Diagnostic Network Optimization (DNO) Implementation in Nigeria

ASLM, November 2021

Omolara Emmanuel, National AIDS and STDs Control Programme, Federal Ministry of Health

Presentation Outline

- Nigeria laboratory services background
- DNO implementation
- Current status
- Lessons learned
- Next steps

Nigeria Laboratory Services: Background

Nigeria's adoption of the test and treat strategy in FY16 necessitated increased system efficiency to address programmatic and operational gaps

- Limited Access to PCR testing and other diagnostic services
- Long Test to result TAT
- Poor laboratory capacity utilization
- Poor coordination
- High operational costs
- Limited accountability
- Supply chain challenges
- No standardized framework for performance management
- Data management gaps

Elements of DNO: Addressing Dysfunctional Systems

Nigeria commenced DNO in 2018 for VL/EID testing using the following approach:

Sample referral network design

Mapping of Lab and clinical facility geolocations.
Identification of instruments, utilization rates, cost, and patient demand

Streamlining PCR Testing Labs

Scale down of the number of PCR testing labs from 27 to 17

Equipment upgrade

Analysis of equipment utilization rates and throughput
Mix of vendors to increase competition

Performance Management

Design of Key performance indicators
Regular performance reviews with vendors

Policy Framework

FMOH approved policy manual and

Appointment of National focal person

Coordination

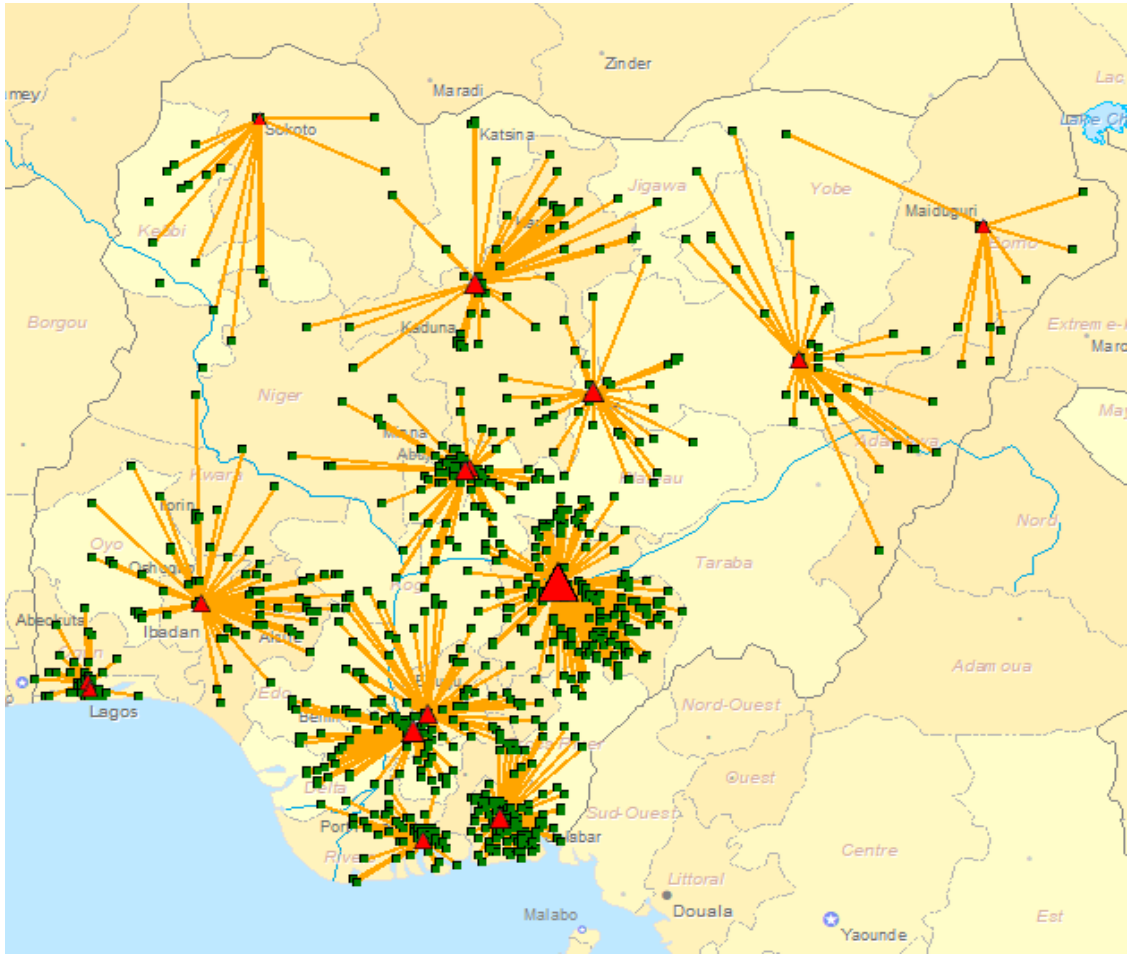
Planning for integration of services across disease areas.

