DSD for chronic disease

A pathway to quality integrated care

Helen Bygrave | International AIDS Society (IAS)
Simplifying HIV service delivery: from evidence to national policy | Johannesburg, 28 October 2026

Discuss in pairs

1. In your setting, is there a definition of ‘established on treatment’ for hypertension or other chronic diseases?

2. How often does someone with hypertension have to visit the facility?

3. Could a lack of DSD for chronic disease make integrating HIV care into primary care or OPD more challenging?



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Food for thought

If we can…

1

A shared definition

Define ‘established on treatment’ across chronic diseases

2

Multi-month scripting

Set up multi-month scripting across chronic diseases

…can we

3

Decongest settings

Decongest the settings where we are integrating HIV care?

4

Make time for quality

Provide more time for a quality, integrated annual chronic disease review?

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Presentation outline

1. Integration of HIV ; Uganda experience

2. Why do we need DSD for chronic disease?

3. How do we get there?

Part 1

Integration of chronic disease and HIV

The integration scenarios, and three questions for integrated settings

Integration of DSD models …



WHO Systematic review (outcomes only for PLHIV – but a range of " integration")
18 randomized and observational studies- most integration into HIV clinic

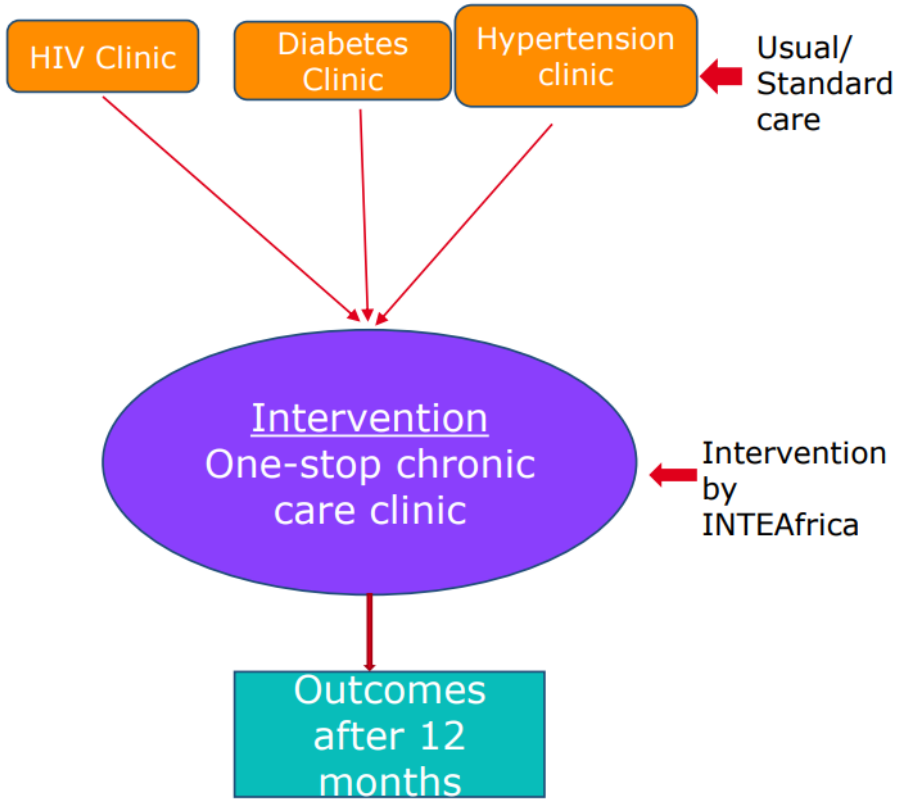
Viral suppression was consistently high (>90%) in integrated services

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; lack of HBA1C (would access support DSD for T2DM)

INTE-AFRICA Study: Uganda and Tanzania



- 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.

Integration: the scenarios

1 HIV clinic, for PLHIV only

NCD care is brought into the HIV clinic for people living with HIV.

