How often should viral load be monitored after the first test?

Lynne Wilkinson, IAS | Simplifying HIV service delivery: from evidence to national policy | Johannesburg, 27 October 2026

Key question for the country tables

Key question

Routine frequency

How often once people are established on ART – and when is it safe to space out?

Also consider

Second VL

When, after a first VL at month 3?

The safety net

Recall

Which results bring people back before their next visit?

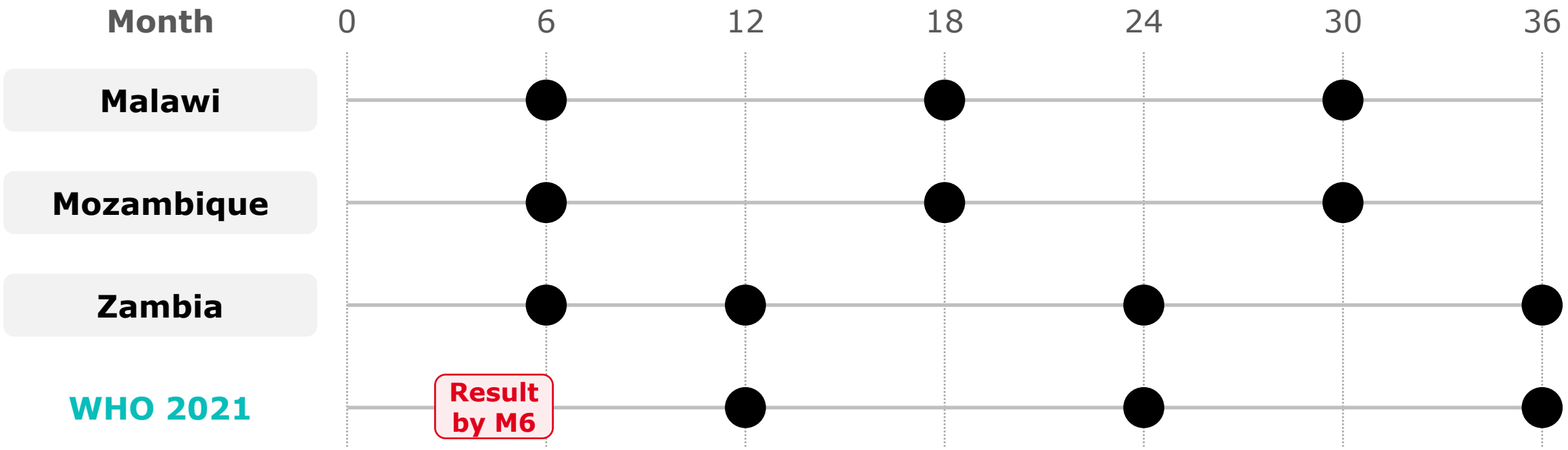
Malawi, Mozambique and Zambia

Where we are

Viral load schedules after the first test – and where countries are heading

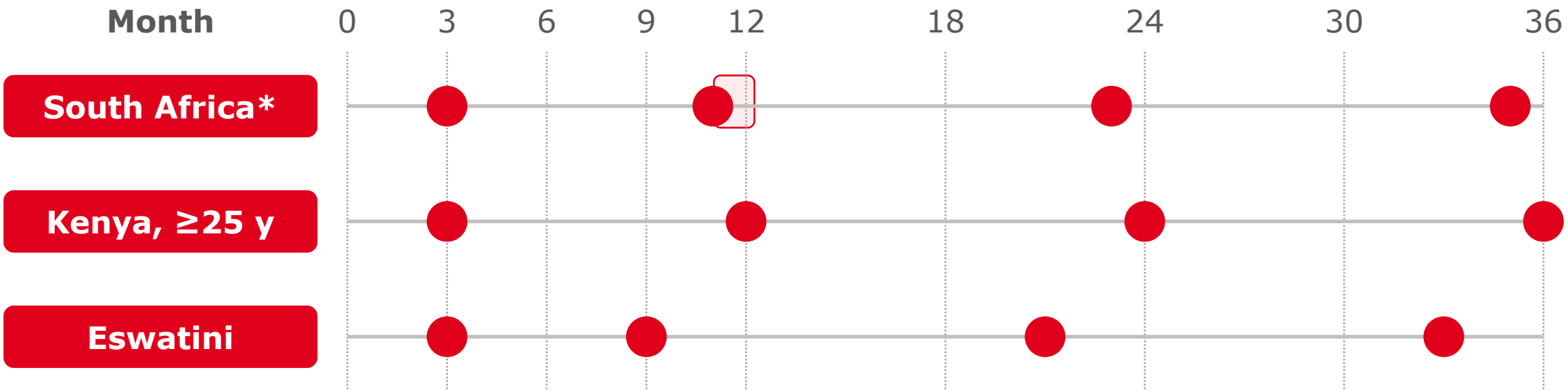
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All three test annually after the second viral load – Malawi and Mozambique wait until month 18 for it



