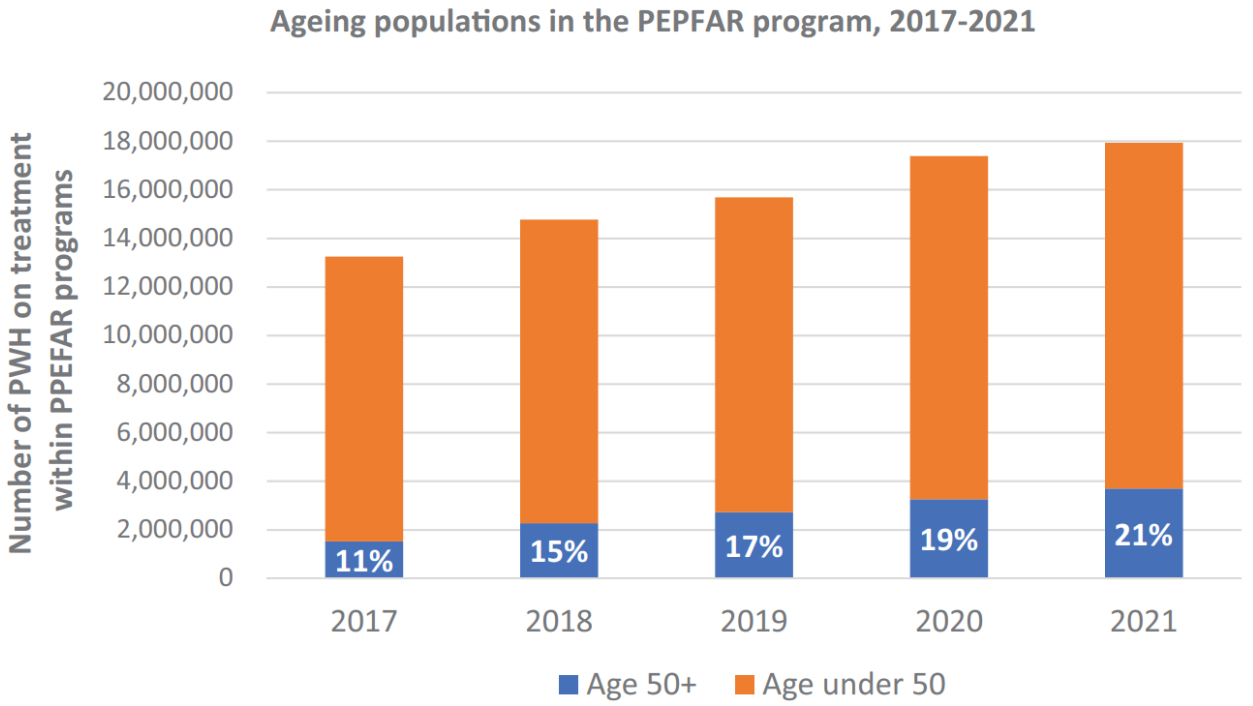


Figure 1. The number of people on HIV treatment in PEPFAR-supported countries, 2017–2021, among older adults and those under 50 years of age. Between 2017 and 2021, the proportion of the HIV treatment cohort 50 years of age and above has increased from 11% to 21%. Abbreviation: PWH, people living with HIV.

Advocate for policy support – integration *within* DSD models

INTEGRATION OF CONTROLLED NON-COMMUNICABLE DISEASES (NCDS)

	Specified in DSD policy	Not eligible for DSD models for HIV treatment	Eligible for DSD models for HIV treatment				
			No guidance on NCD management within DSD models	NCDs managed separately with visit dates aligned	Same, or reduced length, NCD refill in DSD model with separate NCD clinical review	Reduced* ART and NCD refill length and/or more frequent clinical reviews in DSD model	Same** ART and NCD refill length and clinical review frequency in DSD model
Angola	No						
Eswatini [1]	Yes					●	
Ethiopia [2]	Yes		●				
Ghana [3]	Yes						●
Kenya [4]	Yes		●				
Lesotho [5]	Yes				●		
Liberia	No						
Malawi [6]	No		●				
Mozambique [7]	No						
Namibia	No						
Rwanda	Yes						●
South Africa [8]	Yes						●
Uganda	Yes						●
Zambia [9]	Yes		●				
Zimbabwe [10]	Yes					●	