Routine meeting with stakeholders

DNO Implementation (continued)

Outcome of Optimization of VL/EID Labs

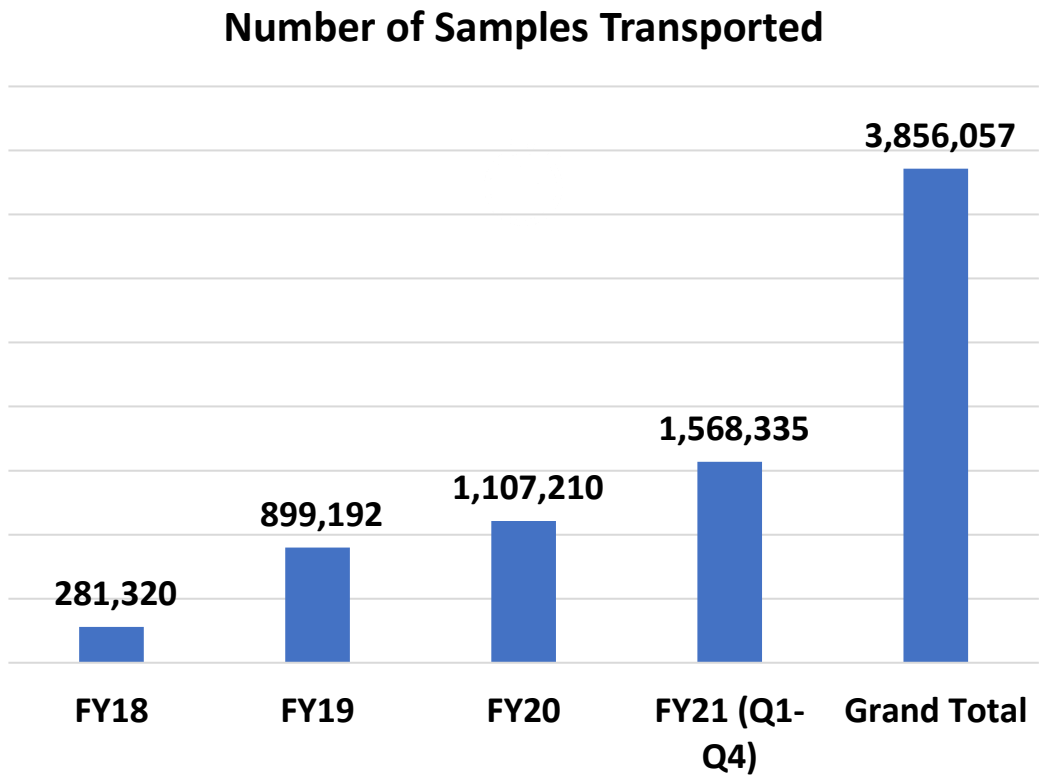
- Optimized Network mapping (Average Service Distance: 65km, Distance Range: 0 – 347 km)
- 27 PCR labs were consolidated to 17 for efficiency
- Balanced and efficient workloads across testing laboratories
- More cost-efficient laboratory testing: higher utilization rates and lower operational costs