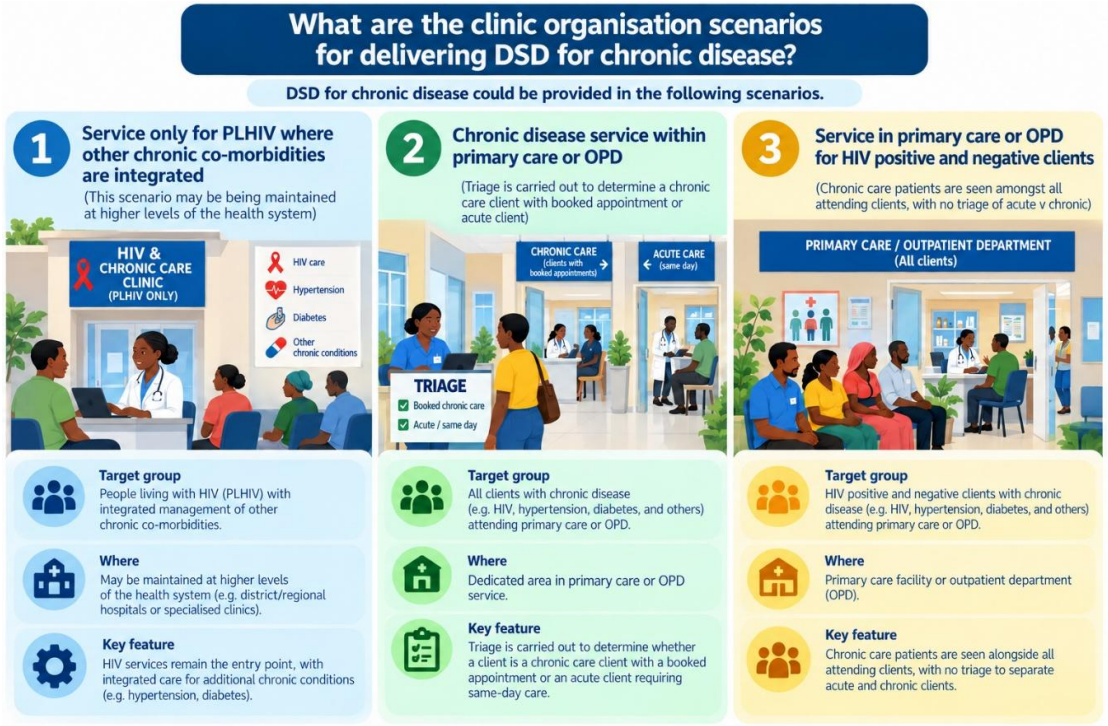
INTE-AFRICA

2 Chronic care clinic in primary care or OPD

Care for HIV-positive and HIV-negative clients with all chronic diseases. Are comorbidity appointments aligned?

3 General queue in primary care or OPD

Booked chronic and acute clients in one queue. Are HIV and comorbidity appointments aligned?



Generalist doctor/ surgeon to specialist at "vertical" HIV , Diabetes, Cardiology etc clinic maintained at provincial / tertiary (and inpatient services)
Refer to higher level
Nurse/ CO to Doctor/ Surgeon at district/ secondary (and inpatient services)

Acute

Common primary care conditions
URTI, UTI, Skin, STI etc

Acute symptoms
Fever, Breathlessness , Abdominal pain etc

Diagnosis HIV, BP, DM etc

Chronic care/ Lifelong Conditions Service



HIV
Hypertension
Diabetes
(Epilepsy, COPD/Asthma)
Follow up schedule until control (mthly)
Majority annual comprehensive review when established on treatment with checklist including
SCREENING for MH , BP/DM, TB, HIV, Cervical cancer for all according to national guidelines

MH

One stop FP if pills/ injectables (self/HCW)

MNCH



ANC/PNC
PMTCT for newly diagnosed including PrEP

Maintain "vertical" services for ART for mothers/children/ adolescents (clubs)- will be numbers dependant

FP/ PrEP

Cervical Cancer screen and treat/ refer

Provided in primary care clinic or OPD at hospital settings

People with HIV are being brought into primary care and OPD services that are already overcrowded and under pressure

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Three questions for integrated settings

Question 1

1 **Is DSD being maintained for PLHIV?**

2 Can PLHIV with comorbidities receive their chronic disease care on the same follow-up schedule, with the same building blocks and DSD model?

3 What service delivery models exist for HIV-negative clients with other chronic diseases? Do we know their building blocks? Are refill models offered (fast track, clubs, etc.)?

Three questions for integrated settings

1. Is DSD being maintained for PLHIV?

Question 2

2. **Can PLHIV with comorbidities receive their chronic disease care on the same follow-up schedule, with the same/adapted building blocks and DSD model?**

3. What service delivery models exist for HIV-negative clients with other chronic diseases? Do we know their building blocks? Are refill models offered (fast track, clubs, etc.)?