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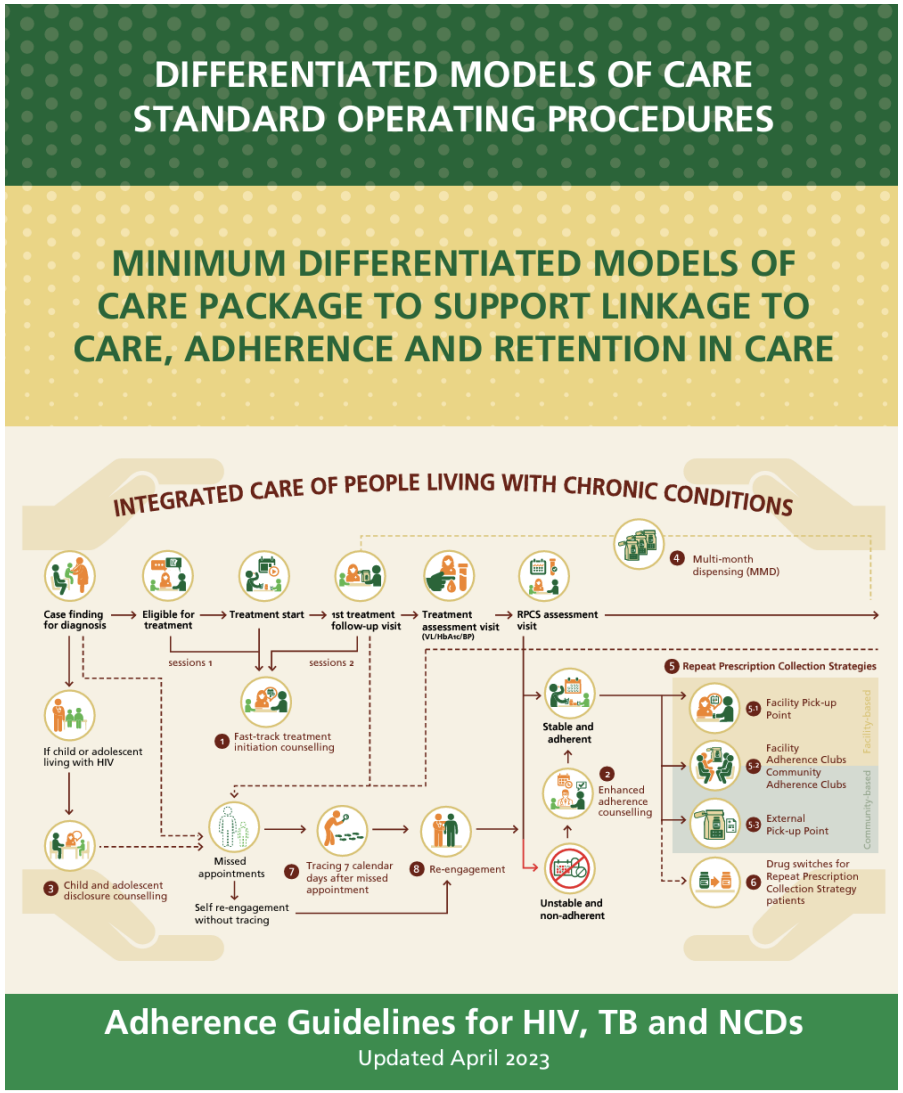
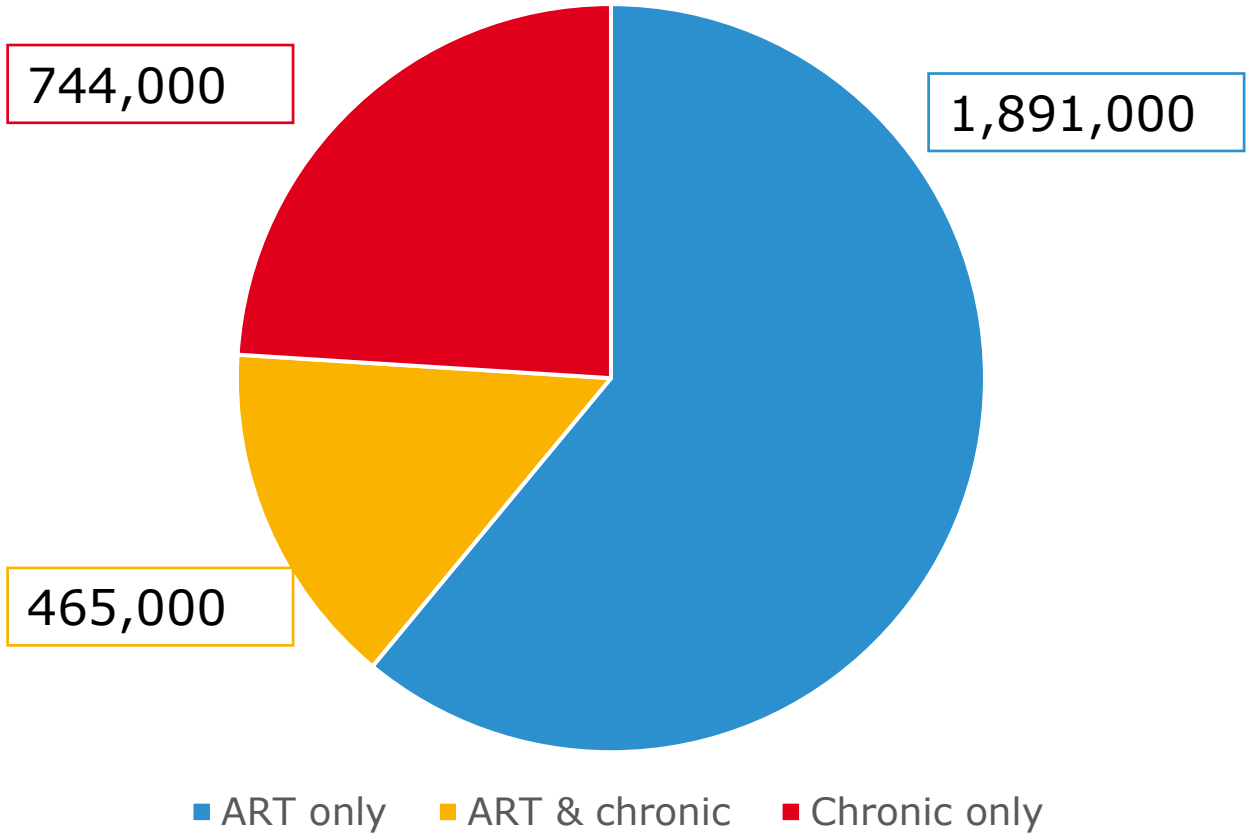