Sources: Malawi HIV guidelines 2022, p.92; Mozambique ART training 2025, UD7 p.52; Zambia guidelines Dec 2022, p.59; WHO 2021, pp.131, 148.

Countries that moved to month 3 do the second viral load at months 9–12 – then annually



*South Africa: any time in months 10–12, dependent on the clinical review date (shaded).

Sources: South Africa 2026 ART guideline (VL after 10–12 months, aligned with annual VL); Kenya NASCOP 2026 guidelines, p.112; Eswatini 2024 amendment, pp.13, 22–23.

Countries are already considering spacing

	Under discussion in country preparation
Malawi	Every 24 months under consideration. Today: blood-draw visit, result reviewed 3 months later.
Mozambique	Every 24 months under consideration.
Zambia	National data on VL 24–48 months apart and on refills beyond 6 months (shown later).

Sources: Malawi and Mozambique country preparation calls (Oct 2026); Mozambique ART training package 2025, UD7 pp.51, 53; Demeke et al., AIDS 2026 (Abstract 6258/EP296).

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The principles

Monitor earlier, then less often – with recall as the safety net

1

Test earlier

First VL at month 3. Find elevated VLs while people are still engaged.

2

Align and recall

VL drawn at the clinical review – no extra visit for result review.
Act on an elevated VL when it arrives – not at the next visit.

3

Then space out

Once **durably** suppressed on dolutegravir, move towards 2-yearly VL – with annual review.

Key question

Routine monitoring frequency

Once people are established on ART and suppressed

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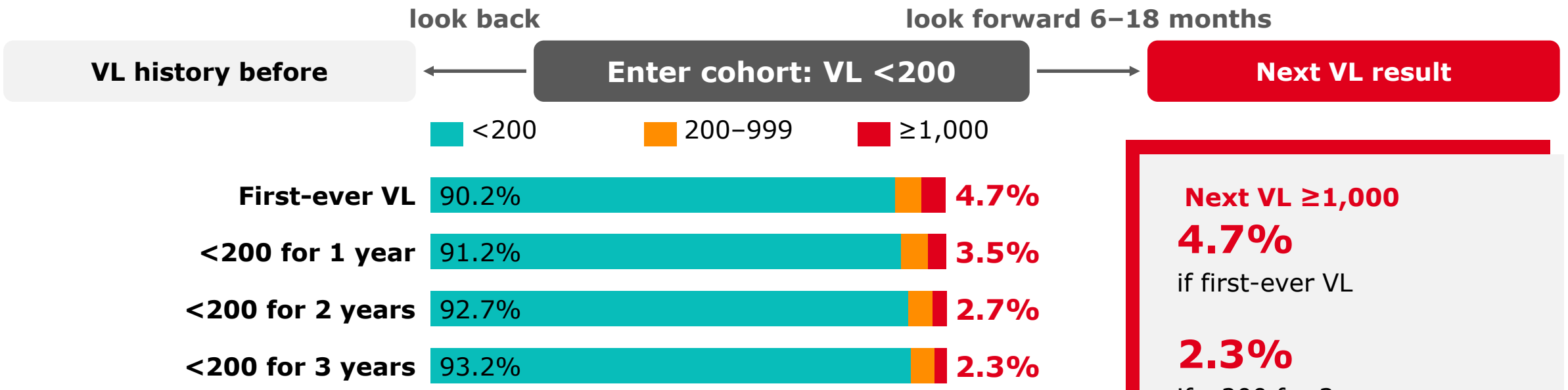
With 6-month dispensing (6MMD), viral suppression stays high

