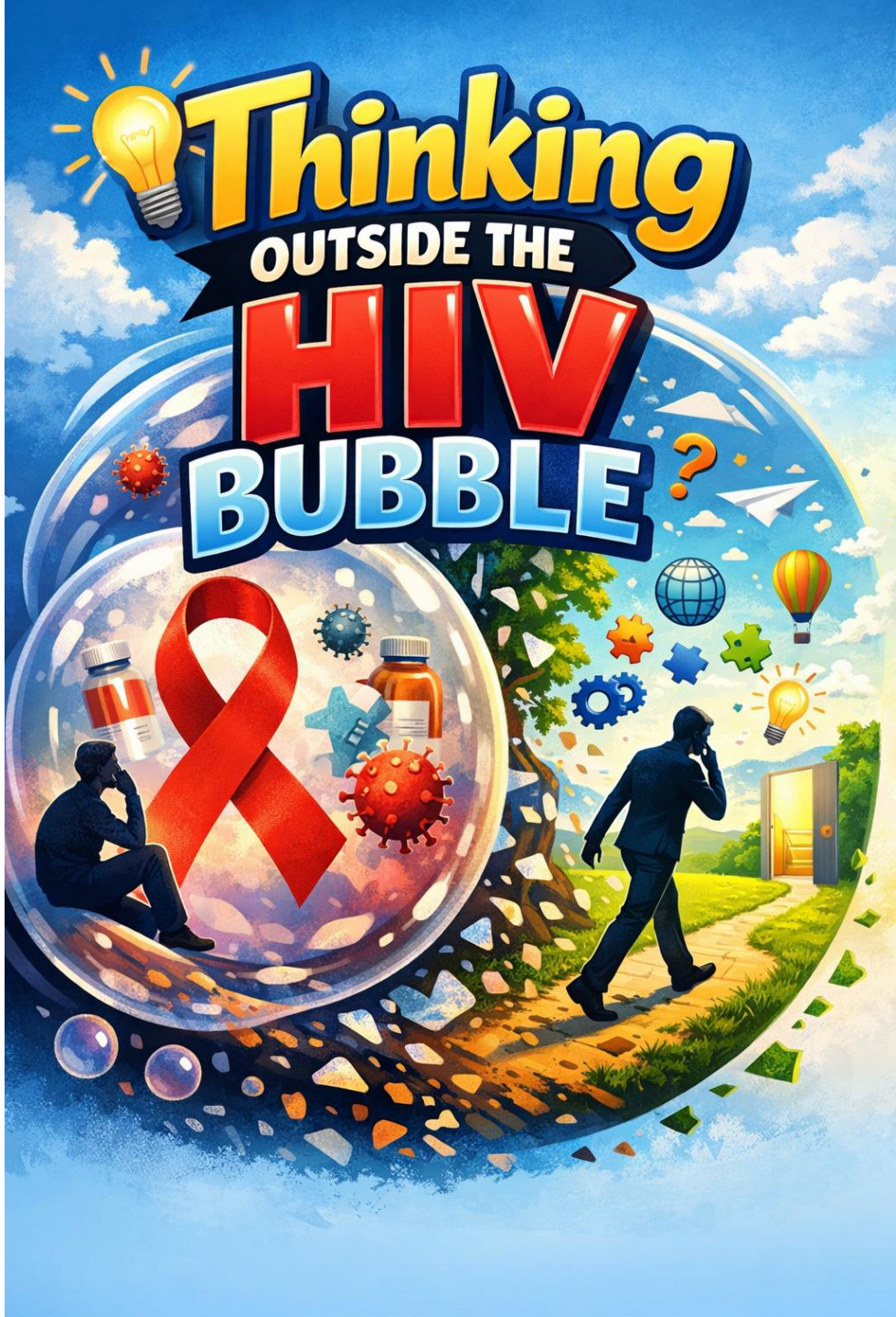
Policies, evidence and service delivery considerations for “integration”

Dr Helen Bygrave
dsd@iasociety.org
18 Feb 2026

Objectives

- **List the WHO recommendations for HIV/NCD integration and evidence supporting them**
- List the essential **service delivery elements to be maintained** in a chronic care clinic
- Know how could use the differentiated service delivery **building blocks for policy analysis** across chronic diseases
- **Share examples from Uganda and Nigeria**
- **Identify research gaps**



