



# THE LABYRINTH ISDH LABORATORY NEWSLETTER

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## STARLIMS Aids Laboratory Swine Flu Response

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STARLIMS is a laboratory information management system (LIMS) that the lab uses to help automate the process of testing samples throughout a sample's life cycle. This begins in accessioning, where sample data is entered into STARLIMS and samples are bar-coded. It continues to the testing area, where test result data is automatically imported into STARLIMS for those assays with automated test instruments. Finally, it assists with the release process by generating standardized lab reports. For samples from submitters who have signed up with LimsNet, the lab's web-based submission and reporting system, data is entered and reports are delivered to submitters electronically, eliminating both the need for manual data entry and the need to mail or fax reports.

During this year's flu outbreak, the lab experienced a large spike in virology specimens from around 10 samples per week to over 600. The analysts and accessioning staff were working extra hours and recruiting help from other parts of the lab to provide assistance. STARLIMS also helped. Data for a portion of the samples were submitted to the lab electronically, reducing the time-consuming data entry process. STARLIMS also helped track the status and test results of each of the thousands of samples, which would have been an overwhelming task if done on paper.

As useful as STARLIMS was this time around, plans are in the works to make STARLIMS even more effective during the next outbreak. For example:

- Electronic LimsNet submissions accounted for only 20 percent of submissions. For other assays, such as Chlamydia and HIV, that number is above 95 percent. The lab will work with

the non-LimsNet submitters to get them signed up and ready to submit electronically.

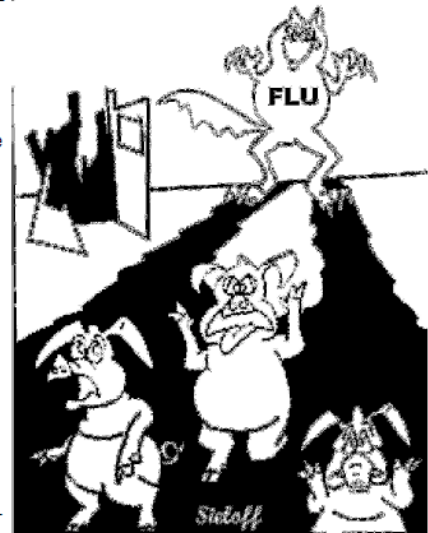
- An optical character recognition (OCR) module is being investigated, which would allow even paper-based submissions to avoid the data entry step.

- The lab is working with IOT to use a fax server to eliminate the step of printing and faxing reports.

Virologists must currently enter data into three different systems to make it available to the CDC and the epidemiologists at 2 North. Links are being built to lighten the analysts' loads by making STARLIMS a "one stop shop" that will automatically deliver critical information to not only the original submitter, but to the CDC and epidemiologists as well.

Looking beyond pandemic flu, the lab is in the process of upgrading STARLIMS to provide additional preparedness capabilities, including assays for biological and chemical terrorism. Algorithms for these assays are being built into STARLIMS, along with an automated instrument interface in the case of Chemical Terrorism. STARLIMS will also streamline communication with and provide real time data to CDC and the ISDH epidemiologists.

Preparedness is a core function of the lab, and with STARLIMS, technology is on our side.



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