Viral load <1,000 copies/mL



Sources: Chacha et al., AIDS 2024, OAE3903 (44,580/45,644; VL coverage 82%); Lekodeba et al., JIAS 2025;28:e70003, Table 3 (as reported)

The longer suppressed, the more likely to stay suppressed



Next VL ≥1,000

4.7%
if first-ever VL

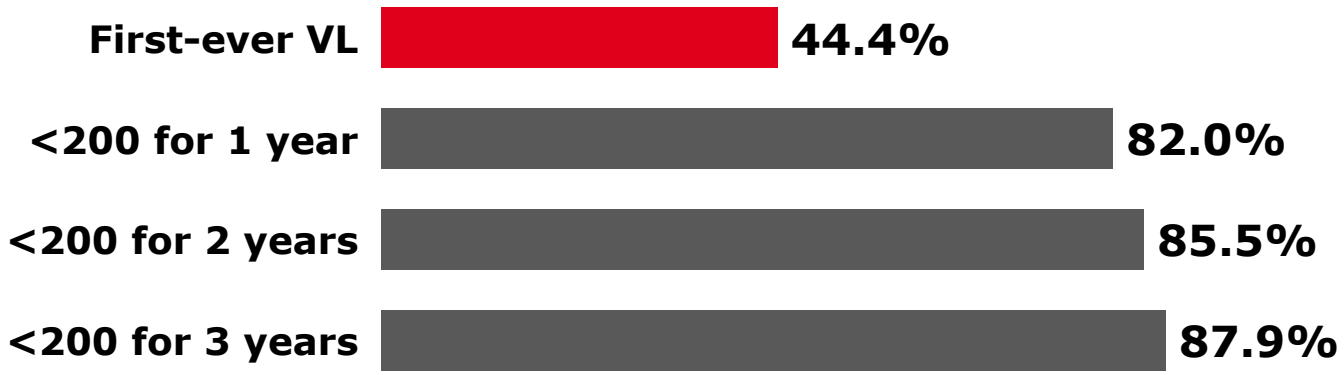
2.3%
if <200 for 3 years

Everyone entered with a VL <200 in 2021–22. Next VL result: only people who had one.

Source: Lauren et al., Lancet HIV 2026;13:e548–56 (NHLS National HIV Cohort, aged 15–59), Figure (panel B).

After a first suppressed VL, fewer than half get their next VL on time





First-ever VL

Most at risk of ≥1,000 – and least likely to be retested

Everyone entered with a VL <200 in 2021–22. Next VL done = any VL 6–18 months later.

Source: Lauren et al., Lancet HIV 2026;13:e548–56 (NHLS National HIV Cohort, aged 15–59), Table 2 (188,868/425,664 first-ever VL).

Zambia asked two separate questions using national data

239,027 adults
≥18, on dolutegravir ≥12 months, VL and refill records (SmartCare, 2020–25)

N=17,001 **1 · Longer gap between VLs**

VL 24–48 months after two suppressed VLs in a row

Usual practice: annual VL

N=4,910 **2 · Longer refills**

A refill of more than 6 months after a suppressed VL

Usual practice: 6-month refills

Two separate groups. VL gap happened in routine care – not a planned schedule.

Source: Demeke HB et al., AIDS 2026, Abstract 6258/EP296; presented at the Global DSD Research Collaborative, 28 Sept 2026.