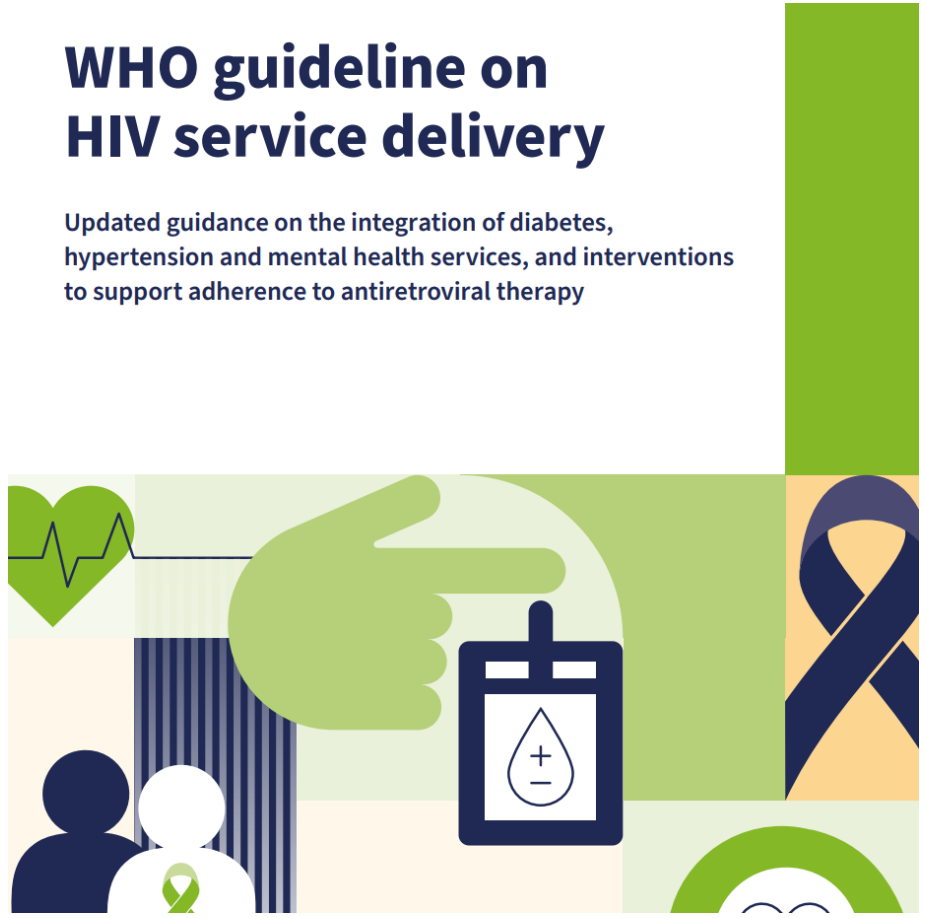
IAS

World Health Organization

Updated WHO recommendations on HIV/NCD integration

- 2025: WHO guideline on HIV service delivery
- Mental health
- Hypertension and diabetes

Integrated service delivery	Integrated health services are health services that are managed and delivered in a way that ensures people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services at the different levels and sites of care within the health system and according to their needs throughout the life-course. For the purposes of this guideline, the level of integration can vary from close collaboration between HIV and other services to fully integrated chronic disease management



IAS

To note

Majority of evidence included in the systematic reviews were integration of MH, hypertension or diabetes services into a vertical HIV clinic.

Will this be the reality going forward?

WHO recommendations

Mental health integration with HIV services

Recommendation (new 2025)

Mental health care for depression, anxiety and alcohol use disorders should be integrated with HIV services

(Strong recommendation, moderate certainty evidence for depression/ low certainty evidence for anxiety and alcohol use disorder)

Strong Recommendation

- Integration may improve
  - retention in HIV care (OR 2.0, 95% CI: 0.9–4.7) (49, 50) and
  - viral suppression (OR 1.6, 95% CI: 0.8–3.2) (49, 51–54).
- Integration leads to a
  - large reduction in moderate-to-severe depression (OR 0.5, 95% CI: 0.3–0.7) (52, 54–58), and
  - may reduce anxiety (mean change in general anxiety disorder (GAD-7) score -3.2, 95% CI: -6.9 to 0.5)
- The certainty of the evidence was downgraded because of contextual heterogeneity related to differences in the integration approaches evaluated, level of integration, populations, settings, study design and other factors, including standard of care comparisons.

But what about prevalence of mental health conditions for other chronic diseases:

- **Setting:** 44 health centres in three rural districts in Rwanda.
- **Participants:** Adults aged 18 years and older with a clinical diagnosis of diabetes, hypertension and/or asthma, who were attending a follow-up appointment during the study period (n=595).
- PHQ-9 used
- Of 595 participants, 265 (44.5%) had depression (95% CI: 40.5% to 48.6%) and 202 (33.9%) had anxiety (95% CI: 30.1% to 37.9%).

https://bmjopen.bmj.com/content/bmjopen/15/7/e102829.full.pdf

WHO recommendations
Diabetes & hypertension and HIV

Recommendation (updated 2025)

Diabetes and hypertension care should be integrated with HIV services

Strong recommendation, moderate certainty evidence for blood pressure control / very low certainty evidence for diabetes control

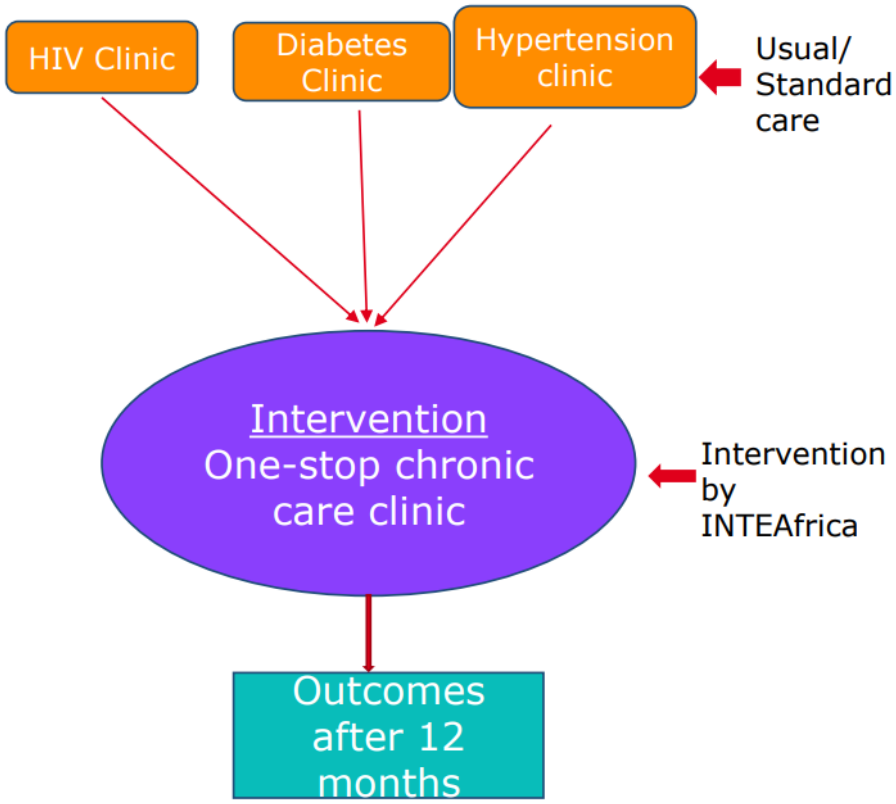
Since 2021, wealth of evidence for hypertension (little for diabetes)

