

Evaluation of time from sample collection at health facilities in Kigezi Region to receipt at Central Public Health Laboratory, Uganda from February to May 2023

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Background: In 2011, Uganda established a national laboratory sample transport, referral, and results network. Using a hub-and-spoke model, HIV viral load (VL) samples collected at ‘spoke’ facilities and transported through a ‘hub’ are expected to be received by Central Public Health Laboratory (CPHL) within ≤ 7 days (≤ 2 days from collection to pick-up, ≤ 4 days to delivery, ≤ 1 day to receipt). However, in Kigezi Region, during October–December 2022, the mean total time was 11 days. We evaluated the VL sample transport process in the Kigezi Region from collection to receipt at CPHL.

Methods: We abstracted data from the CPHL sample tracking database (April–May 2023) on the date of VL sample collection, pick-up, delivery, and receipt at CPHL for the four hubs serving all six districts in Kigezi Region. We calculated mean days between respective time points. We brainstormed and held key informant interviews with CPHL management and Kigezi regional stakeholders to identify factors leading to delays in sample receipt. Thereafter we carried out a root cause analysis.

Findings: Data were available for 6593 samples received during April–May 2023. The mean total turnaround time was 12 days, including 7 days from sample collection to pick-up by transporters, 2 days from pick-up to delivery at CPHL, and 3 days from sample delivery to sample receipt by CPHL. Factors identified as possible causes of delays included non-adherence to route schedules and delays in sample packaging for shipment.

Conclusion: Total turnaround was almost double the 7-day benchmark, and sample collection to pick up represented the longest delays in VL sample receipt at a central lab in Uganda. Future studies could evaluate the impact of efforts to improve adherence to route schedules and rapid sample packaging to address this issue.

Keywords: Turnaround time, Viral Load, Uganda

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