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Zambia: suppression sustained when VL done 24–48 months after two suppressed VLs

17,001

adults

VL 24–48 months after two suppressed results

97.2%

suppressed

at the first VL after the longest gap

98.4%

no rebound

over 2 years (95% CI 97.9–98.4, as presented)

91.9%

retained

15,306 / 16,651

Dolutegravir era, national scale – in people with two suppressed results first.
Fewer tests do mean fewer chances to find blips/lab artefacts/short period of non-adherence.

Source: Demeke HB et al., AIDS 2026, Abstract 6258/EP296; presented at the Global DSD Research Collaborative, 28 Sept 2026 (SmartCare, 2020–25; adults ≥18 on dolutegravir ≥12 months; rebound = VL ≥1,000).

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Acting on an elevated VL matters more than testing everyone annually

Annual VL

Repeat 12 months after a VL >1,000

83 per 1,000

with ≥12 months of undetected failure

5,603 VL tests used

VL every 3 years

Repeat 3 months after a VL >1,000

63 per 1,000

with ≥12 months of undetected failure

3,005 VL tests used

Rakai, Uganda model on NNRTI-based ART: per 1,000 people over 5 years; all had VLs at months 6 and 12. More detail – and the dolutegravir-era evidence – in the additional slides.
Source: Ssempijja et al., Clin Infect Dis 2020;71:1017–21, Tables 1 and 3 (schemes 2 and 7).

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Space out where it is safe – don't cut where we need it

Safe to space out

- Two or more suppressed VLs
- On dolutegravir
- In DSD, with annual clinical review continuing
- Results come back – and recall works

Don't cut

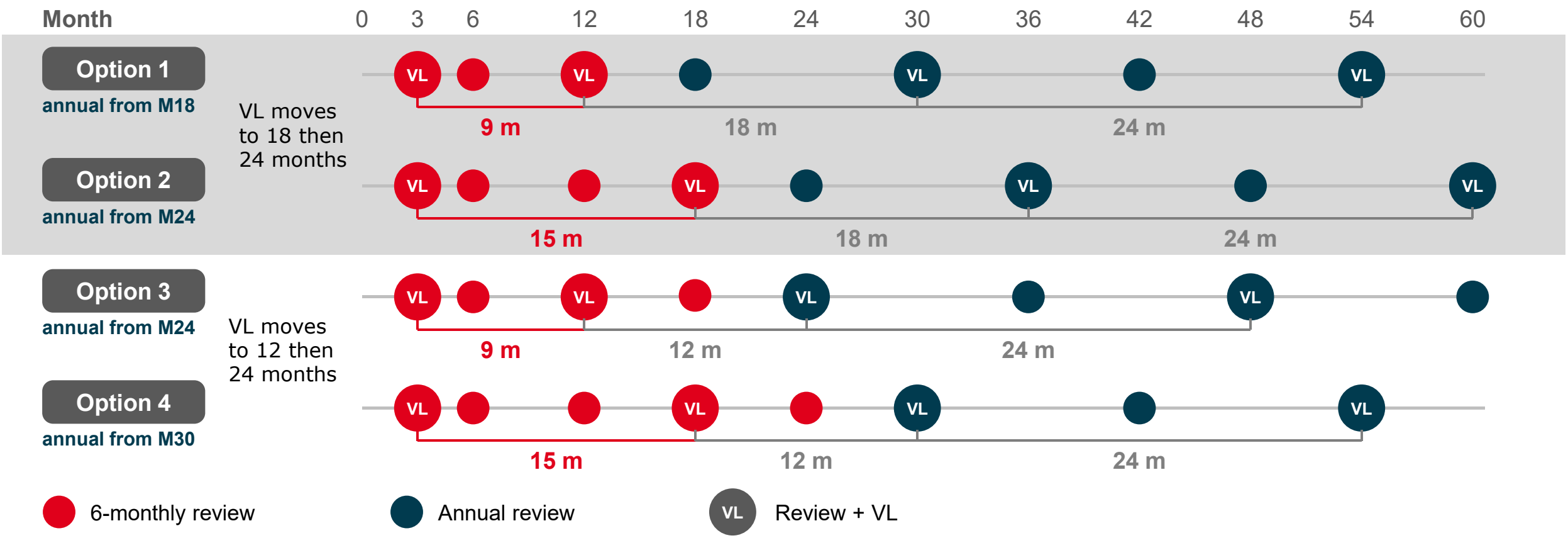
- The month-3 VL (and possibly the 2nd VL in year 1)
- Recall ≥1,000 before next scheduled visit – repeat in 3 months
- Pregnancy, breastfeeding, children and adolescents
- Re-engaging, AHD, recent elevated VL