Strong recommendation

WHO systematic review (outcomes only for PLHIV – but a range of " integration")

- 18 randomized and observational studies
- Viral suppression was consistently high (>90%) in integrated services
- Variation for BP control – varied by study design and BP treatment algorithm
- Studies using a pre-post design showed the strongest effect, with pooled odds ratios of 5.7 (0.7–48.2), translating into an absolute difference of 395 more per 1000 for blood pressure control after compared with before integration
- Evidence for DM weak – fewer studies included; ack of HBA1C (would access support DSD for T2DM)

INTE-AFRICA study: RCT in Tanzania & Uganda



- 7028 enrolled 50/50 ; 50% each arm HIV alone; 25% HTN alone
- **Outcomes:**
  - High rates of viral suppression Int 97.3v 97.4 %
  - BP control 56.3% v 47.2%
- **Qualitative:** " I have no problem with it because we are all sick"; "But if we sit together as patients of HIV , diabetes or hypertension we may counsel each other, talk about the causes of the conditions we have"
- **Cost:** Costs of managing **two conditions in integrated setting were 34.4% (95% CI 17.9-41.9%) lower** as compared to managing any two conditions separately.
- **The investigators concluded that integration of HIV services with diabetes and hypertension control reduces both health service and household costs substantially**

https://www.differentiatedservicedelivery.org/wp-content/uploads/6_Gerald_Mutungi_INTE-Africa-study.pdf

Kivuyo S, et al . Integrated management of HIV, diabetes, and hypertension in sub-Saharan Africa (INTE-AFRICA): a pragmatic cluster-randomised, controlled trial. Lancet. 2023 Oct 7;402(10409):1241-1250. doi: 10.1016/S0140-6736(23)01573-8. PMID: 37805215.

»Service delivery considerations for HIV and NCD integration

IAS

» 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**.

Do we want DSD guidance for chronic disease/ lifelong conditions?

Why aren't DSD models being offered to people with HTN and DM (especially for those established on treatment?

IAS

Individual models based at facilities

Individual models not based at facilities

Group models managed by health-care workers

Group models managed by clients

IAS

Defining established on treatment enables us to differentiate services- do we have definition for NCDs:

Nigeria national hypertension guideline example

The following criteria can be used to identify a 'stable' patient:

- Must have been on anti-hypertensive treatment for **at least six months.** ← Time on treatment
- Must be on current medication combination for at least three months.
- Have their **BP under control** – BP < 140/90mmHg at the last two consecutive visits/measured on two occasions at least one month apart. ← Measure of control
- Patients must **generally be well**, without acute illness/co-morbidity requiring intensive follow-up. ← No other acute illness
- Absence of any adverse drug reaction (ADR) and side effect that requires constant monitoring.
- A good **understanding of life-long treatment and adherence**. ← Good adherence

IAS

Evolution of "established on treatment" in South Africa's national guidelines for HIV, HTN & DM

6-12 month clinical visits + 3MMD

	2016	2020	2023
Time on treatment	On treatment for at least 12 months	**On treatment for at least 6 months**	**None**
Number of tests	2	**1** (2 for HTN)	**1** (2 for HTN)
HIV	Most recent VL taken **in past 6 months + 2 consecutive VLs** = undetectable	Most recent VL taken **in past 6 months** <50 copies/ml	Most recent viral load taken **in past 12 months** <50 copies/ml
Hypertension	2 consecutive BP <140/90	2 consecutive BP <140/90	2 consecutive BP <140/90
Diabetes	2 consecutive FPG normal	**Most recent HbA1c taken in past 6 months ≤7%**	Most recent HbA1c taken **in past 12 months ≤8%**
No other acute illness	No current TB or medical condition requiring regular clinical consultations	No current TB or medical condition requiring regular clinical consultations	Clinically stable with no current TB or other OI/condition requiring clinical review more regularly than once every 6 months (*see MMD SOP 4 to enable longer treatment supply outside of DSD models*).

IAS

For chronic/ lifelong conditions what essential service delivery components should be maintained for HIV and APPLIED for other chronic conditions:

- WHAT: Treatment literacy, appointment system, tracing (likely with priority setting)
- WHO: Task sharing
- WHERE: Decentralization
- WHEN:
  - Defined follow up schedule until " controlled" (first 3-6 months)
  - Definition of controlled/ established on treatment
  - Separation and defined frequency of clinical and refill visits
  - System for **multi-month prescribing** even if multi-month dispensing not feasible
  - A selection of DSD models for refills that solve an access problem for client or health system burden (fast track , community pharmacy, CAG etc) for anyone with HIV/ HTN/DM or other condition needing lifelong medication.
  - Cohort M & E

If just in a primary care /OPD queue, do we risk losing these?

IAS

Policy analysis and need for advocacy

Is there service delivery guidance across chronic diseases that enables integration?

WHEN
Guidance of frequency of clinical and refill visits

Prescribing and pharmacy policies to allow for multi-month prescribing and dispensing mechanisms

WHERE
Can all medications be decentralised to primary care?