In South Africa, same DSD models for NCDs and HIV (and same supply mechanism) – accessed by 3.1M people



March 2024 data

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INTEGRATION OF FAMILY PLANNING (FP)

	Any guidance in DSD policy	FP provision within DSD models	Specifies FP needs and contraceptive method review at ART clinical reviews in DSD model	Specifies LARC offer at DSD enrolment and ART clinical reviews	Only oral refill in DSD model	Oral and self-injectable* refill in DSD model
Angola	No					
Eswatini [1]	Yes	Yes	Partially	●	●	
Ethiopia	No					
Ghana [2]	Yes	No				
Kenya [3]	Yes	Yes	No		●	
Lesotho	No					
Liberia	No					
Malawi	No					
Mozambique	No					
Namibia	No					
Rwanda [4]	Yes			●		●
South Africa [5]	Yes		Yes		●	
Uganda [6]	Yes	Yes	Partially			
Zambia [7]	Yes	Yes	No		●	
Zimbabwe [8]	Yes	Yes	Yes	●	●	

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Integration with DSD for family planning in Zimbabwe

Table 29: Building blocks for the common family planning methods provided

	IUD	IMPLANT	ORAL PILLS	SUB-CUTANEOUS 3-MONTHLY INJECTABLE	INTRA-MUSCULAR 3-MONTHLY INJECTABLE	CONDOMS
WHEN 	At DSD entry At DSD clinical visits At facility walk-in services in between visits	At DSD entry At DSD clinical visits At facility walk-in services in between visits	At same clinical and refill visit as ART Every 3 months	Not yet available	At DSD entry At DSD clinical visits At facility walk-in service Every 3 months	At same clinical and refill visit as ART Every 3 months
WHERE 	Offer at ART clinic or through referral Primary care clinics Hospitals	Offer at ART clinic or through referral Primary care clinics Hospitals	Primary care clinics Hospitals	Not yet available	Primary care clinics Hospitals	Primary care clinics Hospitals
WHO 	IUD-trained doctor, midwife or nurse	Implant-trained doctor, midwife or nurse	FP-trained doctor, midwife, nurse, clinical officer, community-based distributor	Not yet available	FP-trained doctor, midwife, nurse, clinical officer	Doctor, clinical officer, midwife, nurse, community distributor, VHW, CATS and key population peer supporters
WHAT 	IUD information, counselling, insertion/ removal, management of side-effects	Impact information, counselling, insertion/ removal, management of side-effects	Combined and progestin-only pills, information, dispensing of pills, management of side-effects	Not yet available	Injectable information, counselling, giving of injections, management of side-effects	Male and female; information, counselling, dispensing of condoms

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WHO "building blocks" recommendations for hypertension

7. RECOMMENDATIONS ON FREQUENCY OF ASSESSMENT
WHO suggests a monthly follow up after initiation or a change in antihypertensive medications until patients reach target.
Conditional recommendation, low-certainty evidence
WHO suggests a follow up every 3–6 months for patients whose blood pressure is under control.
Conditional recommendation, low-certainty evidence

