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Case Study: Bigger and Better

IR workflow and scheduling running smoothly

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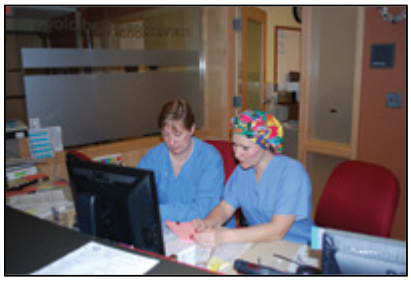
02.01.10

Jennifer Levesque, RT(R) (left), and Annie C. Severance, RT(R), a staff interventional radiologic technologist, examine the daily schedule on the department's HI-IQ system. (Mount Auburn Hospital)



At Mount Auburn Hospital, the Hosted HI-IQ solution can be accessed from any Internet-enabled computer. (Mount Auburn Hospital)

Over the years, Mount Auburn Hospital in Cambridge, Mass., had experienced tremendous growth in the number of interventional radiology (IR) procedures it delivered, and larger quarters became a necessity. While planning the move, department management saw an opportunity to re-engineer workflow and improve communications in the newly designed IR department.

The biggest issue was the whiteboard the department used to manage the daily schedule. The board simply could not handle future demands, as it was too small to capture the details of the growing number of procedures, and schedules could accidentally be erased or become illegible. Staff members were frustrated because whiteboard space was limited, and they had differing opinions on which patient details to capture and when to erase them.

Compounding the issue was the planned size of the new department. A larger area made it imperative to eliminate running back and forth to the whiteboard or yelling down the hall to check a patient's status.

Mount Auburn solved these problems with HI-IQ, an IR-specific solution from ConexSys, Lincoln, R.I., that captures, stores, transfers, and reports essential patient data. Mount Auburn already used HI-IQ's Quality Assurance module, a software application that helps interventional radiologists improve the quality of patient care, comply with healthcare regulations, save time and money, and increase revenue. HI-IQ solved Mount Auburn's workflow issues and positioned the facility for future growth.

Before its move, Mount Auburn's IR department was located in a compact area with a single procedure room. For its daily planning, the department used RoomView, the scheduling component of HI-IQ. However, the HI-IQ software was only loaded on three computers that were networked, so if the computers were being used for other functions, the staff lost access to the schedule. To ensure that all staff could easily view and make changes to the IR schedule, the schedule was printed out each morning and handwritten on a single, centrally-located whiteboard where staff managed schedule changes, room information, and status information using sticky notes and write-on/wipe-off markers.

But expanding to a larger front desk area, six individual patient holding rooms, and two procedure rooms, the new IR lab had more square footage. Clearly, the facility could not continue with the old whiteboard in the new space; it was "maxed out."

Often, the board was congested with 12 and 18 cases a day, and it could be difficult to determine individual patient status. In addition, the data on the whiteboard was never preserved, and the information was not stored in a database. When a patient's exam was completed, technologists usually wanted the information erased. But nurses, attending physicians, and residents wanted to keep the patient on the whiteboard so they could follow up later.

Adapting to Change

Mount Auburn solved the whiteboard problems with a new component of its existing HI-IQ software: the HI-IQ TouchSchedule. The system includes a 40-inch LCD flat-panel display with an interactive touch-screen overlay and HI-IQ's RoomView scheduling software that is configured for touch-screen technology.

By replacing the whiteboard with the TouchSchedule screen, Mount Auburn implemented a central scheduling screen that users can log into from any of the department's computers to electronically change patient status or add notes. At the same time, the hospital converted to a Hosted HI-IQ solution that allows the software to be used on any computer with Internet access. Now, the staff can view and manage a day's appointments on the LCD display and from any Internet-enabled computer. The schedule can be securely accessed, viewed, and changed by any staff member from anywhere, and clinicians can even log in from home.

With one or two screen touches, clinicians can drill down into patient and room detail level. The staff can make notes on the central screen, and status changes are noted through color codes. The information and notes are preserved electronically and can be accessed for follow-ups or rounding.
Besides solving Mount Auburn's whiteboard problems, HI-IQ TouchSchedule also provided other workflow

benefits. For instance, the staff is more organized and can maximize patient care more efficiently. Technologists have a better sense of when a case is going to be completed, and can check the HI-IQ system to see if outpatients are waiting, or if they need to call for an in-house patient.

The system also helps manage patient volume. For instance, we can squeeze uncomplicated procedures such as peripherally inserted central catheter line placements into the schedule whenever there's a small opening. Therefore, rooms don't sit empty.

The HI-IQ TouchSchedule system helps the department be more efficient because everyone is working with the same information at the same time. Previously, the staff asked repetitive questions, such as the status of patient transport from a different floor or room schedules. And clinicians lost time when items weren't logged properly.

Another benefit was the reduced sound level in the department. To avoid walking to the front of the lab to look at the whiteboard, staff members constantly yelled down the hall to check patient and room status.

Mount Auburn also converted from locally-installed HI-IQ workstations to the Hosted HI-IQ product. The application is hosted from ConexSys's Citrix server farm. Mount Auburn pays a monthly fee, which includes technical support, system maintenance, ongoing system upgrades, and secure offsite data backup.

If the system needs to go offline for maintenance or updates, ConexSys schedules the downtime during non-clinical hours.

Before using Hosted HI-IQ, Mount Auburn couldn't take advantage of some of HI-IQ's features. Because the application was only installed on three systems, computers weren't available to input last-minute information, such as inpatient appointments.

The hosted solution can be accessed from any Internet-enabled computer, and it does not need a special operating system, servers or workstations.

Making the Switch

If your IR department is considering replacing the old-school whiteboard with up-to-date technology, you should look at a device's accessibility. Think about where you want to have access to the information and figure out if a product meets those needs. Physicians, nurses, and technologists should discuss different user needs.

You should also encourage department administrators to address staff concerns about implementing new technologies and changing workflows. On the first day of implementation at Mount Auburn, the staff struggled to adjust to the new method of communication. But we did a mock run one week in advance of the move, so people had a chance to see the applications, which allayed their apprehension.

And the information technology support from ConexSys was important to make the implementation work. With Hosted HI-IQ and HI-IQ TouchSchedule, Mount Auburn Hospital's IR department took advantage of the improved productivity, workflow, and communication that resulted from its move to a larger lab. As a result, the department has maximized patient care, minimized wait times, managed increasing patient and procedure

volume, and created a more professional laboratory environment.

In the end, it was a successful example of the old adage “out with the old and in with the new.”

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