Can initiation, up-titration and maintenance be decentralized to primary care?

WHO
Who can screen, diagnose, initiate, up titrate, maintain medication?

Barriers?

WHAT
Are there key enablers in clinical guidance?
Less toxic regimens?
Regimens that achieve earlier control (e.g hypertension medication/ SPCs)?
Clear monitoring test to define control HbA1C?
M & E systems to understand cohort outcomes?

"WHEN" IS ART DELIVERED?

7.5.3 Frequency of clinical visits and ART pick-up

Recommendations (2021)

People established on ART should be offered clinical visits every 3–6 months, preferably every six months if feasible[a] *(strong recommendation, moderate-certainty evidence).*

[a] When routine clinical consultations are due, they should be coordinated with planned medicine pick-ups to reduce visit frequency.

People established on ART should be offered refills of ART lasting 3–6 months, preferably six months if feasible[b] *(strong recommendation, moderate- to low-certainty evidence).*

[b] ARV drug supply management should be strengthened to ensure the availability of ARV medicine and prevent stock-outs in the context of less frequent medication pick-ups.

Source: *Updated recommendations on service delivery for the treatment and care of people living with HIV (63)*

Reducing the frequency of ART refills and clinical visits

Utilizing the maximum duration of ART refills

In Zimbabwe and (parts of) South Africa, already annual visits

World Health Organization 2021 hypertension guidelines : https://iris.who.int/server/api/core/bitstreams/f062769d-f075-4a00-87af-0a2106e0bd04/content

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

Is frequency of clinical and refill visits defined and aligned across chronic diseases

V

IAS

Once stable, what do we do differently?

Separate the clinical and refill visits

We can do multi-month prescribing (even if dispensing is limited) for ALL chronic diseases

Clinical Visit

Six monthly Prescribing

Annual Prescribing

VS

Refill visit via DSD model

Fast track Club Community ART group Out of facility pick up point

Monthly medication dispensing

Six monthly dispensing

To start

The goal

"WHO" IS PROVIDING DIFFERENTIATED ART DELIVERY?

WHO Guidelines

Box 5: Recommendations on task shifting and task sharing

- Trained and supervised lay providers can distribute ART to adults, adolescents and children living with HIV (strong recommendation, low-quality evidence).
- Trained non-physician clinicians, midwives and nurses can initiate first-line ART (strong recommendation, moderate-quality evidence).
- Trained non-physician clinicians, midwives and nurses can maintain ART (strong recommendation, moderate-quality evidence).
- Trained and supervised community health workers can dispense ART between regular clinical visits (strong recommendation, moderate-quality evidence).

World Health Organization 2021 hypertension guidelines : https://iris.who.int/server/api/core/bitstreams/f062769d-f075-4a00-87af-0a2106e0bd04/content

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

What level of HCW can screen, diagnose, initiate, up-titrate and maintain across chronic diseases

What lower cadres could dispense and distribute

"WHERE" IS ART PROVIDED?

WHO Guidelines

Box 4: Recommendations on decentralization

Decentralization of HIV treatment and care should be considered as a way to increase access to and improve retention in care:

- Initiation of ART in hospitals with maintenance of ART in peripheral health facilities (strong recommendation, low-quality of evidence);
- Initiation and maintenance of ART in peripheral health facilities (strong recommendation, low-quality of evidence);
- Initiation of ART at peripheral health facilities

Recommendation (2021)

ART initiation may be offered outside health facilities *(conditional recommendation, low- to moderate-certainty evidence).*

This recommendation is additional to routinely offering ART initiation at health facilities.

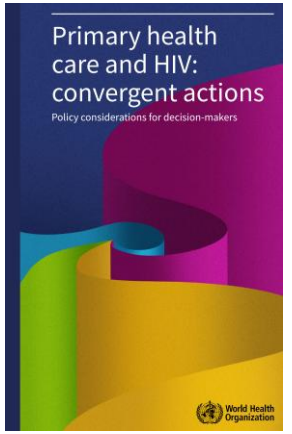
Source: *Updated recommendations on service delivery for the treatment and care of people living with HIV (63)*

Can all relevant NCD drugs be prescribed from decentralised sites

Could NCD drugs be distributed from community sites ?

