

Rebounding from near rock bottom

Extreme makeover preps Indiana's Reid Hospital for success

By Rick Dana Barlow

When Michael Mancebo joined Reid Hospital & Health Care Services as the new manager of material processing in March 2004, he actually welcomed the challenge that lay ahead.

What he didn't fully realize was the extent of the existing problems. He was walking into a pressure cooker, on the brink of hitting rock bottom, in terms of customer satisfaction and

approximately 280,000 residents of five counties in East Central Indiana and two counties in West Central Ohio. Consequently, the current atmosphere wouldn't be acceptable in the new

facility. Early on he faced stiff resistance from the staff he was charged with helping even as he battled with O.R.'s misperceptions and preconceived notions to right the ship.

Through the hardship and pain during the last 18 months, however, Mancebo and what evolved into his cohesive team of 20 sterile processing professionals actually accomplished their mission. They not only redesigned their department space but they revamped their processes with the help of ingenuity and technology, and rebuilt the fractured relationship with the O.R. as well as the fragile relationships with each other. And they did it the hard way. By themselves and using only internal assistance,

and not outside consulting (even though their group purchasing organization – VHA/Novation – and distributor – Owens & Minor Inc. – offered. For these reasons, Reid Hospital & Health Care Services' material processing department earned the coveted 2005 Central Service/Sterile Processing and Distribution Department of the Year Award by *Healthcare Purchasing News*.

A fresh restart

Repairing the damage with the O.R. was as daunting as conducting an extreme makeover of material processing's operations. Mancebo and his team had to balance damage control and prevention with operational efficiency and



Top Row (left to right): Michael Mancebo, Kay Cartwright (CNO), Barry MacDowell (CEO), Scott Rauch (vice president, material services), Jodee Hersey, April Clark, Doug Wilson, Ginger Walker (surgery director), Armando Ayala, Angelique Sieler. Middle Row (left to right): Shannon Turner, Sue Charlton, Brenda Dunn, Cheryl Bee, Tracie Morris, Pauline Shepard, Paulette Marshall. Bottom Row (left to right): Marc Williams, Amanda Gates, Marilyn Vickers, Marla Roberts, Lisa Mullen, Julie Nichols, Dianna Rose, Angela Oler, Mary Bockover

The 234-bed hospital, located in Richmond, IN, about 75 miles due east of Indianapolis and abutting the state line with western central Ohio, was outgrowing its outdated facility so it was building a new \$260-million hospital a mile away, set to open in late 2007. That new construction project gave him the unique opportunity to design a sterile processing department from scratch. Plus, a group of doctors were launching an ambulatory surgery center as a joint venture with Reid at the new campus, scheduled for opening next year. Because those doctors would need reprocessing services Mancebo would be able to bid on the "outsourcing" project.

service, efficiency and organization and most of all, communication. The professional relationship with the operating room, typically sterile processing's top customer, was tempestuous at best. In fact, surgery clearly lacked faith in the department, which had little confidence in itself to do anything about it but seethe and simmer. Even material processing's three shifts competed against each other when they should have been cooperating.

With a directive to turn material processing around in 12 months, Mancebo clearly had his work cut out for him. After all, Reid prided itself on implementing best practices and technological advances that resulted in high-quality patient care and financial success for



Marilyn Vickers (foreground) inspects instruments while Tracie Morris, Angelique Sidler and Cheryl Bee (left to right) assemble trays



Cheryl Bee reaches for backup instruments, while Marilyn Vickers (left) looks on, Angela Oler (middle) wraps a tray and Tracie Morris (back) places a build label on a tray

high-quality customer service. They had to fix what was wrong, ensure it didn't happen again and proceed with further improvements.

"We knew things were going to change and that they had to change," Mancebo said. "We were growing as an organization but also dealing with severe customer satisfaction problems. But the staff deserves this award because they realized the need to change and went through the pain in order to accomplish it."

Mancebo and his team merely took a step back and looked at what they were doing, how they were doing it and how they could improve it as if they were on the outside. His assessment was frank: "What we found was that what we were doing left room for significant improvement," he said. "So we went into [our reorganization process] with an open mind."

