

The laboratory is driven by processes aimed at transforming input (samples) to output (data) used for patients' care. Documenting these inputs, processes and outputs are vital to monitor trends and patterns in patient outcomes and to improve the quality of services delivered to clients. However, documenting these activities, maintaining and retrieving records can be often laborious and time-consuming, especially in laboratories with insufficient human resources, limited space and an ever-increasing workload.



Prior to the implementation of LAMS, it took 5 days for facilities to receive hard copies of laboratory test results notifying them of sample rejections and/or clinical values. With LAMS, facilities can receive notifications by email or SMS in a matter of seconds. This has made real time tracking and notification of results possible, from when the results were picked up to when they were delivered to the facility.

To encourage quality documentation, record keeping and ease of data retrieval APIN designed and deployed the Laboratory Activity Management Systems (LAMS) to the PCR laboratories in Federal Medical Centre, Makurdi, Benue State. LAMS is a software application designed to improve efficiency and drive laboratory operations towards a paperless system. The overall focus was to provide a platform to aid full automation of laboratory processes and reduce the cost of laboratory operations.

“For a data entry officer, there is nothing more pleasing than using a software to perform your task and keep track of activities, even outside the office. With LAMS, data capturing and retrieval have been a wonderful experience. LAMS is a game changer; I just love this platform!”

- Bella Anebi

Data Entry Assistant

One of the major considerations made during the implementation of LAMS was to redesign the workflow of the laboratory in a manner that would support the seamless implementation of an automated operation.

The initial design was for two modules: sample registration for the creation of manifests (used during the transfer of samples), and receipt of results for samples tested outside the molecular (PCR) laboratory.

In the course of the implementation and continuous review of laboratory processes, more modules were designed to improve the entire process from sample reception, sample rejection and sample testing to results dispatch, equipment management, inventory management, occurrence management and documentation.

The LAMS implementation improved the accessibility of laboratory documents and records. It provided a means for instant notification of samples rejected and clinical decision value to enhance the quality of care provided to the patients.

Within 10 months, through the platform, 723 instant notifications of sample rejection were sent to facilities to ensure a prompt collection of another round of samples from the affected clients. Beyond the quality of services delivered to patients, LAMS has enhanced the quality and ensured timely reporting of data, without going through the rigor of collation from hard copies.