

# Stitching Up Surgical Costs

OR management system gives Texas pediatric hospital improved financials, automated reporting, decentralized scheduling and streamlined billing.

As many patients know firsthand, surgery is a critical and often lifesaving part of the healthcare delivery system. It is also the financial lifeblood of a hospital—a revenue producer that can't afford to be undermanaged or inefficient. But often, within the confines of operating room suites, underutilization of information technology equates with waste.

Texas Children's Hospital in Houston is a 697-licensed-bed, internationally recognized pediatric hospital in the Texas Medical Center and the largest children's hospital in the U.S. As part of the specialized care that the organization provides, its surgical staff operate 24 hours a day in three different sites, treating patients ranging from newborns to adults. The challenge of managing costs and revenue for this demanding area is formidable, but it's a challenge met by Judy Swanson, R.N., director of perioperative services, who has managed operating rooms (ORs) like Texas Children's for more than 17 years.

Soon after joining Texas Children's Hospital in February 2001, Swanson discovered that an existing perioperative information system in the department needed upgrading. This basic system required a lot of manual data entry and contributed to inefficient workflow and inaccurate data. Because Swanson's team could not generate statistical reports from the system, they had to manually enter information into Excel spreadsheets, which was costly and resource-intensive.

updated and ensure all supplies used in the operating room were recorded.

These shortfalls contributed to an inefficient charging process that was continually at risk for errors and often riddled with them. Nurses documented surgical cases and calculated OR charges manually, in addition to caring for patients. If an implant was omitted from the documentation, this costly supply would be missed on charges, amounting to significant lost revenue for the department.

About 40 percent of patient records sent to billing contained missing or wrong information that needed to be reconciled. Errors might be as significant as the wrong patient name, medical record number or account number, or they might be a simple misspelling. Regardless of the reason, all errors were routinely sent back to the OR department for correction.

Inaccuracies wasted staff time, sent nurses scurrying around trying to correct information and caused reimbursement problems. The department might spend up to 11 days to process a bill for surgical charges, and anything beyond the five-day limit of some managed care companies could lead to a late charge. Perioperative services averaged in excess of \$100,000 a month in late charges.

Swanson knew that the department needed a comprehensive business system to address multiple user needs, not just a system to manage preference cards or billing. Department users wanted accurate and complete documentation and a complete record of patient care. She decided to replace their existing surgical software with a comprehensive OR management system that would be good for the hospital's business as well as good for clinicians and clinical documentation.

The hospital began looking for software that would automate all phases of surgical care, from scheduling and supply management to preference cards, nursing documentation and billing. The system also needed to provide easy-to-use data management capabilities and a complete electronic record of the surgical event.

## Workflow Meets Automation

The hospital team evaluated all appropriate software systems on the market, and in 2001 they selected CareSuite OR Manager, a perioperative solution from Wakefield, Mass.-based Picis, a company that specializes in automating



### Source

Judy Swanson, R.N.  
Director, Perioperative Services  
Texas Children's Hospital  
Houston

### Product/Company

CareSuite OR Manager  
Picis  
Wakefield, Mass.  
www.picis.com



### Lost Time and Revenue

Scheduling was computerized, but intraoperative nursing documentation and inventory control were handled on paper—often with illegible handwriting. Surgeon preference cards were stored in Microsoft Word, so there was no automated method in place to keep these

high-acuity areas of healthcare. They chose this system because they felt it offered the clinical and administrative functions that the hospital needed, electronic record-keeping from preoperative care through surgery to recovery, and complete OR management. The system also interfaced with the hospital's IDX admissions system and offered many different ways to capture and report statistical data without the need for manual data entry.

Swanson's staff set out to fully implement the system, so the organization could use this technology to its fullest. The implementation team examined in detail the functionality of the system and then streamlined organizational processes to maximize the use of its capabilities.

Their goal was multifold: to use OR Manager to schedule cases, pull supplies, identify equipment needs, document cases, send timely statistics to the post-anesthesia

care unit, transmit OR charges electronically, drop bills and produce reports. They thoroughly researched the OR's impact on the billing and materials management departments and then redesigned workflows within those departments to opti-

mize efficiency and minimize delays and late fees. They also standardized surgeon preference cards and implemented online nursing documentation in the system to provide a complete electronic patient record of surgery.

Swanson's team completely revamped their charge master for supplies and then took steps to improve the accuracy of OR charges. First, they developed accurate and well-tested billing rules in OR Manager to automatically calculate charges based upon time, procedures, supplies and other factors. Then they adopted routine accounting principles in the department and focused on getting charges right before transmitting to billing. This step required retraining of some staff who remained focused on reconciliation of bills as a back-end process, helping them to refocus more on front-end accuracy and correctness, and work toward reducing or eliminating the need for reconciliation.

In September 2002, Texas Children's Hospital went live with the Picis system. Nurses began scheduling cases in OR Manager while tracking supplies and recording exceptions online, and then data was transmitted directly to the hospital's billing system.

### Enhanced Reporting and Scheduling

Texas Children's has been able to accommodate an increased number of surgical cases supported by increased accuracy, online documentation and data analysis. Powerful reporting provides Swanson with the opportunity to continually see what is working and to fix what is not. Reports from OR Manager make it easy to evaluate over-

all costs and the use of supplies as well as staff performance and other activities in the department. These are all reports that were all unavailable with their old surgical information system.

"Some of our reports relate to charging, while other reports, such as room utilization, help supply the types of business information we need. We look at turnover times and room utilization to see if we could use a room better, and we have used the system's reports to change processes," says Swanson.

Reports also track who is having clinical documentation issues, and log quality information like site identification that needs to be addressed with staff. They also use reports to review individual surgeons' supply utilization and procedure times to improve the accuracy of scheduling and supply management. Swanson notes that improvement in

these areas have led Texas Children's to better manage its other resources, including human resources.

With OR Manager, Swanson also introduced a popular new service that transitioned from a tightly controlled, centralized sched-

uling process to decentralized scheduling using a physician office link. This gave surgeons the flexibility to schedule cases faster and at their convenience, while sharing resources and conflict-checking automatically, without repeated phone calls, faxes and e-mails to a centralized scheduling office. The physicians have expressed strong support for this improvement, and as a result of remote scheduling, Texas Children's Hospital has saved two full-time equivalent positions while increasing its volume of surgeries.

### Efficiency Equals Savings

"Forty percent of OR charges used to contain errors, but now that number is less than 2 percent," says Swanson. Texas Children's now captures accurate clinical, financial and statistical data during each phase of surgical care and can process the correct patient bill within 12 to 24 hours of surgical care—down from a five-day average prior to implementing the Picis system. Within four months of go-live, the system succeeded in providing faster billing, which helped the hospital to slash the \$100,000-plus monthly late fees to less than \$20,000 per month.

By thinking at the enterprise level, Texas Children's has boosted revenue, improved data and charge capture, streamlined reporting, enhanced resource planning—and, at the same time, gained high marks in satisfaction from both physicians and staff. "It was worth the hard work, and hospital administrators see the effects, so they are happy," says Swanson. That's no small accomplishment.

HMT

*Swanson knew that the department needed a comprehensive business system to address multiple user needs, not just a system to manage preference cards or billing.*