Mancebo and his crew identified a six-point battle plan to reinvigorate the department. It included reorganizing decontamination, prep and pack, sterilization and storage and dispatch for better process flow; identifying obvious cost savings and inventory flaws; implementing a computer tracking system; improving processes and communication with the O.R.; creating an instrument sorter position; and constantly evaluating progress.

Because material processing was running low on space in its fully stocked two-room sterile storage area, it started there. Compounding the problem: Each room contained 26 InterMetro wire carts, and the layout had disposables, peel packs and trays mixed together. "The system as it stood had no real defining characteristic other than placing items where space allowed," he said.

The group decided to mimic the storage patterns of any major manufacturing and retail businesses. They split the two rooms into two sections. The first room contained all of the disposable supplies and linen with like items placed together; the second room housed all of the



Tracie Morris picks disposable supplies for a case

bundles, peel packs and trays, the latter of which were organized by service.

Rather than call in a consultant Mancebo admirably turned to expertise within their own ranks: Ryan Davis, products and logistics manager within material services. Davis recently had reorganized the hospital's much-larger storeroom. Why go outside when they already had access to someone with a reliable track record? Mancebo noted.

Davis worked with information services to develop a report that defined un-ordered items for a rolling two-year period, according to Mancebo. "Historically at Reid, cases were picked for worst case scenarios, sometimes requesting items that were never used," he said. "Some items were brought in to inventory for a doctor that no longer worked in the facility. There was definite room for improvement." After looking at lead time, use, unit of measure, unit of issue and whether an item was stock or non-stock, Davis, Mancebo and the material

processing crew were able to "right size" the inventory, effectively reducing it by 22 percent and saving more than \$32,000.

Convincing the O.R. was another challenge. They showed the O.R. the extensive list of unused items. Many hadn't been used in three years but were kept because of some doctor. "We had to con-

vince surgery that we were doing this to save money and improve operations," Mancebo said, "and not to take anything away from the department." When the O.R. staff toured the space they understood. In the equipment room, for example, they found items that were last sterilized in 1996. As a result, they were able to condense the room to a single cart but that has expanded again due to

new items. They also created a new shelf identifier for disposable inventory and that was input into the facility's case cart management system. "Together with the new layout [this] made the entire case cart process a more efficient process," Mancebo said. "Now staff can follow a case sheet down as you are walking through sterile storage and pick as you go. The new layout took some time getting used to, but everybody has mastered it. The staff input in the design made the learning process much easier than expected." In addition, the material handling staff agreed to conduct inventory counts three times a week, while material processing retained responsibility for restocking.

The tray room "morphed" into one of the easiest storage rooms to navigate, according to Mancebo. "By grouping service sets together, we made it much easier for our Material Processing staff to retrieve sets in a timely

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Fast Facts on Reid Hospital's Material Processing Group

Material Processing FTEs	20		
Annual Performance and Production	2005	2004	
Number of surgical cases	6,025	6,343	
Number of sets/trays assembled/processed	15,420	N/A	
Nonacute care facilities serviced daily	3	2	
Daily PAR areas serviced	15	15	
Daily carts stocked	4	3	
Inventory line items	623	798	
Inventory value	\$98,780	\$130,821	

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manner," he said. "As long as you know what service a particular set is for, you can go to that service section and locate the set. Each shelf location was labeled with the tray name that was to be placed in that location. This would promote trays being returned to their corresponding locations. As any processing professional can tell you, half of the issues between surgery and processing are due to trays being stored and labeled incorrectly, [so they're] not being found as quickly as possible." The department also placed end cap cards that listed each tray and its location in a particular section. That eliminated the need to move high-density storage shelves to find something.

In the prep and pack area, they had to upgrade the card system they had used for years, which had become disorganized and outdated. As a result, the department didn't produce an active count sheet for surgery to know and verify what is supposed to be in the tray.

At first, Mancebo and his team thought about entering the contents of the card system into a Microsoft Word or Excel program. "But we immediately realized that we would be entering outdated information," he noted. So they decided to roll up their sleeves and perform a complete instrument inventory count and invest in a computer tracking system to maintain accurate data. "We also realized that we were not meeting surgery expectations on instrument sets being put up complete and accurate, and being able to locate sets when they were being called for," he added.

Material processing evaluated about four different systems before deciding on TGX Medical's Alex Gold system last December. "I needed the easiest system for our staff to use," he said. "We were changing everything so an easy system made sense. If you can use [Microsoft's] Internet Explorer you can use this, too."