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Three questions for integrated settings

1. Is DSD being maintained for PLHIV?

2. Can PLHIV with comorbidities receive their chronic disease care on the same follow-up schedule, with the same building blocks and DSD model?

3. **Question 3**

   What service delivery models exist for HIV-negative clients with other chronic diseases? Do we know their building blocks? Are refill models offered (fast track, clubs, etc.)?

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Interview

Baker Bakashaba

Project Director
AIDS Information Centre – Uganda



Part 3

Why do we need DSD for chronic disease?

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Because **HIV care is moving into** settings that are already stretched



Overburdened settings

HIV cohorts are being transferred to integrated settings in primary care and OPD that are already overburdened



Reduced staffing

Fewer staff in these settings, including counselling staff



Diminishing resources

Less funding for the staff, tests and systems that HIV care relies on

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Other chronic conditions are very prevalent in high-HIV settings

Hypertension prevalence and care cascade in Malawi, Mozambique and Zambia

	Hypertension prevalence	Diagnosed	Treated	Controlled
Malawi	21%	37%	24%	**12%**
Mozambique	34%	31%	16%	**9%**
Zambia	25%	44%	23%	**11%**

Across the three countries, **only 9–12% of people with hypertension have it controlled**

Source: WHO Global report on hypertension 2025

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And so DSD for chronic disease matters

25–30%

of our aging HIV cohort also has hypertension

For them, annual HIV visits have no impact unless DSD for chronic disease is addressed

Multi-month scripting is possible even without MMD
MMS could be possible even where MMD is not, for any medication

Extend DSD for chronic disease to HIV-negative clients
This would **decongest primary care and OPD sites and free up time for a quality annual clinical visit FOR ALL**

Differentiated service delivery (DSD)

DSD is a **client-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**.

IAS. DSD for chronic disease: policy brief (2024)
IAS. DSD for chronic disease: integrating hypertension and diabetes care within DSD for HIV treatment

This workshop: annual clinical visits to simplify care

The question for Day 3

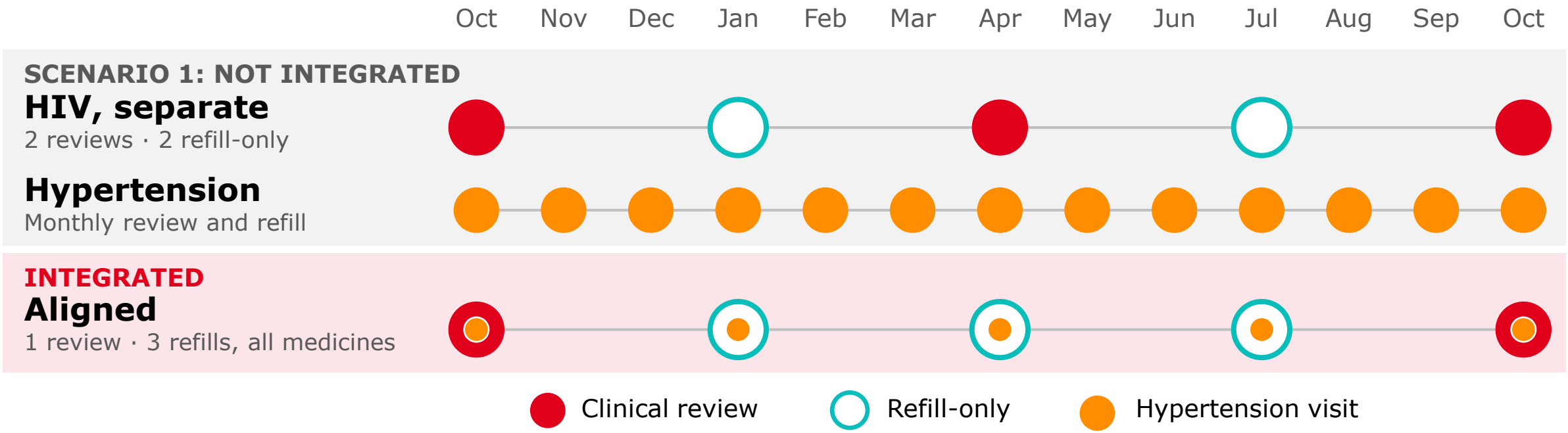
What is the real impact if we don’t look at service delivery for other chronic diseases?



