

New Information System Developed for The Public Health Laboratory: ELIRT™

By John Glock, Senior Software Developer, NPHL

A new computer information system for web-based laboratory ordering and reporting has been developed for the Nebraska Public Health Laboratory (NPHL). The new system was created to replace the Public Health Laboratory Information Program (PHLIP) in use at the NPHL since 1999. At the time PHLIP was developed it was the first web-based laboratory test ordering and reporting system for public health laboratories in the country. However, much has changed in the information technology field and the structure of PHLIP limited the ability to increase speed of operation, a problem that became increasingly obvious as the database grew rapidly over the past four years. Planning for a totally new system was begun to incorporate all of the lessons learned by the NPHL through discussions with clients or customers.

The name of Electronic Laboratory Information and Retrieval Technology was selected to reflect that the new system was more than an upgrade as symbolized by the acronym ELIRT. Beta testing of the ELIRT System began in early March and the roll-out will continue through the month. "We are excited by the increase in speed and the new functionality of ELIRT", said Brian Lenz, NPHL's Client Service Coordinator. "The system has a number of features that people will appreciate, but the most important is the quick response time."

The ELIRT System is composed of several components with the primary element being the improved web-based graphical user interface (GUI) for laboratory test order entry and result inquiry. The look and feel of the new system was designed to optimize its usability and overall efficiency.

PHLIP users had asked for enhanced keystroke function and extensive use of drop down menus and pick lists. Most importantly, the ELIRT system allows the user to order additional tests on the same patient without re-entering demographics and clinic information.

The system utilizes a web-based portal technology called *Guardian* that was developed by the Information Management Services Division of the State of Nebraska. This system has been customized for use with the ELIRT system and provides secure, sign-on capabilities that controls access based on previously defined responsibility and authorization. The primary benefit to the user of *Guardian* is the function of single sign-on, and the ability to access authorized components without the need for multiple passwords. These components of the system define the user's profile. Unlike the PHLIP application, ELIRT fully utilizes the user management capabilities of *Guardian* allowing all aspects to be administered in one place.

An additional feature of ELIRT is the ability to generate a variety of customized reports for specific needs of the laboratory or clinic users. Most importantly, the system allows for the export of data without the need for specialized applications. Of special interest to the Epidemiology programs at the state, county and health district level, the ELIRT system provides for automated submission of Electronic Lab Reporting (ELR) of reportable conditions to the Nebraska National Electronic Disease Surveillance System (NEDSS).

Questions about the operation of the ELIRT system can be directed to Brian Lenz at 402-559-7897 or John Glock at 402-559-3592.