Sources: Ssempijja et al., CID 2020; Demeke et al., AIDS 2026 (Abstract 6258/EP296); Phillips et al., Nature 2015; Loosli et al., CID 2025; country guidelines (slide 5).

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Four options for moving to VL every 2 years

On the basis require two viral load results before annual clinical review assessment



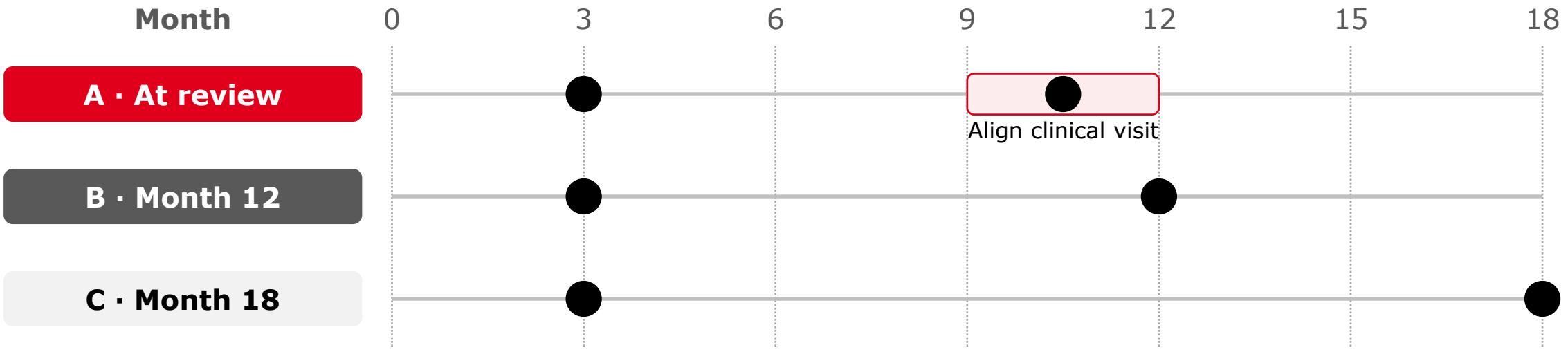
How often should viral load be monitored after the first test?

Also consider

Timing of the second viral load

After a month-3 first viral load

Options for the second viral load after a month-3 first test



A: Eswatini (9), South Africa (10–12). B: Kenya (adults ≥25). C: a 15-month gap after month 3.

For the few with an elevated month-3 VL, the repeat at month 6 is their second VL (presentation 2 pathway).

Sources: Eswatini 2024 amendment, p.23; South Africa 2026 ART guideline; Kenya NASCOP 2026, p.112.

