

Using the National Integrated Specimen Referral Network (NiSRN) to Increase Viral Load Testing Coverage, Overcome Barriers to Laboratory Access, and Achieve the Third 95 in Nigeria

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➤ Sample movement between requesting clinic and testing laboratory using NiSRN. Photo Credit: GHSC-PSM

Background

In Nigeria, access to medical laboratory testing services, especially in rural and poor populations, posed a significant challenge. The absence of a well-structured system for referral and transport of diagnostic specimens further exacerbated the problem. To address this issue and provide equitable and cost-effective medical laboratory testing services, the National Integrated Specimen Referral Network (NiSRN) was established in March 2018. This study evaluated the impact of NiSRN in relation to achieving the third 95 of UNAIDS' 95-95-95 targets.

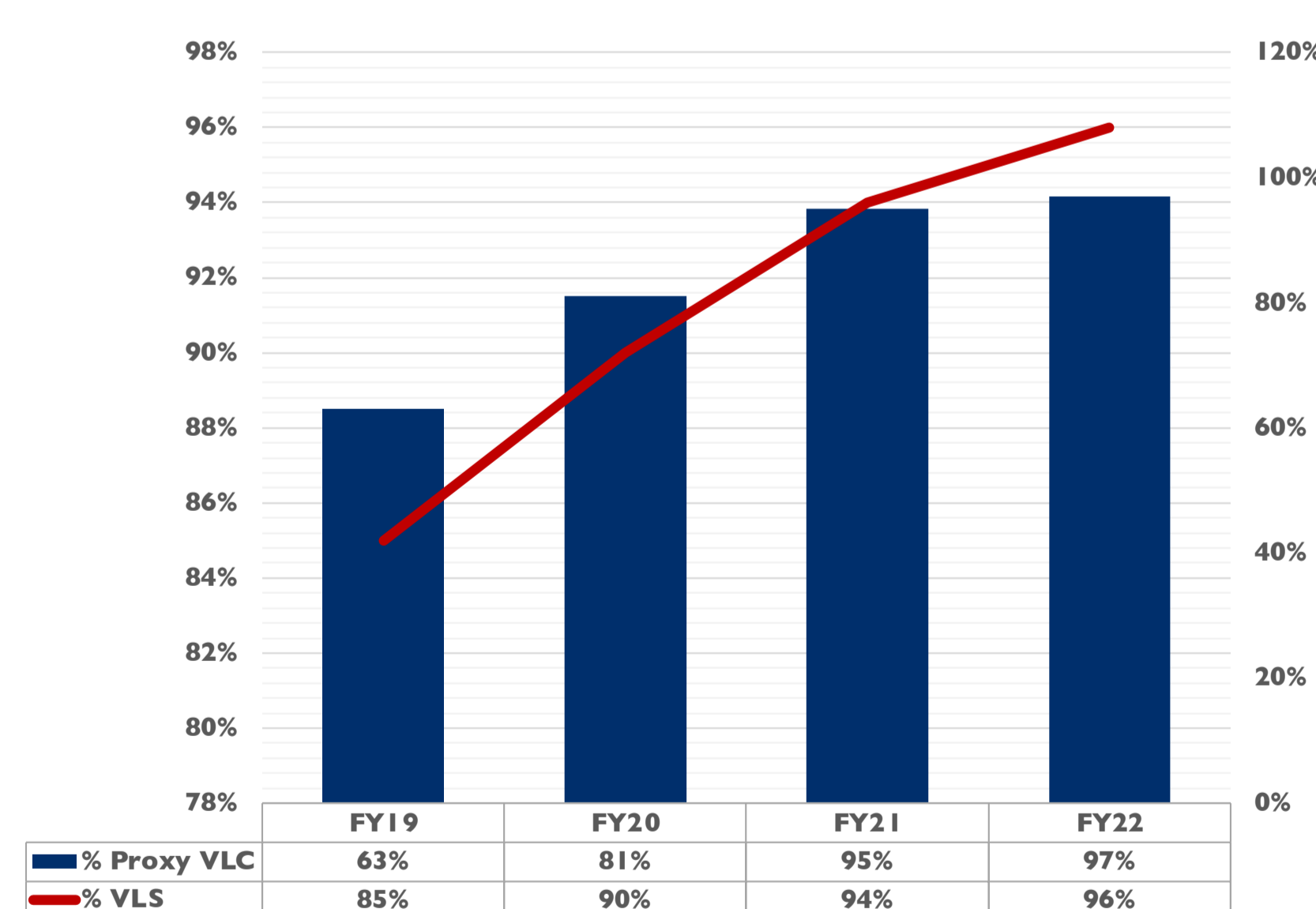
Methods

The study employed descriptive methodologies to assess HIV viral load testing in Nigeria before the implementation of NiSRN. Data on the annual volumes of viral load and early infant diagnosis (EID) samples transported across the 36 states and the Federal Capital Territory from 2018 to 2022 were collected. The samples were assayed at Polymerase Chain Reaction (PCR) laboratories, and viral load suppression rates were reviewed.

