Specimen tracking improvements average 65%.

Centricity Laboratory case study – MetroHealth Medical Center.

MetroHealth Medical Center is the model of a highly efficient, high-volume laboratory. Formerly, the Cleveland, Ohio facility had a laboratory information system that required manual inputs, that frequently resulted in high levels of misidentified and mislabeled specimens. Once MetroHealth switched to Centricity® Laboratory, a significant difference was immediately observed.

The MetroHealth System at a glance:

- One of the nation's largest public healthcare providers.

- Ohio's only Level I Trauma Center for adults and children.

- Provides care to 30,000 inpatients, 764,500 outpatients and 98,400 emergency patients annually.

- Named one of Top 100 Hospitals nationwide by Thomson Healthcare.

- Implemented Centricity Laboratory in September 2007.

- Reduced specimen misidentification by 65% in the three months following go live.*

- STATS processing reduced by 20%.

- 30% reduction in processing routines.

*MetroHealth Medical Center, 2008

The MetroHealth System is one of the nation's largest public health providers, ranking in the top 1% of all hospitals nationwide for quality in patient care.

Making the right software solution decision.

The decision to purchase the Centricity Laboratory Information System from GE Healthcare was made as much for the system's functionality as GE's willingness to participate in a collaborative effort with MetroHealth Medical Center.

"Our pathologists made a list of things they did with the former system that they wanted to be able to do with the new system," explains Carol Iaffaldano, Administrator of the Pathology Department. "GE sat down and listened to what our pathologists felt would be appropriate workflow for them – and then they made adaptations that made Centricity Laboratory very attractive to our pathologists, to streamline their workflow. That's pretty unheard of; most systems are what they are, and the user has to adapt."

GE's reputation as a leader of informatics in many clinical areas, including imaging, was also important in the selection process. Furthermore, MetroHealth's previous clinical system and anatomic pathology system were on separate databases and platforms. The Centricity Laboratory system is fully integrated with all laboratory disciplines residing on a single relational database.

Difficulty tracking specimens with former manual system.

The MetroHealth Lab had been using a 20-year-old laboratory system that required many processes to be performed manually, with limited barcoding being done on the floors. This lack of automation led to a serious problem with specimen identification in the Core Laboratory areas, as well as the Anatomic Pathology (AP) division. Specimens were simply being mislabeled and misidentified. A new laboratory information system with automated workflows was needed to help decrease specimen handling and identification errors and increase efficiencies. A special challenge was to overcome ingrained workflow patterns and processes which had evolved with the former information system.

Centricity Laboratory provides automatic efficiencies.

Centricity Laboratory supports paperless workflow capabilities in the laboratory setting, and extensive utilization of barcoding in all areas of the laboratory, including the generation of barcodes at the point of collection to decrease the opportunity for specimen mislabeling.

Smooth transition to Centricity Laboratory.

MetroHealth was impressed with GE's responsiveness and communication throughout the transition from pre-live to post-live. The GE team provided additional site visits, and participated in training, problem solving and troubleshooting.

"Every time we asked for more, GE came through for us. We placed a lot of value on one-on-one conversations rather than conference calls, both during the implementation and post-live," offers Dr. Joseph Tomashefski, Jr., Chairman of Pathology. "Once we were live, we started to wean off the implementation team, and move to regular support calls."

In fact, the Go-Live in September 2007 went so well, the CEO of MetroHealth System complimented Dr. Tomashefski and his team on the smoothness of the transition.

Dramatic improvements seen almost immediately.

By placing barcodes on samples at the point of collection, MetroHealth slashed specimen misidentification by 65% in the three months following go live.

Additionally, barcode labeling has made a big difference in the high-volume processing area. Instead of manual keying, MetroHealth is now identifying specimens with laboratory-produced barcode labels and, post-live, they have experienced a 20% reduction in turn around time for processing STATS, and a 30% cut in processing routines.

Upholding a reputation of excellence.

Centricity Laboratory provides the MetroHealth Medical Center with a paperless, automated system to track specimens and monitor receipt of these specimens into the Laboratory – helping the Laboratory meet a performance initiative of reducing specimen misidentification. Additionally, processes, such as automated reflexing and auto-faxing, helps to streamline the laboratory workflow.

"Every time we asked for more, GE came through for us."

Joseph Tomashefski, Jr., M.D.
Chairman of Pathology

Centricity benefits under the microscope

Increased barcode functionality

MetroHealth now uses barcodes to label specimens directly from the floors in the hospital. Barcode capture at the microscope has greatly reduced chances of misidentification of specimens in Anatomic Pathology (AP); culture media labels have minimized mislabeling of plates in Microbiology, and aliquot labels have reduced misidentification in Core Lab.

Teaching opportunities

The AP module has enriched the residency program by allowing residents to enter diagnoses directly into the application. It provides additional teaching opportunities in the AP Department.

Enhanced AP reporting

In AP, the integration of Microsoft Word into the AP module allows MetroHealth to take advantage of special features and functionality for AP reporting. The ability to order special procedures on specific slides has also enhanced the capabilities of the department. An interface to the Leica Cassette Labeler and slide etcher has streamlined the operation in the Surgical Pathology Laboratory.

Direct printing

Additional enhancements in the AP module include the direct printing of frozen section diagnoses in the Operating Room, and the replacement of paper drafts with electronic report editing.

Automatic reflex tests

Reflex tests were previously handled manually according to written SOPs based on provider. Reflex tests are now accommodated automatically, easing the burden of relying on the technologists to remember to add tests and comments.

Standardized workflow

In Microbiology, the menu driven workflow with available dropdown lists has helped to standardize the workup of organisms across technologists in the laboratory and provide consistency.

Expansion of autoverification

MetroHealth has been able to expand the autoverification of results from core analyzers to include blood cultures in Microbiology; rules with autoverification have significantly decreased the amount of results that require technologist review, and also decreased TAT for blood cultures, specifically CBCs.

Auto-faxing

MetroHealth has also benefited from Centricity Laboratory's ability to perform auto-faxing of results upon completion. Faxes were previously sent manually, and users can now depend on automated processes to deliver the faxes.

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