

The University of Texas M. D. Anderson Cancer Center speeds clinical research trials



With mounting pressure to increase efficiency, enhance care and control costs, healthcare institutions are looking for new and innovative ways to leverage existing resources. It is no longer enough to just automate functions within a department; medical centers must find tools and tactics to drive better processes and more positive outcomes throughout the enterprise. If your organization is like most, data that already exists within your information systems has tremendous potential to solve problems beyond its current application area.

At The University of Texas M. D. Anderson Cancer Center, they looked for ways to use information from Picis CareSuite perioperative management system outside of the context of the operating room. They discovered that integrating their database management capabilities with e-mail and text-paging technologies provided a fast and cost-effective way of sending important information to other parties within the hospital. As a result, they have helped solve difficult challenges within the organization — such as clinical trial recruiting, blood supply management and daily staff assignment notification — at very little cost to the institution.

Quick Profile

The University of Texas M. D. Anderson Cancer Center

Institution profile:

Academic medical center with 50-80 OR cases per day

Key business/clinical drivers:

Find innovative ways to leverage existing resources with mounting pressure to increase efficiency, enhance care and control costs

Picis solutions:

CareSuite® modules: Anesthesia Manager, PACU Manager, Preop Manager, OR Manager and Critical Care Manager

Interoperability:

Siemens (ADT), Cerner (lab) and various medical devices

Results:

- Enhanced clinical study recruitment
- Improved blood supply management
- Improved patient and staff satisfaction
- Optimized surgery time and resources



▶ Revving up research recruiting

Clinical research is vital in helping find a cure for cancer. Identifying appropriate research candidates for clinical trials is an important part of this process and needs to be fast and accurate. Timing is everything. Experience has proven that the best time to approach patients about participating in a study is during their preoperative clinic appointments. This proved difficult to do using manual methods, and as a result, recruitment suffered.

The hospital's solution was to create a process in the CareSuite OR management system to automatically scan the preoperative evaluations as the data was being entered by providers in the exam room and, if one met the designated criteria, immediately page the research nurse associated with the study. The nurse would then further screen the patient by using the electronic medical record system and, if the patient proved to be a candidate, go to the preoperative center and personally recruit the patient for the study.

"The outcome has been impressive. Four months after the paging began we closed a clinical study that been open for almost two years because researchers were unable to find qualified candidates," stated, John Frenzel, M.D., M.S., director of the perioperative information technology group at M. D. Anderson Cancer Center. "Since the new method of screening patients was fast and easy the technology is now being used on other surgery and anesthesia studies. We expect it to dramatically improve vital clinical study recruitment."

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Keeping cases on track

The need for blood and blood products is high among surgical cancer patients. Because of the risk of metastatic spread, intraoperative blood salvage devices such as cell saver cannot be used. Having the required blood supplies on hand is necessary to avoid last minute cancellations of OR cases. This means patients and families are spared unnecessary anxiety, staff satisfaction is increased and the institution can avoid underutilized surgery time and resources.

They developed a pager-based application to help the center's blood bank better manage cases that require a high volume of blood. Picis'OR management system's database searches for pending procedures that typically require intraoperative transfusion as a result of surgical blood loss. When a case is scheduled that meets this criteria, the blood bank is automatically paged and given the details of the case, including the medical record number, the surgeon surgical date and the type of procedure. The staff can then proactively take steps to ensure that the blood demand can be met. "This is particularly important for the one-third of our patients who come to M. D. Anderson from outside of Texas,"

stated Frenzel. "Early notification means that we can work with families and blood banks in other regions to organize activities that will enable us to meet the patient's requirement."

Increasing efficiency and patient safety

M. D. Anderson has also applied pager technology to help increase physician satisfaction, improve operational efficiency and enhance patient safety. Staff assignments for next-day cases are now automatically sent via text pagers to anesthesiologists and Certified Registered Nurse Anesthetists every evening from their OR scheduling system. This application has been well-received by their clinical users because it eliminates the need to call in or check online for schedules and assignments.

Since pagers are ubiquitous, the incremental cost of developing new applications is virtually nonexistent. In addition, the use of Simple Mail Transfer Protocol (SMTP) makes communications programming fast and easy. They continue to look for new ways to take advantage of existing data to open their information silos to benefit other team members throughout the institution. "For example, we are also developing pager applications to notify key personnel of anesthesia cases that require special attention or equipment. This helps ensure that the room and the personnel are ready for the case, thus increasing productivity and patient safety," added Frenzel.

Applying lessons learned

While the integration of pager technology presents a tremendous opportunity to leverage existing resources and drive value to different constituents in an organization, there are several things that should be considered when deciding on potential applications.

- Clinicians are busy people, and paging is an interruptive technology. The interruption needs to be worth the information delivered. Don't page because you can; page because it's needed.
- Keep the message short so that the recipient doesn't have to scroll. Leverage other IT resources, when needed, to complete interactions.
- Understanding clinical workflow is critical to making your paging application a success. You need to perform a workflow analysis and understand how to support the process changes required to make the application work efficiently.

When you identify the right application, the benefits can be significant. Since you are using existing resources such as pagers and your existing e-mail gateway, costs should not be a constraint. Your only limitation is your imagination. ■

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