IAS

Higher level health worker and speciality clinics at secondary or tertiary level



Primary care clinic or Hospital OPD

Acute: No appt

Chronic care clinic: Appt

SRH/MNCH

Option: X

Primary care clinic or Hospital OPD

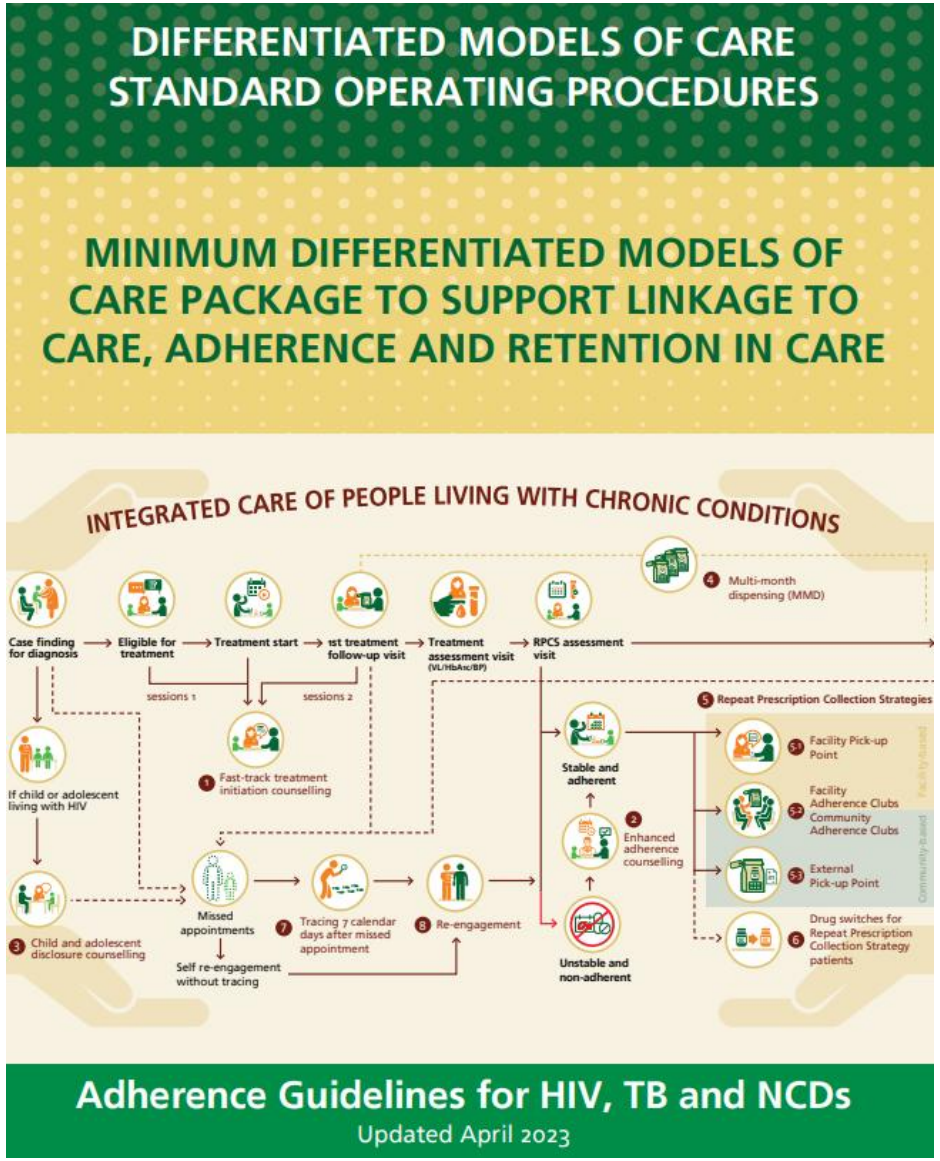
Mixed OPD/ Primary care queue; ? Appt for HIV, HTN, DM etc

SRH/MNCH

Option: Y

What is the time needed to do a comprehensive/quality annual review for someone with comorbidities (e.g., HIV and HTN or HIV and DM)

IAS



WEB-VERSION_South-African-National-Differentiated-Models-of-Care-SOPs-2023_FINAL07062023.pdf

South Africa

▸ BMC Health Serv Res. 2021 May 17;21:463. doi: 10.1186/s12913-021-06450-z

Title: Expansion of a national differentiated service delivery model to support people living with HIV and other chronic conditions in South Africa: a descriptive analysis

Lingrui Liu [1,2], Sarah Christie [1], Maggie Munsamy [3], Phil Roberts [4], Merlin Pillay [4], Sheela V Shenoi [5], Mayur M Desai [1,6], Erika L Linnander [1,2,✉]

IAS

Uganda: Coordination mechanism for transition to integrated services

- At time of executive order all stand alone HIV services to close

- National Advisory Committee on Integration (NACI)
- Sub-taskforces
  - Service delivery
  - Human resources for health
  - Financing
  - Supply chain
  - Data and M & E systems