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Annual review as the anchor for integrated chronic care

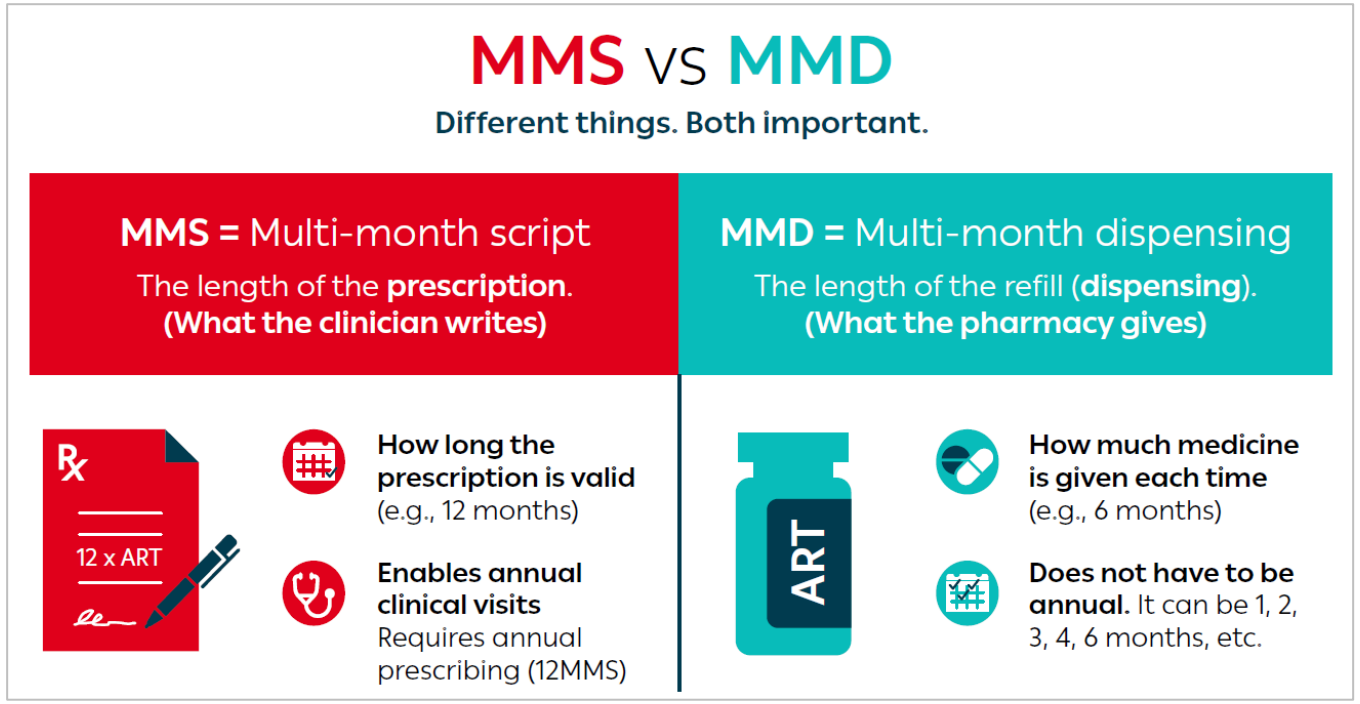
One year of care, plus the following visit, for a person with HIV and hypertension (illustrative)



16 contacts become 4: one review, one script and one refill schedule for all chronic medicines

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12MMS is not 12MMD: can we do multi-month scripting for all chronic diseases?



The script (MMS)

Written once a year at the clinical review: sets how often a clinician needs to see someone

The refill (MMD)