The safety net

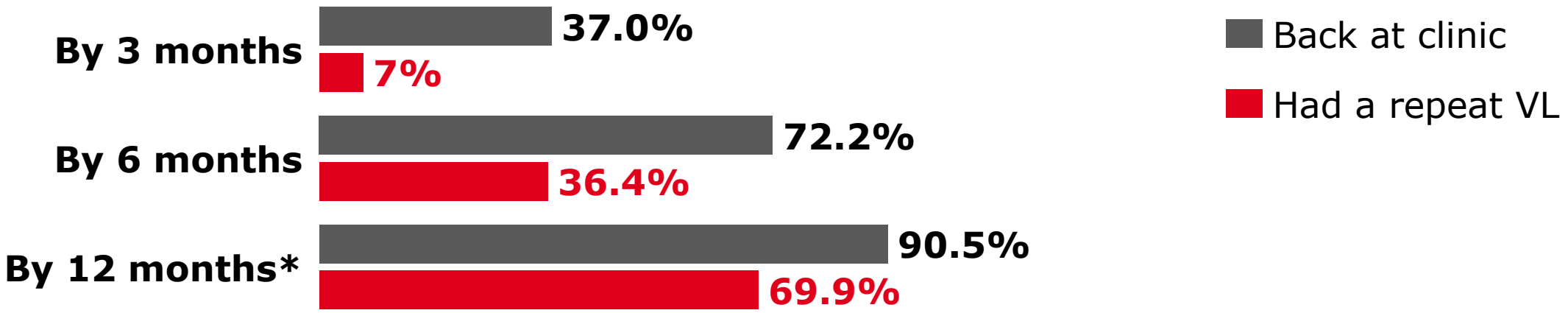
An effective recall system supports less frequent VL monitoring

Most people will be suppressed – those who aren’t need to come back earlier, not at their next visit.

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How effective are our recall systems and follow-up VL coverage?

We do not do this well – after a VL ≥1,000, Lusaka



*12 months: usual-care arm of a later analysis from the same clinics (CROI 2026). Median time to repeat VL: 180 days among those retested. No recent data found for Malawi or Mozambique.

Sources: Sikombe et al., PLoS Med 2025;22:e1004720 (24 Lusaka clinics, 2019–21; 7,916 adults with VL ≥1,000); Sikombe et al., CROI 2026, abstract 183 (same clinics; 7,641 adults; usual-care arm).

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Remember good recall systems matter most for people who are **not** in DSD

Not in DSD

Newly started, unwell, re-engaging, or struggling with adherence.

Most elevated VL results are here and need to be recalled to manage.

In DSD

Safety net for the few people whose adherence pattern has changed from suppressed

Sources: Chacha et al., AIDS 2024, OAE3903; Lekodeba et al., JIAS 2025;28:e70003, Table 3 (as reported).

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Recall only those in DSD with an elevated VL – today most people come back only to hear they are well

Today



20 people visit the clinic.

All 20 come back for the result. 19 of them hear they are suppressed.

Recall if elevated



1 person visits the clinic.

Only the 1 with an elevated VL is called back. The other 19 collect at their next pick-up.

Illustrative.

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In summary

1. **Viral load monitoring** tells us whether treatment is working
2. **Less frequent VL** for people with a history of suppression may make sense when resources are tight
3. **Reduce intentionally for some** – rather than let quality erode for all
4. **With less frequent monitoring,** people with an elevated viral load result need to be actioned more quickly

For discussion: when – and for whom – can VL monitoring be less frequent?

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For questions and discussion

Additional slides

Available to address these country questions:

- NNRTI era modelling of VL spacing – and resistance in the dolutegravir era
- Responding to low-level results below 1,000

Up next: plenary discussion

Annex · for questions and discussion

Additional slides

- NNRTI era modelling of VL spacing – and resistance in the dolutegravir era
- Responding to low-level results below 1,000