Nigeria: Facility readiness assessments and operational guidance

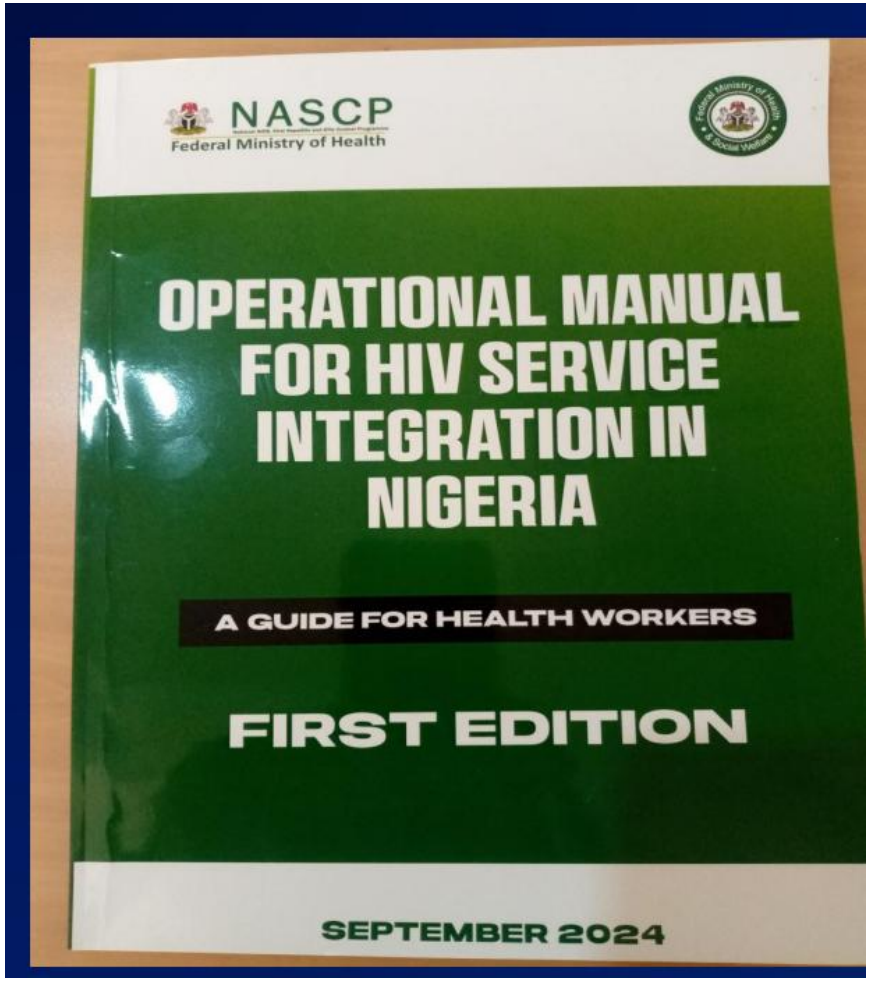
HIV SERVICE INTEGRATION SITES - ASSESSMENT CHECKLIST, SCORING & MATRIX

Partner: | State: | LGA: | Facility:

Domain	#	Key Performance Indicators	Assessment Question	Response (Dropdown)	Score	Max. Score	Comments / Evidence
A. STRUCTURAL INTEGRATION							
Structural	1	Situated in a non-stigmatizing place within the facility	Is the ART clinic situated in a non-stigmatizing place that prevents unintentional disclosure of clients' HIV status?	No	0	5	
	2	Clinic location & Labeling	Is the ART clinic NOT labeled as 'Heart to Heart Clinic'	No	0	5	
			Is the ART services rendered with other OPD services?	No	0	5	
	3	Standalone status	Is the ART clinic standalone (no additional services except HIV/TB)? i.e. is there a separate clinic for PLHIV?	No	0	5	
	4	Co-location with non-HIV services (except TB)	Are additional non-HIV services provided in this building (except TB)? If YES, indicate which clinics are in the same location (Write in the comments): Infectious Disease, Hematology, Dermatology, Others. i.e PLHIV being seen in the same clinic as other patients	No	0	10	
	6	Support for Utilities	Are all the utility bills (power, cleaning, maintenance) borne by hospital management outside of the USG funding?	No	0	5	
	7	Laboratory	Are laboratory commodities for PLHIV stored in the same location as other hospital laboratory commodities?	No	0	5	
	8		Is the laboratory structured to serve all patients, including PLHIV, and are HIV-related investigations conducted in the same area as general	No	0	5	
	9	Pharmacy	Are pharmacy commodities for PLHIV stored in the same location as other hospital pharmacy commodities?	No	0	5	
	10		Are ARVs and other non-HIV medications dispensed from the same pharmacy, and is this pharmacy situated to serve all patients, including	No	0	5	
Structural Subtotal:					0	55	
B. WORKFORCE INTEGRATION							
Workforce	1	All HIV service staff (overall)	What proportion of ALL staff providing HIV services are hospital-employed?	<50%	0	5	
	2	Clinic staff (Doctors/Nurses)	What proportion of clinic staff providing HIV services are hospital-	<50%	0	5	
		Retention and Tracking activities	What proportion of the designated officers responsible for PLHIV tracking and retention activities are Government-engaged HRH?	<50%	0	5	
	3	Laboratory staff	What proportion of lab staff providing HIV services are hospital-employed?	<50%	0	5	
	4	Pharmacy staff	What proportion of pharmacy staff providing HIV services are hospital-	<50%	0	5	
	5	Hospital-employed staff	What proportion of staff offering services in the ART clinic are hospital-employed and not paid from USG funding?	<50%	0	10	
	6	SI/Records staff	What proportion of SI/Records staff providing HIV services are hospital-	<50%	0	5	
Workforce Subtotal:					0	40	
C. STRATEGIC INFORMATION INTEGRATION							
Strategic Information	1	EMR /NMRS Interoperability	Is the facility EMR able to extract information of HIV patients from the	No	0	5	
	2	Data tool storage integration	Are HIV program data capturing tools stored in the same space as other hospital registers?	No	0	5	
	3	Patient folders filing integration	Are HIV patient folders kept in the records room as other hospital patient	No	0	5	
	4		Do patients use the same hospital folder for both general care and ART services, or is there a separate folder for PLHIV?	No	0	5	
	5		Does the facility assign hospital numbers to PLHIV in addition to PEPFAR	No	0	5	
	6		Do the same records staff retrieve folders for both PLHIV and other	No	0	5	
Strategic Info Sub-Total:					0	30	
Grand Total					0	125	
				Overall %	0%	Category	No Integration

This tool was administered by:

Date:

