BENCHMARKBRIEFINGS

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SITE
Wausau Hospital
Wausau, WI

APPLICATION
Distribution of med-surgical supplies to the hospital

EQUIPMENT
Four horizontal carousels, Pick Light Towers and FastPic® software

SUMMARY
One horizontal workstation has reduced floor space 75% while increasing accuracy to 100% and reducing the cost per pick by 88%

The carousels pre-position and the Pick Light Tower indicates the correct cell, shelf and quantity to pick for rapid batch picking and occasional "stat picks," a form of hot pick.

Order Picking Costs Reduced by 88% With Perfect Accuracy

When the Supply Processing and Dispatch (SPD) department of Wausau Hospital looked to increase floor space utilization while decreasing their cost per pick, they turned to an automated Kardex Remstar horizontal carousel system. SPD reduced their cost per pick by 88% and was able to reclaim 75% of previously occupied floor space.

The SPD was looking to provide their 301 bed and 15 surgical suite facility with the med-surgical supplies it requires every moment of the day, seven days a week more efficiently while using less distribution space. This was the challenge handed to Dale Bouvat, the Materials Manage-ment Operations Manager.

"Our patients care is our first and highest priority. Having various materials such as critical surgical supplies to every day support items on hand when doctors and nurses need them is our department's mission. We used to have shelves and carts filled with supplies and our people would have to walk and search up and down the line to fill the orders," stated Bouvat.

The SPD automated system has dramatically impacted the department's ability to service the hospital. "Under the old system which SPD staff manually picked supplies from shelves and carts, the estimated cost of processing each transaction was roughly 60 cents. Today using the automated carousel system, the cost is roughly seven cents, a savings of over 88% per transaction," Bouvat said.

The previous manual system had allowed 10,000 items to be processed per month. The new system has 21,000 items being processed per month with zero errors. Bouvat continued, "The SPD department's manual picking system would average 36 errors per month. Today the carousel system has helped us hit zero errors each month for over a year."

The Carousel System

An automated cluster (workstation) of four horizontal carousels with Pick Light Towers and FastPic inventory management software helps drive the supply distribution and has saved over 75% of the previously required floor space. The carousels hold 2,296 different types of medical supplies (SKUs) for the surgical departments and other inpatient units. This translates to a quantity of inventory on the carousels that is over

The shelves are easily adjusted to minimize wasted space and provide a 75% floor space savings.

254,000 items. Approximately 99% of the orders are processed through the carousel system.

Pallets and cases of goods required to replenish the carousels SKU quantity are stored in an offsite warehouse and delivered as needed. Incoming requests for cases or bulk quantities of items are taken directly from the warehouse delivery to the requesting department.

The carousels are set up for order picking from one end and replenishment from the other. This allows inventory to be buffered and staged by the carousel without interrupting the picking flow. During replenish-ment, an item number is entered and the carousel positions the correct carrier to the operator. The Pick Light Tower lights, direct the picker to the correct cell and shelf location. Replenishment is usually done after the days orders have been picked.

For order picking, orders are entered into the FastPic software terminal. The carousels spin via the shortest path to present the proper carrier to the operator. The Pick Light Tower indicates the correct quantity, cell and shelf level to pick from. The operator makes the pick and confirms the transaction by hitting the task complete button on the floor.

While the operator is picking from one carrier, the other carriers are pre-positioning for the next pick. Once the task complete button has been hit, the next Pick Light Tower is activated directing the operator to the next pick.

This "round robin" method of picking from the carousels is repeated until the order and wave of orders are completed. As items are picked, they are placed in that order's tote in the front of the system. Completed orders are then placed on a cart for delivery.

The system is designed to make three types of picks: batch picks, single retrieves and stat picks. The majority of picking consists of batch picking up to seven orders simult-aneously with 10 to 30 items per order. A "stat pick" occurs when there is an immediate need within the facility for an item or items. When this occurs, the current batch picking is paused and the stat pick is retrieved from the carousel system and delivered to the requesting department immediately. Once the "stat pick" is taken care of the batch picking resumes where it left off.

The automated system has also made finding items much easier for the operators. "It seems as if every item had multiple names, this made manually searching for the items very difficult. The FastPic software allows SKU number plus alias (AKA) names for each piece of inventory. This means typing in the name finds the exact item accurately and quickly," Bouvat stated.

The system operates 24/7 to meet the constant needs of the hospital. Each of the carousels has 36 carriers with seven shelf levels adjusted at different heights to maximize storage density. Up to seven cells can be positioned across any shelf to accom-modate high density in small items. The picking area is sterile and requires all operators to wear appropriate hair and gown attire.

"Meeting and exceeding our growing community's needs is what Wausau hospital strives for. The automated carousel system has helped the SPD department step up its capacity and efficiencies," said Bouvat.

The shelves can have from one to seven cells (or SKU positions) across to accommodate small pieces.

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