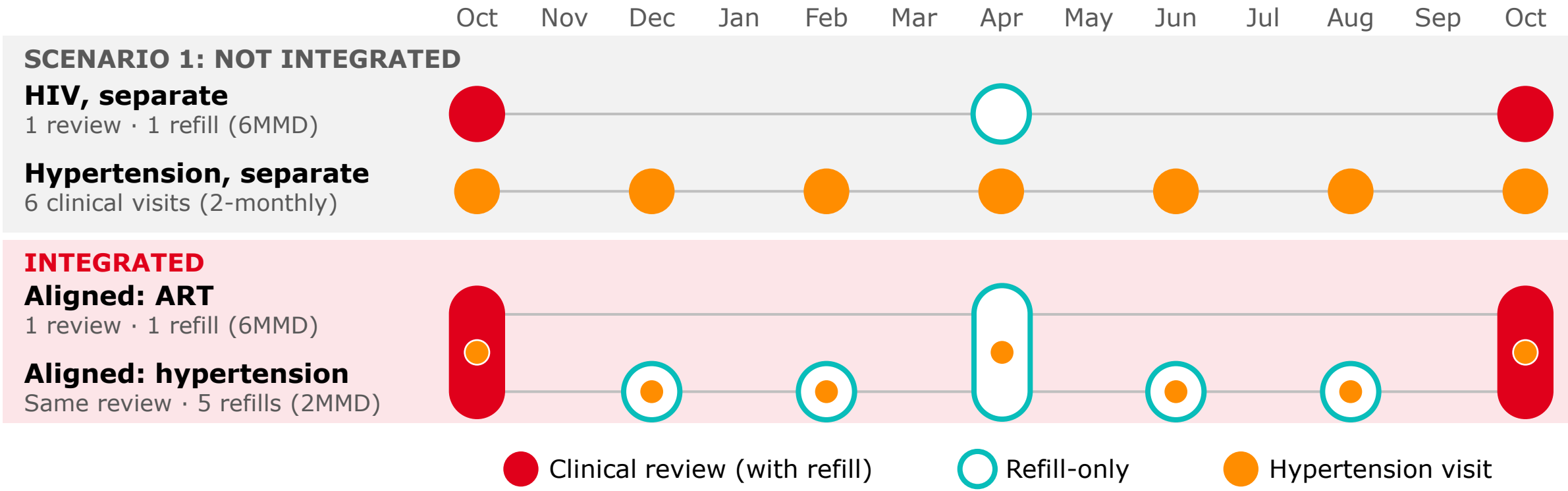
Unchanged: 3–6-monthly through fast-track, community or group models, as national policy sets

Annual visits need 12MMS, not 12MMD

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Even with limited stock, an aligned annual script helps

One year of care, plus the following visit, when hypertension stock allows only 2MMD (illustrative)



Clinical visits fall from 7 to 1: refills follow each medicine's MMD schedule

Part 4

How do we get there?

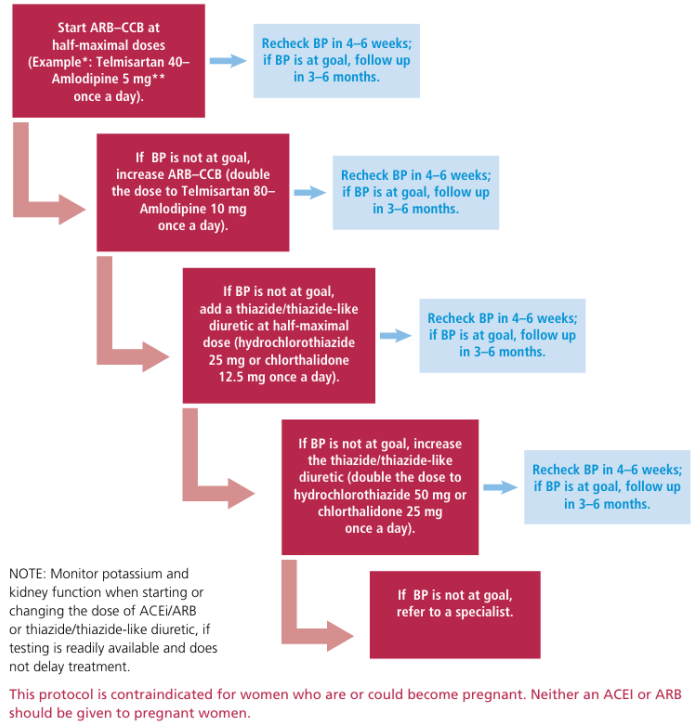
Key enablers, defining ‘established on treatment’ and separating clinical visits from refill-only visits

Key enablers

Less toxic regimens	Simplified, effective algorithms (see Figure)
Fixed-dose combinations (FDCs)	Task sharing
Appointment systems and tracing	Monitoring and evaluation
A definition of 'established on treatment'	**Separation of clinical and refill visits**

In bold: the focus of this session

[WHO 2021 Hypertension Guidelines]



Example: a simplified hypertension treatment algorithm

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Paying for medicines

What we know

Out-of-pocket payment for chronic disease medicines is likely to be needed.