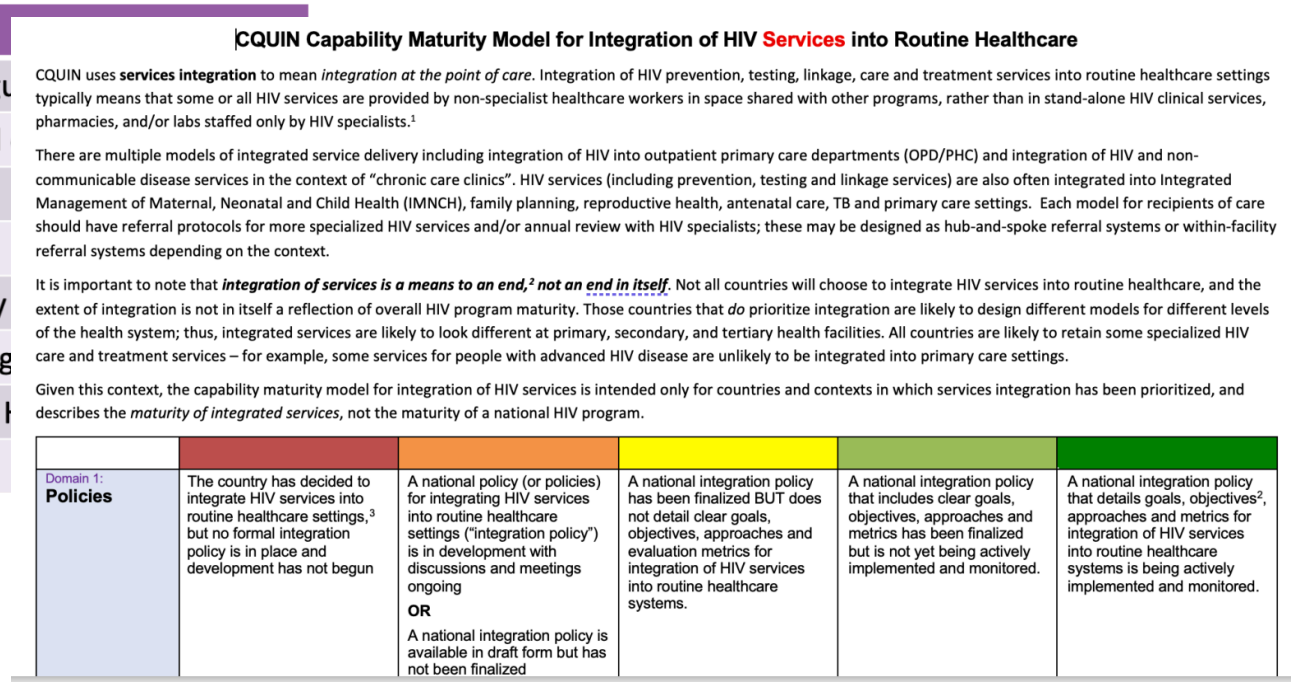


IAS

CQUIN: Assessing transition to integration - Capability maturity model

What domains should be included in a services integration CMM?

#	Domain Name	#	Domain Name
1	Policies	9a	AHD 1: Operational gu
2	National Integration Scale-up Plan	9b	AHD 2: Coverage and
3	Scale-up of integration enablers	10a	KP 1: Quality
4	Meaningful community engagement	10b	KP 2: Coverage
5	Facility-level integration coverage	11a	TB/HIV 1: TPT Quality
6	One-stop shop laboratory services	11b	TB/HIV 2: TPT coverag
7	One-stop shop pharmacy services	12	Quality of integrated H
8	Linkage to prioritized DSD models		



CQUIN Capability Maturity Model for Integration of HIV Services into Routine Healthcare

CQUIN uses **services integration** to mean *integration at the point of care*. Integration of HIV prevention, testing, linkage, care and treatment services into routine healthcare settings typically means that some or all HIV services are provided by non-specialist healthcare workers in space shared with other programs, rather than in stand-alone HIV clinical services, pharmacies, and/or labs staffed only by HIV specialists.[1]

There are multiple models of integrated service delivery including integration of HIV into outpatient primary care departments (OPD/PHC) and integration of HIV and non-communicable disease services in the context of "chronic care clinics". HIV services (including prevention, testing and linkage services) are also often integrated into Integrated Management of Maternal, Neonatal and Child Health (IMNCH), family planning, reproductive health, antenatal care, TB and primary care settings. Each model for recipients of care should have referral protocols for more specialized HIV services and/or annual review with HIV specialists; these may be designed as hub-and-spoke referral systems or within-facility referral systems depending on the context.

It is important to note that ***integration of services is a means to an end,[2] not an end in itself***. Not all countries will choose to integrate HIV services into routine healthcare, and the extent of integration is not in itself a reflection of overall HIV program maturity. Those countries that *do* prioritize integration are likely to design different models for different levels of the health system; thus, integrated services are likely to look different at primary, secondary, and tertiary health facilities. All countries are likely to retain some specialized HIV care and treatment services – for example, some services for people with advanced HIV disease are unlikely to be integrated into primary care settings.

Given this context, the capability maturity model for integration of HIV services is intended only for countries and contexts in which services integration has been prioritized, and describes the *maturity of integrated services*, not the maturity of a national HIV program.

Domain 1: **Policies**	The country has decided to integrate HIV services into routine healthcare settings,[3] but no formal integration policy is in place and development has not begun	A national policy (or policies) for integrating HIV services into routine healthcare settings ("integration policy") is in development with discussions and meetings ongoing **OR** A national integration policy is available in draft form but has not been finalized	A national integration policy has been finalized BUT does not detail clear goals, objectives, approaches and evaluation metrics for integration of HIV services into routine healthcare systems.	A national integration policy that includes clear goals, objectives, approaches and metrics has been finalized but is not yet being actively implemented and monitored.	A national integration policy that details goals, objectives[2], approaches and metrics for integration of HIV services into routine healthcare systems is being actively implemented and monitored.