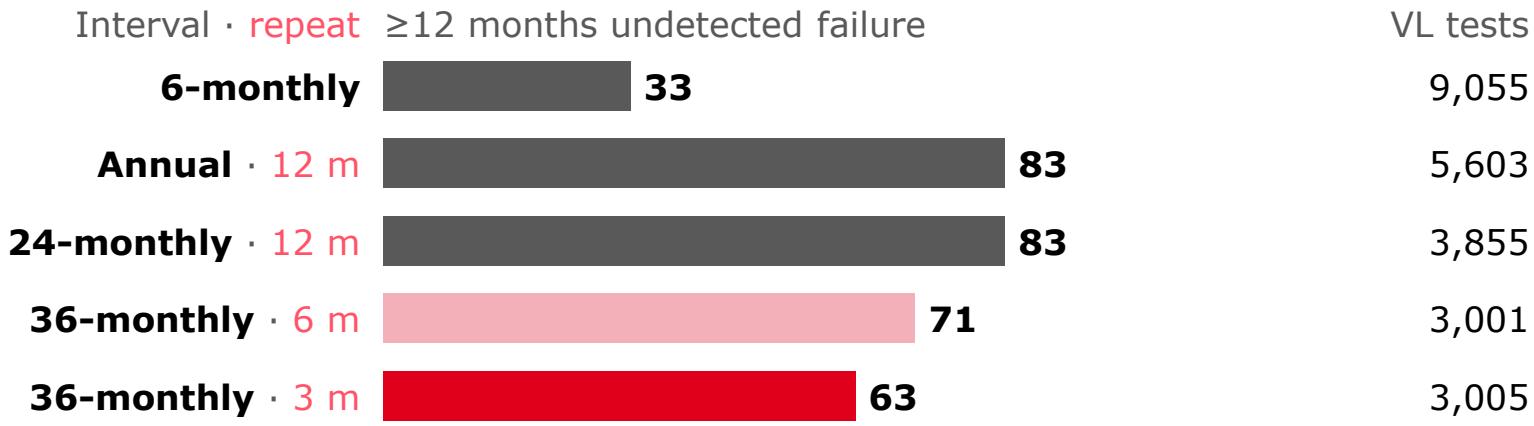
Annex

Spacing out VL: modelling and resistance

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In modelling, how fast an elevated VL result is repeated matters more than how often everyone is tested

Rakai, Uganda model: per 1,000 people over 5 years.
All had VLs at months 6 and 12.
"Repeat" = next VL after a result >1,000



Repeat EVL 3 months later

−46%

tests vs annual – and fewer people with a year of undetected failure (63 vs 83)

Source: Ssempijja et al., Clin Infect Dis 2020;71:1017–21, Tables 1 and 3 (schemes 1, 2, 3, 5, 7; 2,229 people on NNRTI-based ART, 10,000 simulated).

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These models were built for NNRTI regimens – dolutegravir has changed the picture

Rakai, Uganda, population cohort, 2014 → 2022 (dolutegravir scale-up)

57.1% →
90.3%

suppressed, all people with HIV

51.1% →
27.9%

any resistance, treatment-experienced with viraemia

0.8%

intermediate/high dolutegravir resistance in 2022 (2/258)

Source: Martin et al., Clin Infect Dis 2026;82:e1242–51 (Rakai Community Cohort Study; 8,781 people with HIV, aged 15–49).

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Resistance builds when an elevated VL persists – aim to shorten how long it persists

488
enrolled after a VL >1,000 on dolutegravir

85% had ≥2 preceding VLs >1,000

→

234
still >1,000 when retested – median 36 days later

→

227
had integrase sequenced

→

49
high-level dolutegravir resistance (21.6%)

All 59 people with major integrase mutations had taken ART before dolutegravir.

None of the 21 viraemic people who started ART on dolutegravir did.

High-level resistance was about 20 times more common than in Europe or North America – possibly because failure is found and resistance-tested earlier there.

Source: Loosli et al. (DTG RESIST), Clin Infect Dis 2025;81:e128–31 (16 sites, 7 African countries, incl. Malawi and Zambia).

Annex

Response to VL results < 1000

Which results need an additional visit?