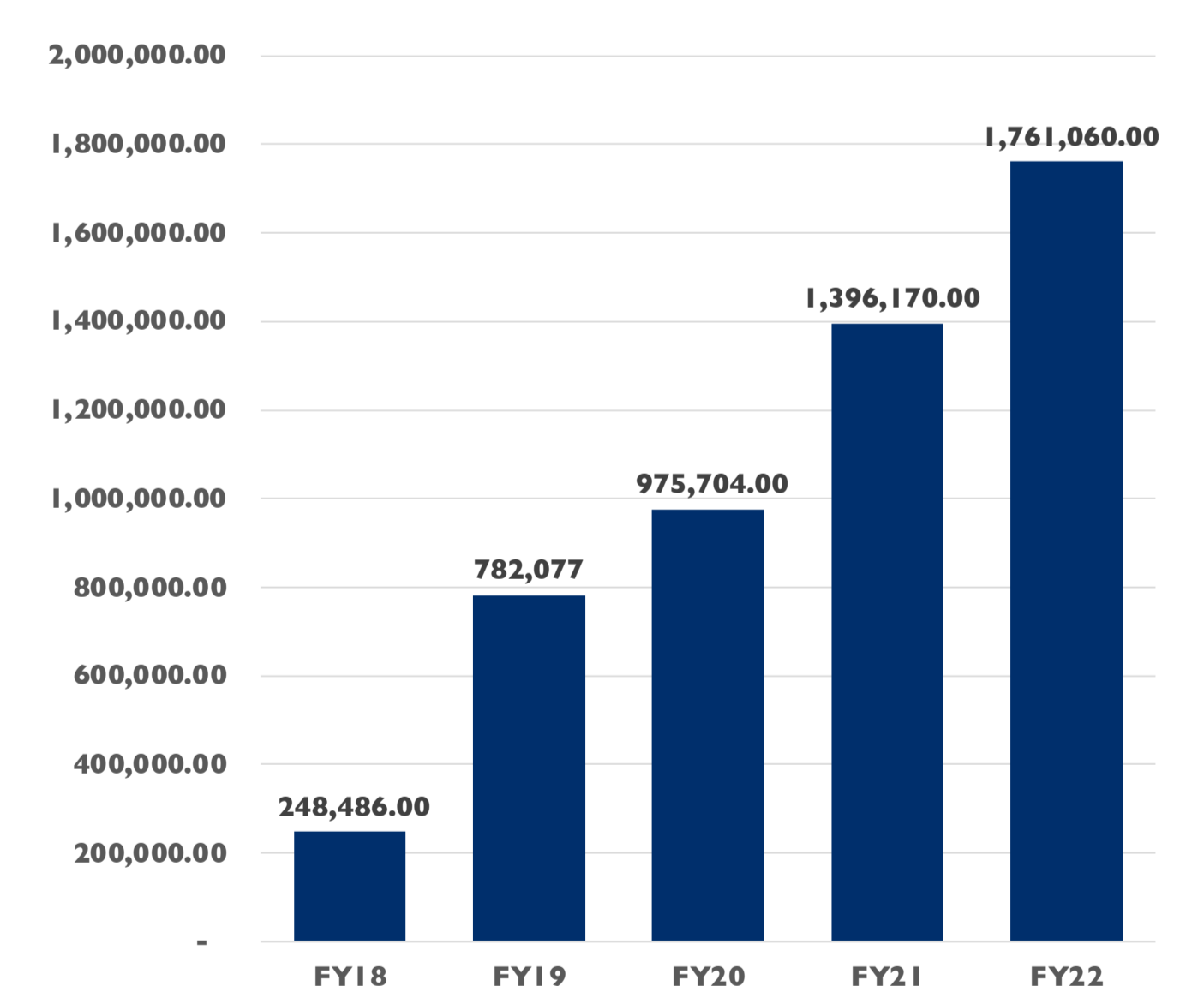
Results

NiSRN promoted responsive sample management through agile routing and redistribution of samples to laboratories capable of prompt analysis. The number of specimens transported annually increased from 248,486 in 2018 to 1,761,060 in 2022. Viral load coverage improved from 55% in 2018 to 95% in 2022. The viral load suppression rate increased from 78% in 2020 to 96% in 2022, surpassing UNAIDS' third 95 target.

Improvement in the Viral Load Suppression Rate



Viral Load Samples Transportation in Nigeria 2018–2022



Conclusion and Recommendations

The implementation of NiSRN helped to increase agility in sample management, ensuring that samples can be redirected to laboratories capable of prompt analysis. The number of specimens transported annually increased from 248,486 in 2018 to 1,761,060 in 2022. Viral load coverage improved from 55% in 2018 to 95% in 2022, while viral load suppression rate increased from 78% in 2020 to 96% in 2022.