IAS

Going forward

- Integration of coordination – WHO (HIV/TB + NCD +?), national ,district

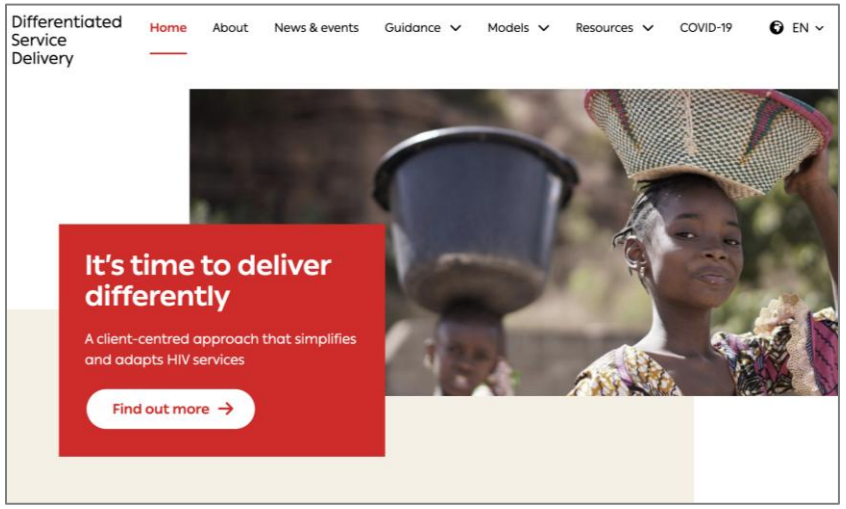
- Do we want DSD guidance across chronic diseases?

- Research gaps highlighted in WHO 2025 guidance
  - Evidence for use of DSD models across chronic diseases
  - Evidence for annual clinical visits and multi-month prescribing
  - Earlier viral load, more effective hypertension treatment algorithms for earlier entry into DSD
  - Costing work
  - Inclusion of diabetes (move to HbA1C as key enabler for DSD)

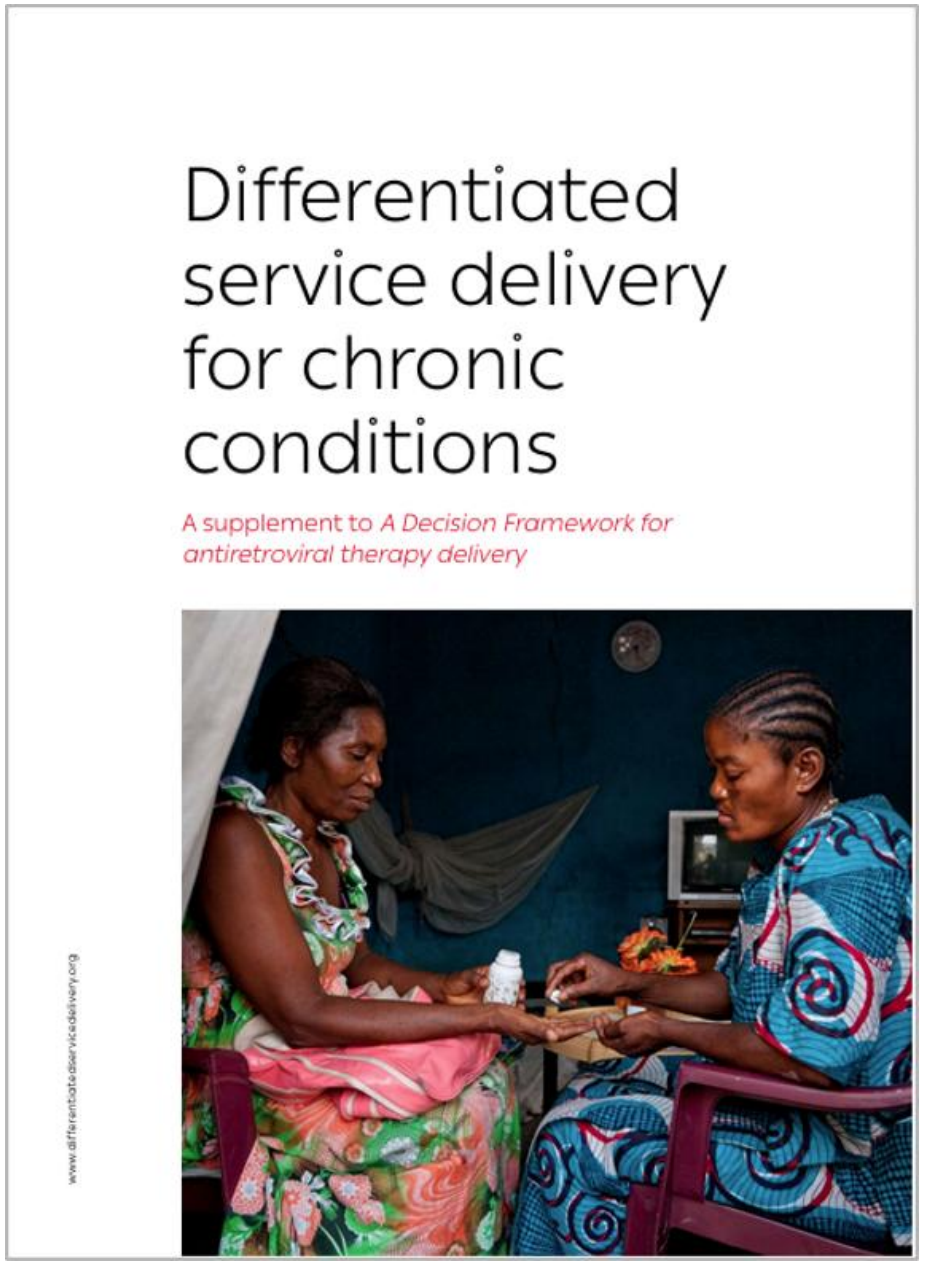
IAS

www.differentiatedservicedelivery.org

These resources (and more) available on the DSD website



- DSD for chronic conditions
- NCD Alliance HIV/NCD advocacy toolkit (forthcoming)



IAS_DSD-for-chronic-disease-policy-brief_2024_WEB-2_Final.pdf