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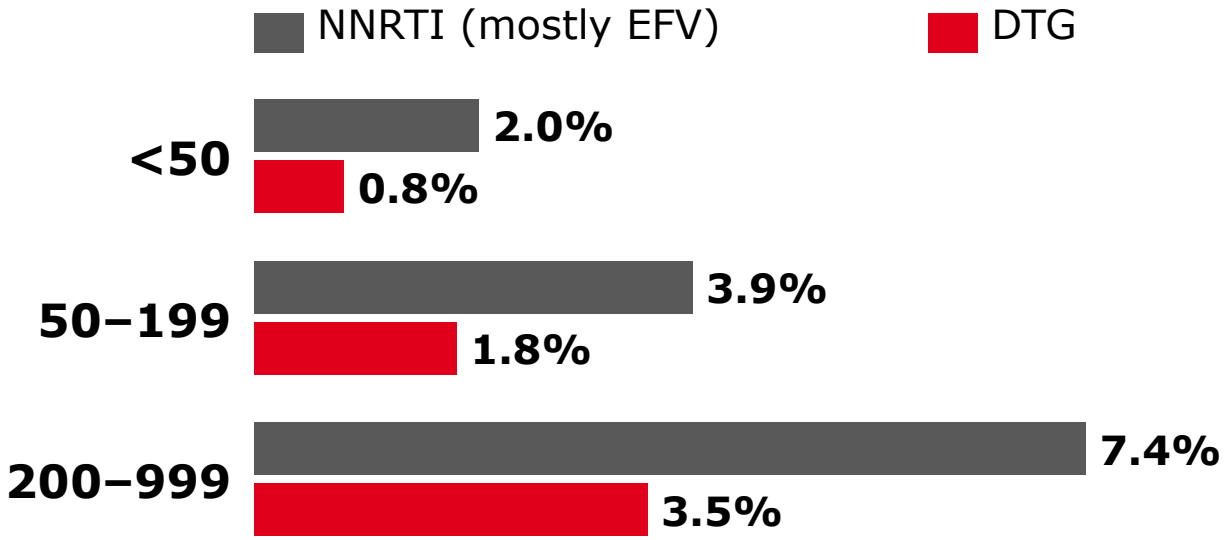
Countries respond very differently to a result below 1,000

	Response to an elevated VL below 1,000
Kenya	≥200: not established with 1–3-monthly visits; repeat after 3 months of good adherence
Malawi	Any low-level viraemia: back to clinic care, 6-month dispensing stops; repeat at 3 months
Mozambique	50–999 on dolutegravir managed as suppressed: repeat in 12 months, no recall
South Africa	Stays in the repeat-prescription model; clinical management in parallel with repeat VL 3 months later
Zambia	Not specified below 1,000; >1,000 is "high risk" – models for unstable clients

Sources: Malawi clinical HIV guidelines 2022, Table 20 and p.103; Mozambique ART training package 2025, UD7 p.53; Kenya NASCOP 2026, Tables 1.24–1.25; South Africa 2026 ART guideline (IAS LLV briefing, Sept 2026); Zambia consolidated guidelines 2022, p.148.

On dolutegravir, a single low-level result carries less **risk** than a suppressed result did on efavirenz

Later VL >1,000, by previous result (Lesotho)



Persistence matters

Botswana, on DTG, after LLV (51–999): later confirmed failure

One result	**0.6%**
Two in a row	**1.1%**
Three or more	**2.7%**

NNRTI group: 91% efavirenz, 9% nevirapine. Botswana: confirmed failure = two VLs ≥1,000; small numbers for persistent LLV (3/110).

Sources: Kohler et al. (VICONEL), OFID 2024;11:ofae013; Bareng et al., Viruses 2024;16:720 (50,742 adults; LLV 51–999; 39/6,260, 4/371, 3/110).

Consider a simpler response: look again without shifting people out of MMD and DSD

<200	No action. Discuss 50–199 at the next clinical review.
200–999	Repeat at the next visit or pick-up (i.e. 6–12 months later) – no extra visit; stay in the model.
≥1,000	Recall on receipt: adherence support, AHD screen, repeat after 3 months.

Sources: Kohler et al. (VICONEL), Open Forum Infect Dis 2024;11:ofae013; IAS low-level viraemia briefing (Sept 2026).