The question

If DSD saves people transport costs, could that money contribute to the cost of medicines?
How can patients buy drugs at cost price ?

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Impact of Bridging Income Generation with Group Integrated Care (BIGPIC) on Hypertension and Diabetes in Rural Western Kenya

Sonak D. Pastakia, PharmD, MPH, BCPS[1,2,3,4], Simon M. Manyara, BPharm, MSc[1,2,4], Rajesh Vedanthan, MD, MPH[5], Jemima H. Kamano, MBChB, MMed[1,2,3], Diana Menya, PhD[6], Benjamin Andama, BA[1], Cleophas Chesoli, BA[1], and Jeremiah Laktabai, MBChB, MMed[1,3,7]

BIGPIC Kenya

Revolving Pharmacies



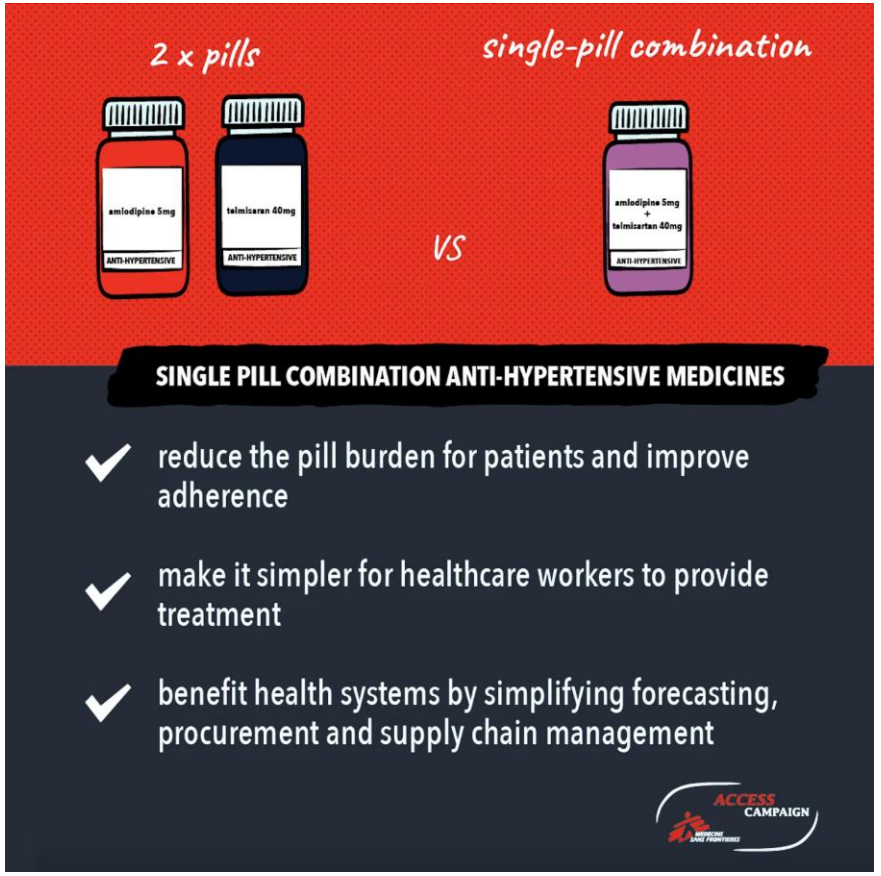
Financial implications of protocol-based hypertension treatment: an insight into medication costs in public and private health sectors in India

Swagata Kumar Sahoo, Anupam Khungar Pathni, Ashish Krishna, Bhawna Sharma, Danielle Cazabon, Andrew E. Moran & Dagmara Hering

68.83 when using SPC (protocol-3). When drugs are purchased at low-cost generic stores (Jan-Aushadhi stores), the cost of medication per patient per annum was substantially reduced, ranging between $5.78 and 9.57 for protocols 1 and 2, and $7.35–9.89 for SPC (protocol-3). The annual medication cost per patient in the public sector, where drugs are procured by the state on a large scale through competitive tenders is substantially lower, ranging between $2.05 and 3.89 for protocol-1 and protocol-2 and $2.94–3.98 for protocol-3 (Table 5).

