

Reaching the Third 90:

Implementing Routine Viral Load Monitoring in Lesotho

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Country Context

The Kingdom of Lesotho is a landlocked country surrounded by South Africa. It is a lower middle income country and has a population of 1,924,381⁽¹⁾. The country is divided into ten administrative districts and 73% of the population resides in rural areas. Lesotho is among the hardest hit countries in the world by both HIV and TB. The HIV prevalence among people aged 15-49 is 24.6% and annual incidence is 1.9%⁽²⁾. There are 315,000 people living with HIV and TB/HIV co-infection is 74%⁽³⁾. The TB incidence is 852 per 100,000 population⁽⁴⁾.

Since the start of the public ART program in 2004, the country has scaled up treatment services in more than 200 facilities. The WHO 2013 ART guidelines with a cut-off of 500 CD4 including Option B+ and targeted viral load (VL) monitoring were adopted in 2014. Currently, the ART coverage is 41% for adults and 57% for children⁽³⁾. The country has adopted the WHO 2015 guidelines on Test and Start and implemented services as of June 2016. With the Test and Start approach, Lesotho plans to achieve the UNAIDS 90-90-90 targets in the five districts with the greatest HIV burden by end of 2017.

Laboratory Systems for VL Monitoring

The laboratory service is structured in three tiers: National, District and Health Center levels. The National Reference Laboratory (NRL) provides VL, EID, TB culture and DST. The 18 district laboratories provide basic diagnostic and patient monitoring tests while 216 health centers provide point of care testing (POC) and/or serve as collection sites. To improve the quality of services, the WHO step-wise quality improvement process was implemented in all clinical laboratories. The national HIV VL strategic and annual operational plan is in place^(5,6).

In 2014, targeted VL monitoring was initiated. Plasma-based VL testing using the Roche Taqman platform is currently used. Recently, routine VL monitoring has started and coverage increased to 15%⁽⁶⁾. The routine VL monitoring scale up is expected to cover 50% by end of 2016 and >90% of patients on ART by end of 2017 (Fig 1). To scale up and improve quality of services, the following are being implemented: referral network is being strengthened; sample collection frequency from sites is increased through subcontract with Riders 4 Health (R4H) and DHL courier services; optimal use of VL platform by introducing 16-hour shift at NRL; sample tracking tool is being piloted; electronic LIS is used to transmit results from NRL to district labs; and preparations are underway to decentralize services at Mafeteng district laboratory.

Clinical/Program Systems for VL Monitoring

For achieving the Third 90, monitoring the program level viral suppression is an important quality of service indicator at the site and national levels. In order to guide and monitor the roll out of VL testing in Lesotho, the Ministry of Health developed the National Viral Load Scale-up Plan with technical assistance from partners, which was finalized in December 2015⁽⁶⁾. Targeted VL testing was rolled out in 2014 to ART patients with signs of clinical or immunological failure, patients on 2nd or 3rd line regimens, pregnant and breastfeeding women, and children under 5 years. As of June 1, 2016, routine VL monitoring has been made available to all patients on ART. The National ART guidelines were recently revised and recommend VL testing six and 12 months after ART initiation followed by annual testing thereafter if suppressed (<1000 copies/ml). Pregnant and breastfeeding women and all children and adolescents are to be monitored with VL every six months.

National-level training of trainers and subsequent district-level step-down trainings on comprehensive HIV have been conducted in the past year inclusive of training on VL monitoring and interpretation, management of treatment failure, and 2nd and 3rd line ART. Further district- and site-level trainings on use of VLs are ongoing as part of the nationwide roll-out of Lesotho's new Test and Start ART guidelines.

Moving forward, VL testing will assist with differentiating the package of services ART patients receive, i.e. stable patients with viral suppression will be seen less frequently to decongest clinics and "unstable" patients with VL >1000 copies/ml will receive intensified adherence support with switching to 2nd or 3rd line ART as deemed appropriate with select monitoring of ARV drug resistance.