TGX's team worked with Mancebo's group to do a complete instrument inventory count, comparing actual data with the outdated card

system. Each one of the hospital's 875 sets was opened, photographed, labeled and categorized. Two workdays, two weekends and considerable amounts of overtime later, they completed the long and tedious process, which included placing a bar code on each set.

"Due to the ease of use of the system we selected, we were able to go live the same day as the in-service," he said, which was in February. Now they were able to track a set through its entire lifecycle. A technologist simply scans a bar code, which brings up the count sheet. Armed with accurate descriptions and catalog numbers of instruments he can assemble the set, print out a count sheet for the scrub tech and a build label, which contains such information as tray name, sterilization method, tray assembler, time assembled and if anything is missing. Previously, surgery wouldn't know about this until they opened the set for a case.

Material processing also uses the computer system to track sterilization loads and prompt techs for managing the use of biological indicators.

Mancebo admitted the computer system would have come in handy a few months before implementation. That's when they received a telephone call from surgery about one of two particular endoscopes that was sterilized in the ethylene oxide unit (material processing has one EO and one gas plasma and three steam units) without the EO cap. Surgery wanted to know if it needed costly repair based on the number of times it had been sterilized during the previous four months. "Four days and 16 paper cuts later, we had the answer," he said. "Something had to be done with our record keeping. As with all fixes it usually takes an issue to point out the flaw in your system. So after searching through six months of records, located in four locations in the facility, and in 12 different boxes, we came to the conclusion that we had to have a better system of keeping our records."

Despite the computer system, Mancebo regrettably said they still maintain the cards as a crutch even though he'd like to get rid of them.

Still, Mancebo indicated that material processing plans to go paperless in the future. TGX Medical currently is working with STERIS to create an interface linking instrument management to sterilization. Eventually, they expect to connect with material services' Lawson system. They're also looking into automated supply cabinet technology for inventory, along with the cath lab.

While improving tray assembly, sterilization records and sterile storage may have helped material processing



Marla Roberts restocks sterile supplies

work smarter the department also had to improve its customer service, reputation and perception by other departments – primarily the O.R.

Rolling the stone uphill

From the start, trying to repair surgery's negative impressions of material processing seemed like a Sisyphean task.

"As with all relationships between surgery and processing, ours was strained," Mancebo noted. "Surgery wanted complete case carts and complete trays. Material processing wanted instruments returned in the same pans we send them up in. The perception was that material processing picked every case wrong and assembled every set wrong. Surgery wanted somebody to make our staff more accountable and improve what we were doing. But I looked at it as improving the overall process and not just something to make surgery happy. I never said no. I always asked why. My philosophy is to first understand before you're understood. It took time for them to understand that I wasn't saying no."

"We felt like the stepchild of the organization," he continued. "Nobody wanted to really fix what was wrong. Instead, they'd apply bandage jobs. But the bottom line was a lack of communication. They can't succeed without us and we can't succeed without them." Post-It Notes with comments affixed to dumb waiters full of instruments and tension-filled e-mails were insufficient. They needed face time.

A key motivator was the new joint venture ASC scheduled for opening in third quarter 2006. The surgeons simply were not comfortable relying on material processing to support them, even though Mancebo's department could handle the capacity. "Surgeons in the ASC felt that we were only as good as our last mistake," Mancebo said. "The perception was that surgery felt everything we did for them was wrong and we thought everything we did for them they hated. Surgery never defended us, even if it turned out to be their mistake. So we were fighting an uphill battle."

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Armando Ayala works with the Pasteuramatic in decontamination; Lisa Mullen reassembles a piece of durable medical equipment

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CNO Kay Cartwright instituted a material processing steering committee, comprising top managers from surgery, nursing, material services and material processing, to fix perceived issues. They met weekly with a goal of reducing errors.

The first fix was a case cart quality assurance program where material processing would place a QA sheet on the cart to be audited by surgery to track cases and number of errors. Mancebo hoped that surgery would be more accountable, too, instead of just shifting the blame to material processing. After some initial resistance and political volleyball, they were able to make some headway. Communication improved; error rates dropped to around 3 percent on average from more than 20 percent.

