

Guam is implementing a new integrated Laboratory Information Management System



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CATEGORY: **Laboratory Data Exchange**

To improve Guam's ability to manage and respond to disease threats, Guam Public Health Laboratory began the process of implementing a new laboratory information management system (LIMS). While a work progress, this implementation was critical for the timely processing and reporting of COVID-19 laboratory results.

The "What"

Delays in the processing and reporting of laboratory results performed by the Guam Public Health Laboratory (GPHL) hamper their ability to adequately manage and respond to new disease threats, such as COVID-19. Requests to perform laboratory tests are received on hard copy forms, and results are sent to providers via fax or phone call. Results are entered manually into the National Electronic Disease Surveillance System Base System (NBS). Data are retrieved from NBS to perform analyses and report statistical information. GPHL used Epidemiology and Laboratory Capacity for the Prevention and



Control of Emerging Infectious Diseases (ELC) funding to implement a new LIMS to improve this process.

The "So What"

This integrated LIMS will provide GPHL with one system to manage the accessioning, requisitioning, resulting, and reporting of laboratory results. It will transmit Electronic Laboratory Reports (ELR) to NBS using Health Level Seven (HL7) Interoperability standards. This will streamline processing and provide timely access to the data necessary to study disease trends and to aid in controlling the spread of emerging threats.

The "Now What"

Because of the massive amount of COVID-19 testing required throughout the pandemic, the LIMS was initially set up to process COVID-19 tests. The LIMS will now be configured to process laboratory tests to check for additional conditions as well.

Phase II of this project will include integration with multiple different pieces of lab testing equipment, which will further streamline the processing of laboratory testing and reporting.

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