Financial implications of protocol-based hypertension treatment: an insight into medication costs in public and private health sectors in India | Journal of Human Hypertension





https://msfaccess.org/under-pressure-strategies-improve-access-antihypertensive-medicines-low-and-middle-income-0

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How are clients defined as established on treatment?

Example: criteria for a ‘stable’ patient in Nigeria’s hypertension guideline

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

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

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Once established on treatment, what do we do differently?



The clinical visit

Reduce the frequency of clinical visits



The refill

Extend the refill period

Separate the clinical visit from the refill visit

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DSD building blocks: when, where, who and what



For chronic disease, the policy questions are:

When	How often are clinical and refill visits?
Where	Where can medicines be collected?
Who	Which cadres can prescribe and dispense?
What	Which medicines and services are included?

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WHO already recommends the 'when' and 'who' for hypertension care

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

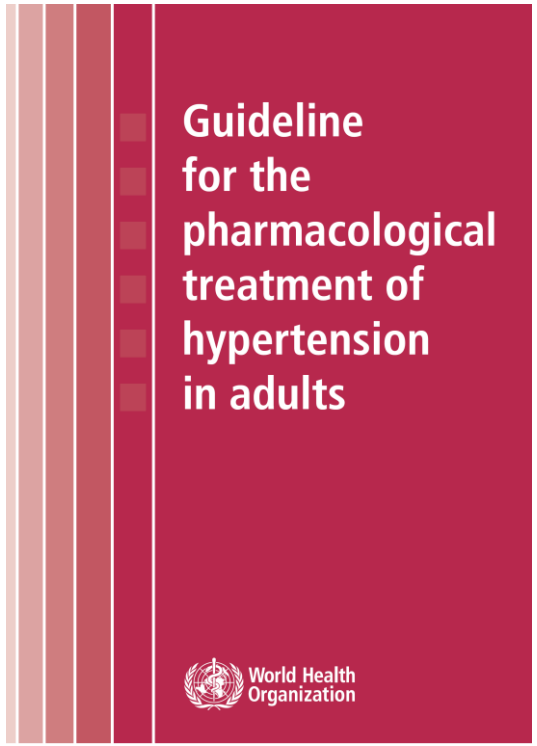
8. RECOMMENDATION ON TREATMENT BY NONPHYSICIAN PROFESSIONALS
WHO suggests that pharmacological treatment of hypertension can be provided by nonphysician professionals such as pharmacists and nurses, as long as the following conditions are met: proper training, prescribing authority, specific management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

When

Every 3–6 months once BP is controlled

Who

Pharmacists and nurses can treat, with safeguards



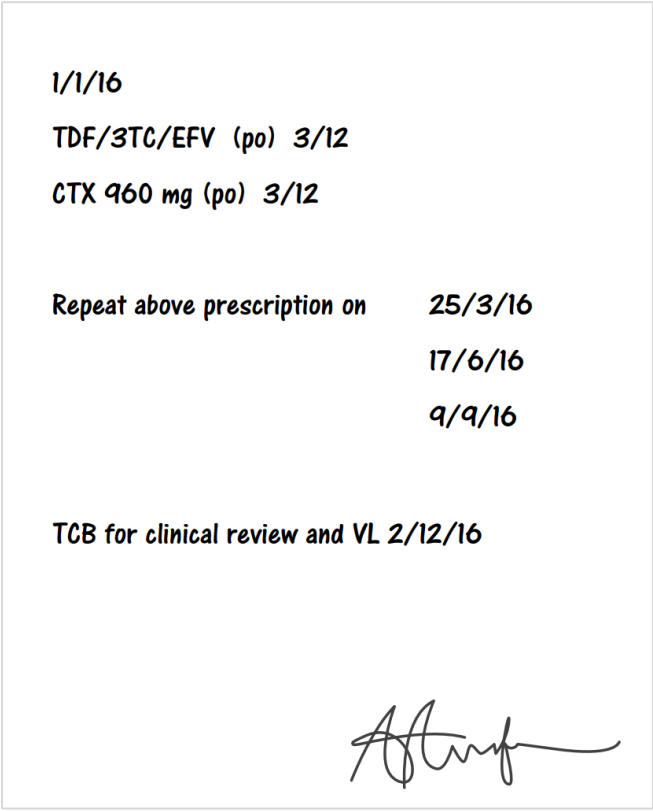
Source: WHO. Guideline for the pharmacological treatment of hypertension in adults. Geneva: World Health Organization; 2021.

