HIV Viral Load Coverage through Strategic Interventions: Best Practices from the USAID-DISCOVER-Health Project

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Expanded ART coverage in Zambia

- The HIV program in Zambia is on track to reach epidemic control and stands currently at 90-98-96 against the UNAIDS targets.
- Viral load testing has been decentralized, with polymerase chain reaction (PCR) machines installed in each of the ten provincial capitals of the country.
- However, despite this success, viral load coverage (VLC) continues to stall, especially in lower-level facilities.

...but barriers affecting viral load coverage

- Low demand for viral load among clients accessing HIV treatment, due to suboptimal treatment literacy.
- Challenges synchronizing clinical or ART collection appointments will sample collection for viral load testing.
- Viral load coverage coverage (VLC) remains suboptimal nationally for both adults (83%) and pediatrics (76%).
Intervention

USAID District Coverage of Health Services Project

• Funded by the United States Agency for International Development (USAID) and implemented by JSI

• Designed to expand the reach of the health system to underserved areas and populations, through a direct service delivery and outreach model, at the lowest level of the health system (health post) to provide an integrated package of primary health services.

• Set up new prefabricated clinics in high-density informal settlements to expand the range of services provided and deliver services where need is high and there is no infrastructure.

• Currently providing lifesaving antiretroviral therapy to 80,178 men, women and children through 183 clinics and sites.

• In October 2022, viral load coverage at supported sites lagged at 72%.
Step 1: Conduct a viral load value chain analysis

Collection Facility
- Health Provider
  - Staff knowledge Gaps (roles, monitoring cascade, indicators and targets)
  - Availability/effectiveness of VL champions, lab and ART staff
- Health Systems
  - Systems for identifying and following up clients due/overdue
  - Systems for tracking pending results
- Data Management
  - Availability of M&E staff to update electronic medical records
  - Availability of tools (registers, client files)
  - VLC definition
  - Completeness of records
- Logistics
  - System for forecasting
  - Availability of consumables

Courier
- Courier Systems (Intra-district)
  - Systems for monitoring
    - Courier (sample collection and result delivery)
    - Result flow
    - Turnaround time (TAT)
  - Motorbike functionality

Hub Labs
- Courier Systems (Inter-district)
  - Systems for monitoring
    - Courier (sample collection and result delivery)
    - Result flow
    - TAT

Testing Lab
- Laboratory Systems
  - System managing backlogs
  - Machine functionality
  - Sample rejection
- Logistics
  - Availability of reagents and consumables
- HRH
  - Availability/effectiveness of Lab staff
Step 2: Craft strategies to optimize VL value chain at facility level

<table>
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<th>What were the gaps at facility-level?</th>
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<td>• Dyssynchronous clinical/pharmacy and VL sample collection client appointments.</td>
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<td>• Low sample collection in clients due for VL whose clinical/pharmacy visit was not in sync with VL sample collection appointment.</td>
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<td>• Increased load of sample collection mainly towards the end of the quarter leading to longer TAT and non-reporting of some results.</td>
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<td>• VL results TAT not factored in when considering the due date for sample collection.</td>
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<td>• Weak tracking system of sample movement from collection points, Hub lab, DISA system to PCR Lab.</td>
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Step 3: Craft strategies to optimize the value chain at laboratory level

What activities were required at the laboratory level?

- Proactively engaged Hub and PCR labs for continued supply of reagents, commodities and consumables
- Revamped transport to courier samples from collection facilities to Hub Labs within 24 hours and from Hub Labs PCR Labs within 2 days of sample collection or every time samples exceeded 50
- Process VL and EID samples for priority populations at Hub Labs using POC machines
- Used electronic lab reports to monitor samples couriered from Hub labs to PCR labs, samples received in PCR Labs, results transmitted to Hub Labs and specimens pending analysis on daily basis.
- Tracked all pending results within a week.
- PCR labs instructed to communicate samples received, results transmitted, and challenges being identified to Hub Labs on weekly basis.
Step 4: Institute a monitoring mechanism for strategy implementation

How did we measure success?

- Integrated VL strategy implementation in the technical support team at district level, for overall leadership in executing the implementation with fidelity
- Created WhatsApp groups at various levels to communicate challenges, achievements and logistics in real-time.
- Conducted weekly project-level VL performance monitoring review meetings with key district staff to:
  - Review cumulative weekly achievements
  - Review effectiveness of strategies
  - Identify areas that needed improvement in the VL value chain
  - Appreciate challenges faced by site-level teams
  - Collectively craft remediation measures
- Held monthly meetings to interrogate and optimize the whole VL value chain
Trend in viral load coverage and suppression, FYs 2023-2024

NOTE: VL Coverage is calculated based on proxy denominator
Recommendations

• Interventions targeting different components of the viral load value chain are critical to improving viral load coverage

• Community viral load sample collection, coupled with differentiated service delivery of ART and community-based clinical services contribute to the improvement of VLC

• Infrastructure and availability of laboratory commodities must be in place to support efforts at facility-level

• Viral load champions, who can hold the facility accountable and ensure planned activities are conducted, are critical to driving facility-level intervention

• Treatment literacy is key!
Thank you!

For more information, please contact Musonda Musonda (mmusonda@usaid.gov)

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