University of Maryland Medical Center Saves Time and Boosts Efficiency with HI-IQ Software for IR Practice Management

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– Karen Finnegan, Chief IR Technologist, UMMC

UNIVERSITY OF MARYLAND MEDICAL CENTER

Located in Baltimore, Maryland, UMMC is affiliated with the University of Maryland School of Medicine.

Licensed Beds: 705
IR Procedure Volume: 30/day
IR Procedure Rooms: 6
Number of years using HI-IQ: 15

IR Procedures:
Diagnostic arteriography and venography; recanalization; sclerotherapy/ablation; biliary interventions; GI tract; esophogeal and colonic stent placement; SIRT; tumor embolization; vascular access and many others.

Clinical Services:
Trauma care, acute surgical care, cardiovascular diagnosis and treatment, women's and children's health, organ transplants, cancer care and many others.

The University of Maryland Medical Center's (UMMC) vascular and interventional radiology (IR) division has improved quality assurance (QA) and inventory management and increased department efficiency with HI-IQ from ConexSys, practice management software for IR departments.

A division of UMMC's radiology department, the IR group has used HI-IQ for more than 15 years for quality assurance and inventory tasks. Staff document cases by collecting demographic and clinical data during the patient encounter. They use HI-IQ's inventory management module as part of a hybrid resource management solution. And HI-IQ's built-in scheduler helps schedule procedures and track patients, rooms, and staff.

HI-IQ's advanced features for capturing, archiving, transferring and reporting on patient and inventory data enhance workflow and productivity. By using HI-IQ to automate its QA and inventory processes, UMMC saves hours of staff time and increases efficiency by eliminating paper-based and manual processes.

QA Reports Streamline Data Capture and Eliminates Errors

"HI-IQ is designed specifically to meet the needs of IR departments by people who know IR, and it works better for us than other solutions," says Karen Finnegan, chief IR technologist. "There was a hospital-wide solution that we could have used for QA reporting but it wasn't geared towards our specialty. We wanted to use IR terminology and HI-IQ is the only product that uses standard service definitions from the Society of Interventional Radiology (SIR)."

HI-IQ provides the ability to create both simple and complicated search queries and pre-formatted or customized reports for QA compliance and process improvement purposes. Because procedure complications are logged in the HI-IQ patient record, the department risk manager can prepare a monthly complications report. "This allows us to understand what complications are common, and we can work on ways to prevent them from happening," explains Finnegan. "Besides internal use, the report could also be used externally—for example, for Joint Commission reviews."

The alternative to automating QA reports, says Finnegan, is a manual process that involves digging through logbooks and piles of paper records. "Using HI-IQ, we can create a report in a couple of mouse clicks," Finnegan continues. "If we had to do it manually using written logbooks, the process would take hours."

An interface between HI-IQ and the hospital's RIS imports patient orders and demographic data, populates the HI-IQ database with this information, and initiates the QA documentation process. This streamlines data capture, eliminates redundant data entry, and removes the potential for human error. And because UMMC has archived years of patient and procedure data in the HI-IQ database, over time it has built a powerful aggregate and patient-level reporting tool.

QA reports can be analyzed and used to track success rates and negative outcomes. UMMC has plans to use HI-IQ to document outcomes and complications related to central venous line (CVL) and peripherally inserted central catheter (PICC) line procedures. This will allow them to track catheter-related bloodstream infections (CRBSI), a common hospital-acquired infection caused by CVL, PICC, and other catheter-based procedures. The Centers for Medicare and Medicaid Services recently announced that they will not reimburse hospitals for costs related to CRBSI. "If CRBSI became an issue, we would know right away and could immediately take steps to address it, such as implement a quality improvement process," Finnegan says. "For example, we could measure incidence of complication and compare it over multiple timeframes using HI-IQ's Complication Analysis reports."

Automated QA Reports Enable Better and Faster Report Generation

HI-IQ's QA reports can be used to provide patients and payers with information about the success rates for angioplasty, stent placement, or any other procedure. "With the growth of pay-for-performance initiatives and disincentives for negative outcomes, we feel that we're ahead of the game because we already have data available that will allow us to respond," Finnegan continues. "When you're already collecting the data and running the reports, it's easy to provide success rates."

Because so much data is gathered, the department is able to to create multiple reports from the many data points that are collected and archived in HI-IQ. "There are so many ways we can slice and dice the data," says Finnegan. "We can look at overall productivity, physician productivity, how many days we started on time, how much each procedure cost, which patients are allergic to contrast, whether we've used up all the veins in a patient's arm. The data is all in there."

Both business management and quality improvement needs can be met by using HI-IQ's reports, "We can tell when the referral volumes from specific referring physicians have dipped, so we can do a business analysis to figure out why," Finnegan says. "Another hot topic is radiation levels. Since we can log radiation exposure into HI-IQ, we're developing a way to interpret and present this data."

Automatic Par Level Notification Facilitates Just-in-Time Inventory Ordering

Before using HI-IQ to manage par levels, an IR department supply coordinator reviewed all inventory on-hand values in HI-IQ for reorder suggestions, manually entered supply requisitions using the hospital-wide supply chain management solution, and prepared inventory reports. This was labor-intensive and error-prone. Like many IR departments, UMMC faced a constant challenge of keeping a wide array of supplies on the shelves in sufficient quantities to meet patient demands.

Now its supply team relies on HI-IQ to provide reorder recommendations by managing par levels, or order points. Automated product ordering using pre-established par levels saves hours spent manually checking the database. Plus, it eliminates potential human error that could result in needed product not being ordered.

Establishing and managing par levels in HI-IQ enabled UMMC to meet its primary challenge: reducing on-hand inventory. "Previously, we might have 10 widgets on the shelf because we'd rather be safe than sorry," Finnegan explains. "But if we really only need to have 5 on-hand and if each widget costs $2,000 each, we're losing money, that's $10,000 tied up in inventory we don't need."

Conclusion

HI-IQ helps UMMC meet the increasing demand to comply with QA initiatives by making it easy to record, retrieve, and analyze patient and inventory data. By using HI-IQ's IR practice management tool, UMMC's IR department automated its QA and inventory processes and achieved multiple workflow efficiencies. By managing both inventory and Quality Assurance data in one system, HI-IQ also allows UMMC to consolidate workflows and analyze cost and outcomes data at the same time to achieve higher quality, lower cost care. The efficiencies provided by HI-IQ help UMMC save time and money by eliminating paper-based and manual processes. "HI-IQ allows us to streamline. we're eliminating logbooks and getting rid of a lot of paper," summarizes Finnegan. "And the best part is that we're able to use a tool that's focuses on the needs of IR staff, practice and patients."

About HI-IQ

HI-IQ is a software platform designed to be the centerpiece tool for managing interventional radiology workflow. It enables IR departments to streamline patient scheduling and tracking, and it empowers the department to proactively manage both the QA process and inventory. Versatile and adaptable, HI-IQ accommodates the full spectrum of clinical practices. Hospitals currently running HI-IQ range from large multi-campus academic institutions to small community hospitals. Endorsed by the Society of Interventional Radiology (SIR[1]) HI-IQ has been modeled after the workflow of busy Interventional Radiology departments.

[1]SIR is not responsible for the performance of any products or services offered by ConexSys, including HI-IQ, or any guarantees, representations or warranties offered by ConexSys.

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