Another victory for material processing involved the case sheets, which historically were set up for worst case scenarios. Essentially, they carried too many sets, peel packs and disposables that were never used. And material processing had to store this "just-in-case" inventory because surgery didn't want it in their space, according to Mancebo. After much debate and documentation, they were able to remove more than 700 unused items from case sheets and removed 150 items altogether.

The committee also resolved the case of missing or misplaced instruments. "In 2004, we spent over \$40,000 in replacement instrumentation," Mancebo noted. "When a set was returned without an instrument, and the tray is needed for another case, there is no time to investigate where the instrument mysteriously disappeared to. So another was ordered. This was especially prevalent in orthopedic cases where the amount of instrumentation used, including loaners, is significantly higher than that of other services. In most cases the missing/misplaced instrumentation would show up,

but always after the replacement had been ordered. This issue needed to be rectified." So they created an instrument facilitator position to be responsible for sorting and tracking trays at the point of use. Equipped with a voice pager for surgery to call immediately after a case, this person gathers all the sets in a soiled utility room designated by surgery, scans the sets using TGX's Alex Gold system, sorts them, restrings, opens and disassembles all instruments and sprays them down with foaming enzymes. As a result, the facilitator can ascertain when an instrument disappears before leaving surgery. And thanks to this new position, only one tech was needed in decontamination so the other could be re-allocated elsewhere in the department.

Meanwhile, material processing created its own internal committee, consisting of Mancebo and representatives from each shift to discuss problems the larger committee explored and report those findings back to the



Ayala and Mullen decontaminate I.V. pumps

shifts. From these meetings the committee discovered that a majority of errors occurred during the case cart picking process. So they created a case cart picker position to assume responsibility and be held accountable for that task, which freed up two staffers to handle tray assembly on two different shifts when they were needed.

Pain led to progress

Looking back, Mancebo marveled at the progress his department has made during the last year or so, all because they recognized change was needed and were open to the challenge.

"First and foremost I expressed why we were changing," he said. "And in all honesty the staff knew why we were changing. They lived it everyday. One hundred-plus phone calls from surgery a day. Sixty percent picked supplies being returned unused to material processing. Missing/lost instrumentation. Poor quality assurance records. No staff accountability. I explained to the staff that we would do one change at a time. Until one change was mastered by all, we would not jump to the next change. And most importantly, staff input was encouraged in all changes. Not only have they accepted the changes, but they are excited for more.

"Interesting enough our group as a whole has developed into one group," he continued. "Before it was more, first shift versus second shift versus third shift. But as we have had more internal interaction, be it through monthly departmental meetings, or the material processing internal steering committee, the department has bonded."

Mancebo admitted that the key motivation probably was him. Humbly speaking, of course. "The No. 1 reason why they came together is that they were all unified against Mike," he said. "Here's a new guy changing everything.

"Our department now runs as one cohesive, well-oiled machine that has dramatically improved relations with the O.R. staff

by further ensuring that accountability and best practices have been put in place," he concluded. "We have empowered our staff and the O.R. department to not work in such a reactive mode, which is a common trait to this environment." **HPN**

Editor's Note: Michael Mancebo asked to dedicate his department's award to the late Kathi O'Shaughnessy, a sterile processing industry leader who was instrumental in his earning certification.



Scott Rauch (left) and Michael Mancebo are proud of material processing

Reid Hospital & Health Care Services Roster

Michael Mancebo	Manager	Marla Roberts	Tech I
		Angelique Sidler	Tech I
<i>First Shift</i>		Lisa Mullen	Tech I
Jodee Hersey	Tech II	Armando Ayala	Tech I
Paulette Marshall	Tech II	<i>Third Shift</i>	
Shannon Turner	Tech II	Brenda Dunn	Tech II
Tracie Morris	Tech I	Pauline Shepard	Tech II
<i>Split Shift</i>		April Clark	Tech II
Julie Nichols	Instrument Facilitator	Amanda Gates	Tech II
Doris Brown	Tech I	Marc Williams	Tech I
<i>Second Shift</i>		<i>Registry - per diem</i>	
Dianna Rose	Senior Tech II	Mary Bockover	Registry Tech II
Marilyn Vickers	Tech II	Valerie Buckler	Registry Tech I
Cheryl Bee	Tech II	Sue Charlton	Registry Tech II
Angela Oler	Tech II	Doug Wilson	Registry Tech I