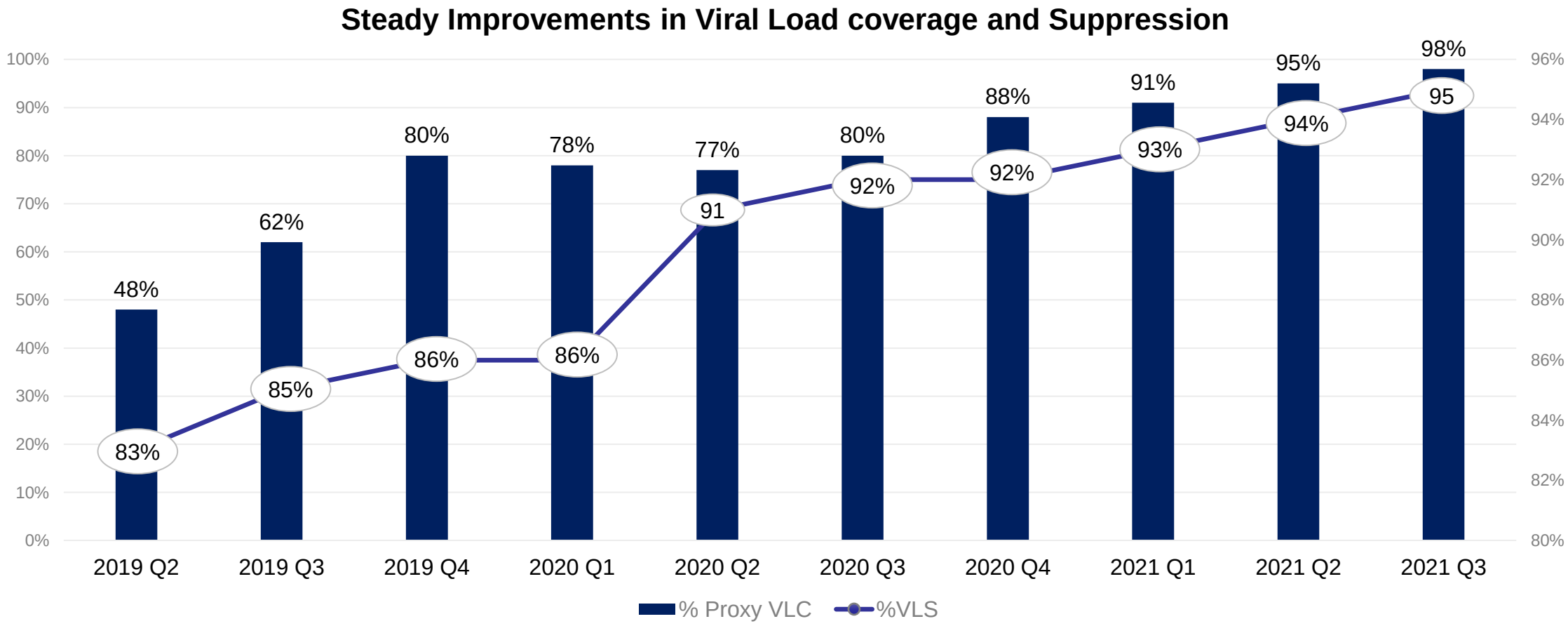
Current Status: Execution

Achievement of VL Diagnostic Network Optimization

- National Sample Referral Network established and had transported about 4 million samples since inception (March 2018)
- Increased instrument capacity utilization
- **Reduced reagents pricing** and **improved in-country service**



Nigeria Viral Load Trend



With Diagnostic Optimization, Nigeria Benefits:

Achieving a better deal by leveraging testing volume through DNO

From		To
Limited competition	>	Increased competition
High pricing with limited price transparency	>	Transparent, low, all-inclusive reagent rental prices
Poor accountability for service performance	>	Standardized service levels, KPIs & operational data connectivity
Purchased equipment	>	Leased equipment (reagent rental)

Lessons Learned

- Landscape analysis and geo-location mapping are critical to the design of a functional referral system – issue an RFI if necessary
- It is important to define service level expectations - with KPIs
- Ensure DNO is complete with mapped sample transport lanes to inform RFP with national buy-in
- Quarterly performance reviews with all stakeholders are vital for continuous improvement
- Routine costs and performance evaluation help ensure efficiency
- Annual renegotiation of contracts based on performance evaluation help to promote accountability.
- Service integration across disease areas is required to achieve optimal benefit from DNO

Next Steps

- Consolidate on the gain of DNO on HIV/AIDS and TB to expand to other disease areas
- Expand the National Integrate Specimen Referral Network to transport other sample types (COVID-19)
- Ensure the buy-in of other stakeholders for the sustainability of NiSRN beyond the funders' support
- Bring the sub-nationals (state governments) to take ownership of diagnostic network optimization at state level

Nigeria MOH Dr. Ehanire Flagging the NISRN SOP