Engagement of Patients and Communities

Following implementation of routine VL monitoring from 1st June 2016, Civil Society Organizations (CSOs) developed a roadmap for demand creation through awareness and monitoring of VL scale-up implementation plan.

Patients and Community Engagement Roadmap:

June
2016

- Introduction of Routine VL to stakeholders;
- Develop IEC and advocacy materials; Evaluate current VL testing capacity

July
2016

- Hold roundtable discussion on VL testing interruptions
- Identify gaps in routine VL testing cascade
- Hold VL testing awareness campaigns and distribute IEC materials; Launch routine VL testing

Aug-
Dec
2016

- Collaborate with National AIDS Commission, clinical partners and MoH on creating demand for VL testing
- Advocate for >90% of ART population to have access to routine VL testing by 2019
- Monitor VL scale-up implementation plan of the MOH to meet targets

M&E Systems for VL Monitoring

Laboratory and program level indicators are used in monitoring scale-up of VL monitoring (Fig 1). VL test results, aggregated and disaggregated, are generated through electronic-based LIS. The VL test performance and turnaround time are reviewed on monthly basis (Fig 2). Since April 2015, the number of VL tests done has increased more than two fold (Fig 3).

For monitoring program level viral suppression, the percentage of ART patients with a VL result documented in their medical record, and the proportion of viral load tests with a suppressed viral load (<1000 copies/ml) are determined annually and disaggregated by age and gender. In FY15, a total of 11,185 adults and children on ART had a documented VL with 75% suppression rate.