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Talk to pharmacy

Why can’t multi-month scripting be done for other chronic diseases?

Example: one HIV script written for the year, with three repeat refill dates and a booked clinical review



Over to you

Develop a template for a structured clinical review

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Review of evidence for four service delivery models for clients established on treatment



Individual models based at facilities



Individual models not based at facilities



Group models managed by health care workers



Group models managed by clients

Name of the Speaker

Topic Lore Ipsum

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Reducing visit burden and improving quality of care for clients with chronic disease
1 Define established on treatment for each chronic disease
Established on treatment
Time on treatment
Indicator of success (e.g. viral load suppressed, BP at target, HbA1c at target)
Understanding of disease
No other active medical needs
2 Separate the clinical visit from the need to collect medication
For clients established on treatment, separate the clinical visit from the medication refill visit.
Clinical visit
Scheduled clinical assessment (e.g. annual or as clinically indicated)
Focus on health status, examination and investigations
Medication refill visit
Collect medication without a clinical consultation
Quick and convenient (e.g. fast track, community or group models)
3 Define the building blocks
Identify when, where and who for both clinical and refill visits.
When?
Frequency
Timing
Duration
Where?
Health facility
Community sites
Outreach/mobile
Other accessible locations
Who?
Clinicians (doctors, nurses)
Pharmacists and pharmacy staff
Community health workers
Peer leaders / trained lay workers
4 Support system between clinicians and pharmacy for multi-month prescribing
Establish strong systems and communication between clinicians and pharmacy to enable multi-month prescribing and safe dispensing.
Shared protocols and guidelines
Clear communication systems (e.g. electronic or paper-based)
Aligned records and information sharing
Pharmacy preparation and dispensing of multi-month medication
Quality assurance and monitoring
5 Define differentiated refill models
Offer a range of refill options for anyone with a chronic disease, based on client needs and context.
Facility-based fast track
Quick and easy refills at the health facility
Out-of-facility models
e.g. community distribution points, mobile outreach
HCW-led group models
Refills with follow-up in group settings
Peer-led group models
Supported by trained peer leaders
6 Provide clear structured templates for a quality annual clinical review
Use standardised templates to ensure a comprehensive, consistent and high-quality annual review.
Annual clinical review
History
Examination
Investigations

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Key message

If we can…

1

A shared definition

Define ‘established on treatment’ across chronic diseases

2

Multi-month scripting

Set up multi-month scripting across chronic diseases

…then we can

3

Decongest settings

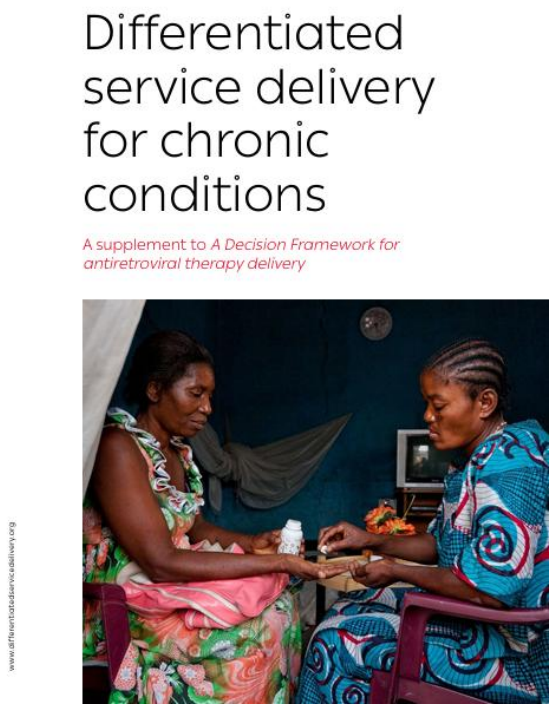
Decongest the settings where we are integrating HIV care

4

Time for quality

Make more time for a quality, integrated annual chronic disease review

Read more



Differentiated service delivery for chronic conditions

A supplement to *A decision framework for antiretroviral therapy delivery*

IAS Q4 Newsletter:
Experience of out of facility chronic care management INTECOM
Experience of using FDC , earlier control , earlier DSD for hypertension

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Thank you