



Demonstrating how to Improve Operational Efficiency in Uganda's Overall Pathology Service by Empowering Regional Initiatives

Pilot Scheme in the West Nile Health Region

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Background

Uganda's strategy to improve laboratory services involved setting up more than 1500 clinical laboratories of different sizes. This was to ensure 90% of the country would be served either by larger clinical laboratories in major hospitals and health center IVs or smaller health centers. In 2011, 100 regional hubs were created in major hospitals and health center IVs to support the transport system, each serving 25 to 30 lower health facilities, resulting in 90% coverage. Laboratory capacity at the hubs was meant to support lower sites and only refer hi-tech tests to the Central Public Health Laboratories (CPHL).

However, many of these regional labs were either not functioning at all or operating to full capacity; further space capacity was not being used to support lower sites. The current system was suffering from a number of operational and governance challenges such as frequent stock out, poor equipment maintenance, lengthy downtime for instruments and slow turnaround times.

With CPHL support, a bold experiment was initiated which made a fundamental change to the way the regional laboratory service was managed. This focused on moving away from a centralized approach to handing responsibility for laboratory sample coordination to regional level. An integral part was the need to addressing flaws in the transport management of the physical collection and transportation of samples from the rural catchment areas.

Method

The West Nile's Arua central referral laboratory was chosen as the test case because of the challenges it presents in terms of distance, existing health facilities and its high refugee population. The CPHL funded the placement for 12 months of an experienced lab scientist to take responsibility for sample coordination, including mentoring the hub laboratory team and engaging with stakeholders. Baseline performance and workflow data was collected prior to the start of the trial and then tracked on a quarterly basis throughout.

Summary of achievements included

- Created a reliable and efficient sample transportation system
- Improved overall laboratory inventory management
- Reduced laboratory turnaround time for all tests
- Developed an ethos of collaborative working and improving communication and reporting among stakeholders at all levels of the laboratory hub system
- Increased timely access for patients to diagnostics for HIV/AIDS and opportunistic infections
- Illustrated the cost implications for implementing changes throughout the country.

Results

Before intervention, the hubs in the area averagely sent 38,534 viral load samples per quarter. This increased by 130,346 VL samples, an almost 350% rise. Before the intervention, lower sites under the hubs were sending 1,517 VL samples each quarter. This increased well over 800% to 13,958 samples. Other remarkable improvements in sample transport functioning were noted.

Conclusion

The pilot showed how delegating coordination to the center receiving and processing the samples resulted in more samples being transported and processed in a timely fashion, with bottlenecks reduced and overall workflow improved. They demonstrate how establishing a coordination resource at regional hub level - and empowering and mentoring local laboratory professionals in workflow management – has transformed the routine laboratory service in Arua.

The magnitude of the success of this approach sets down a clear and practical roadmap for delivering greater efficiencies to the country's overall laboratory services, if funding were to be made available to other regional hubs.



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