WHEN

Appointment spacing once established on treatment every 3-6 months

8. RECOMMENDATION ON TREATMENT BY NONPHYSICIAN PROFESSIONALS
WHO suggests that pharmacological treatment of hypertension can be provided by nonphysician professionals such as pharmacists and nurses, as long as the following conditions are met: proper training, prescribing authority, specific management protocols and physician oversight.
Conditional recommendation, low-certainty evidence

WHO

Management by non-physician professionals

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Building blocks for NCD integration

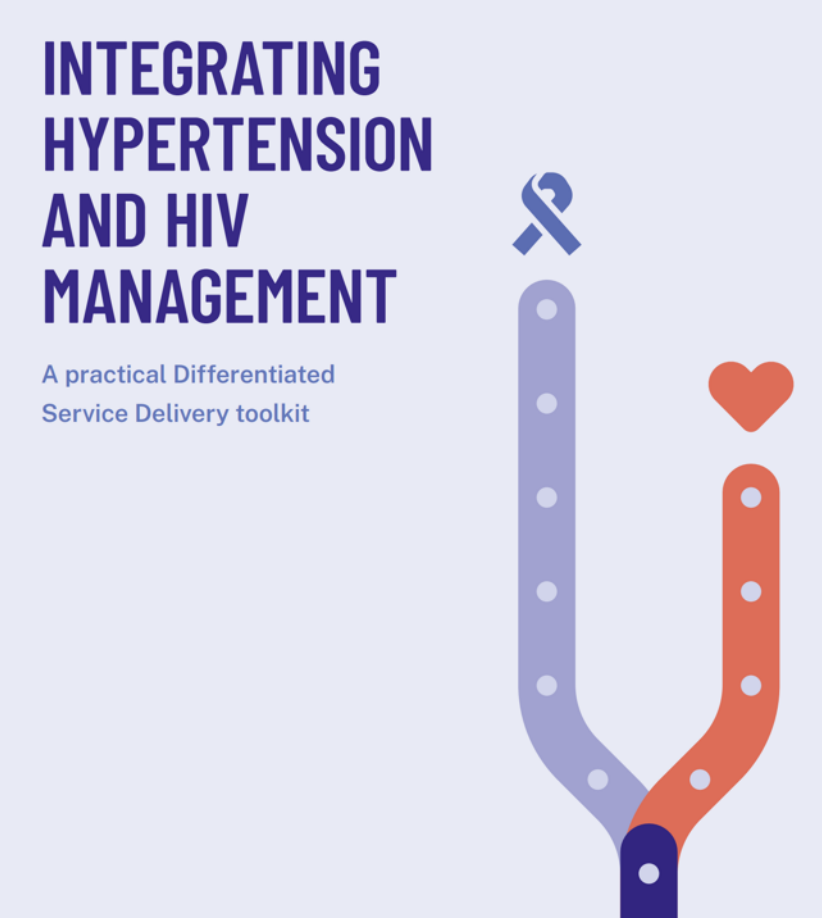

Figure 5: **The building blocks of integrated differentiated hypertension and ART care**

	Hypertension diagnosis	Hypertension medication initiation	Hypertension medication titration	Medication refill
WHEN	At ART initiation/ re-initiation Entry into DSD for ART Clinical visits for ART	At ART initiation/ re-initiation Entry into DSD for ART Clinical visits for ART	Monthly visits until hypertension is controlled, then every 6 months	Same time as ART refill Refill duration of BP medication and ART (ideally 90 days or longer) should be aligned
WHERE	Room where ART is provided	Room where ART is provided	Room or community location where ART is provided	Room or community location where ART is provided
WHO	HCW who provides ART*	HCW who provides ART*	HCW who provides ART*	HCW, lay person, or peer who provides ART refill
WHAT	Correct measurement of BP	Correct selection of initial BP medication according to protocol	Correct measurement of BP and titration of initial BP medication according to protocol	Hypertension and ART refills**

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Expand self-care options for contraceptive care and less frequent clinical consultations

- DMPA-SC, a lower-dose, easy-to-use injectable contraceptive that protects against pregnancy for three months - Sayana Press
- Available in nearly 54 countries worldwide, with nearly 34 countries offering self-injection
- Can enable self-care – and annual clinical consultations

In summary

1. The principles of DSD can be applied to other chronic conditions and to family planning
    1. There are examples of DSD for chronic conditions and family planning – simply using different terms
2. We can define:
    - Eligibility for DSD
    - Building blocks of " when", "where" and "who" for clinical vs. refill visits
3. The building blocks are adapted for the clinical visit and refill visit
4. Many of key enablers from DSD for HIV treatment also apply to DSD for NCDs and family planning
5. It's time to think beyond HIV