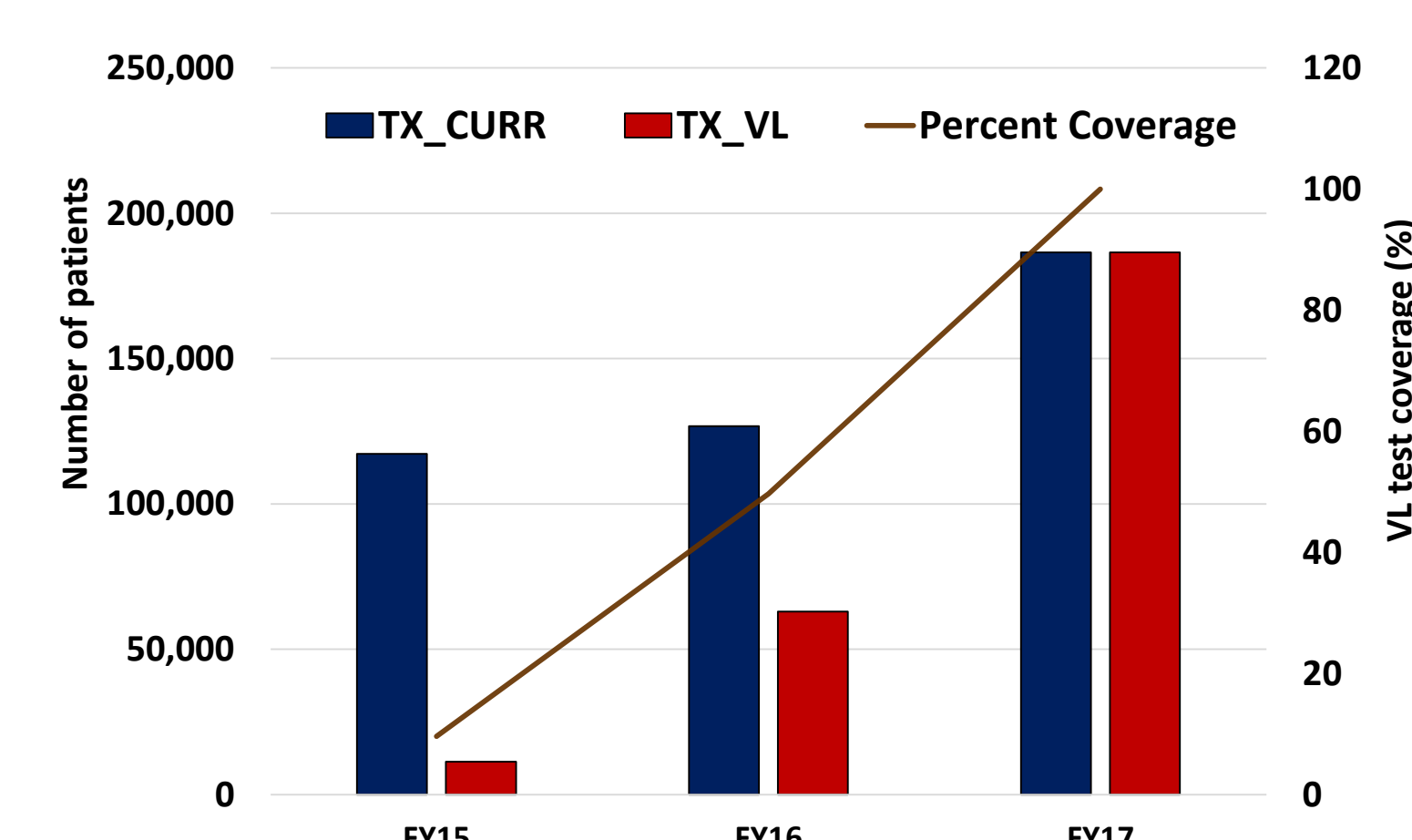


Fig 1. VL Coverage: Results and Targets

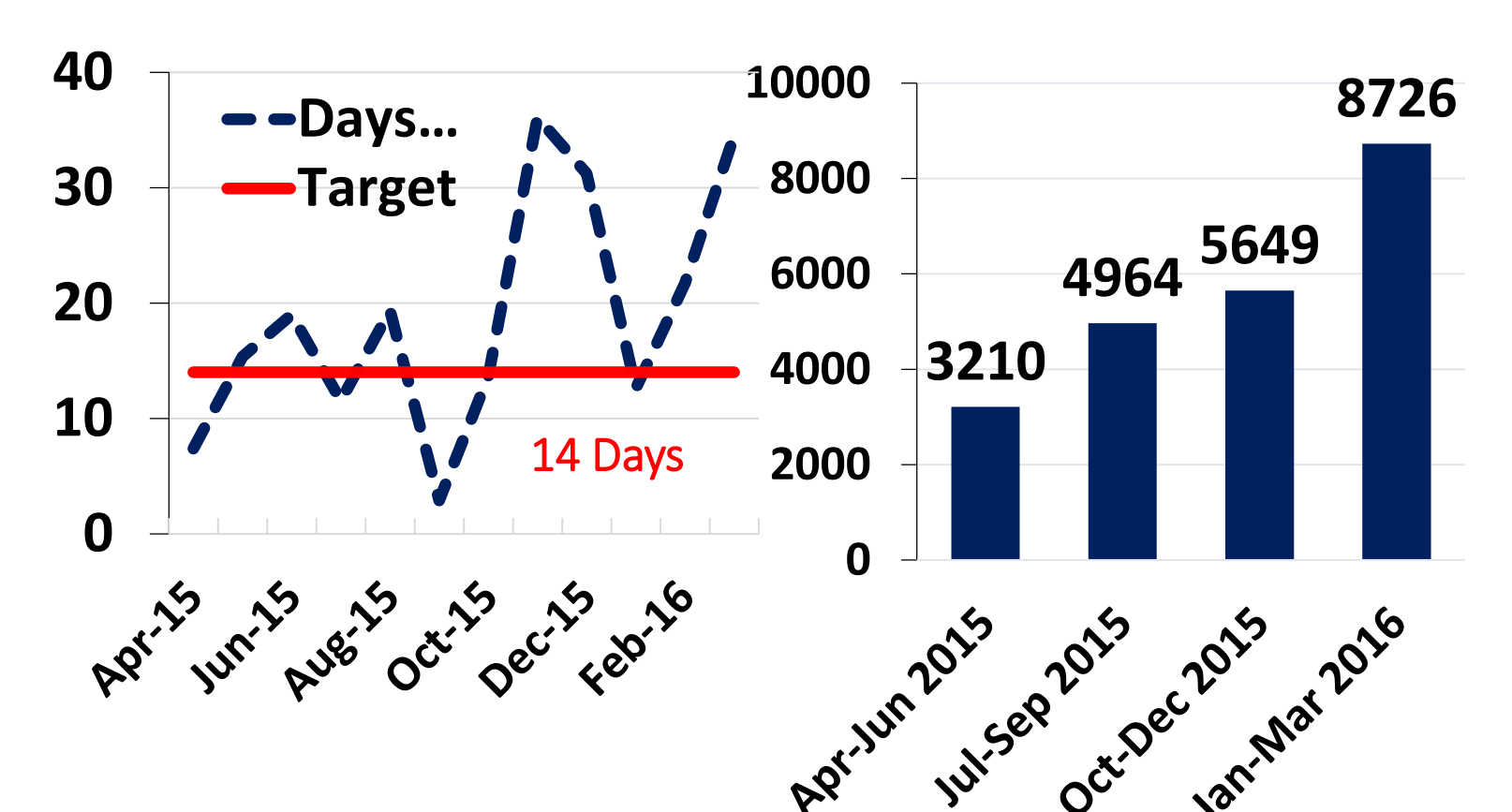


Fig 2. Turnaround time, April 2015 to March 2016.

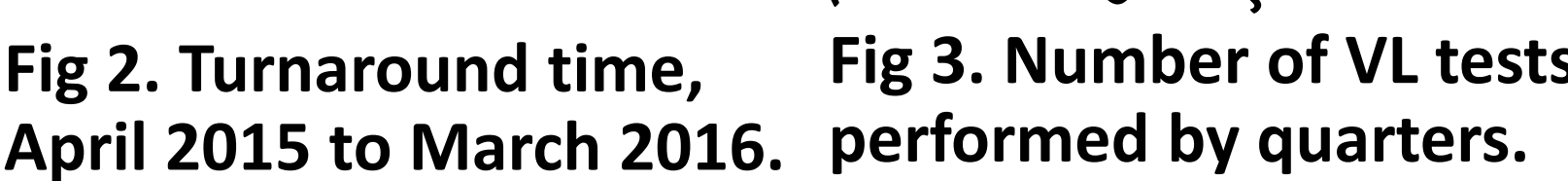


Fig 3. Number of VL tests performed by quarters.

Next Steps/Way Forward

- Improving laboratory infrastructure: Build capacity of district laboratories to decentralize testing services in Leribe district laboratory and introduce POC VL testing devices
- Sample transport and referral network: Increase coverage and frequency of sample collection at sites and improve the turnaround time; establish effective sample tracking and result reporting system
- Address human resources: Train and deploy additional laboratory techs; ongoing training and clinical mentorship of health care providers
- Demand creation through clinician and patient education
- Implementation of patient tracking and management protocols system: Timely result reporting; adherence and counseling support, increase 12-month retention to 90%; and improve cohort monitoring at 12, 24, and 36 months
- Laboratory commodity and supply chain: Resource mapping, quantification, procurement and distribution of supplies to ensure uninterrupted VL testing services
- Implementation of the lab quality system essentials and strengthen the EQA/PT program

References

¹ Lesotho Bureau of Statistics, 2015

² Lesotho DHS, 2014

³ UNAIDS, 2016

⁴ WHO Global TB Report, 2015

⁵ National Reference Lab Report, 2016

⁶ Lesotho National VL Strategic Plan, 2015

