



CASE STUDY

Healthcare leader's viewpoint

Summary

Health Care System
Baptist Health, Louisville, KY

Size
8 Baptist-owned hospitals, 1 Baptist-managed hospital, 300 points of care, including outpatient, urgent care, physician offices, occupational medicine, physical therapy and diagnostics

Supply Budget
\$70 million-plus in distributed medical and surgical supplies

Challenges

- » Replace automated point-of use system with cost-effective solution
- » Improve par optimization
- » Enhance supply chain efficiency

Solutions

- » Implement 2-bin inventory replenishment program for all supply rooms
- » Employ enhanced LUM system – totes arrive “put-away-ready” in supply rooms

Results

2-bin

- » Confidently maintain accurate par levels in supply rooms
- » Avoid costly upgrade

Enhanced LUM

- » Totes arrive “put-away-ready”
- » Saves minimum one man hour a day

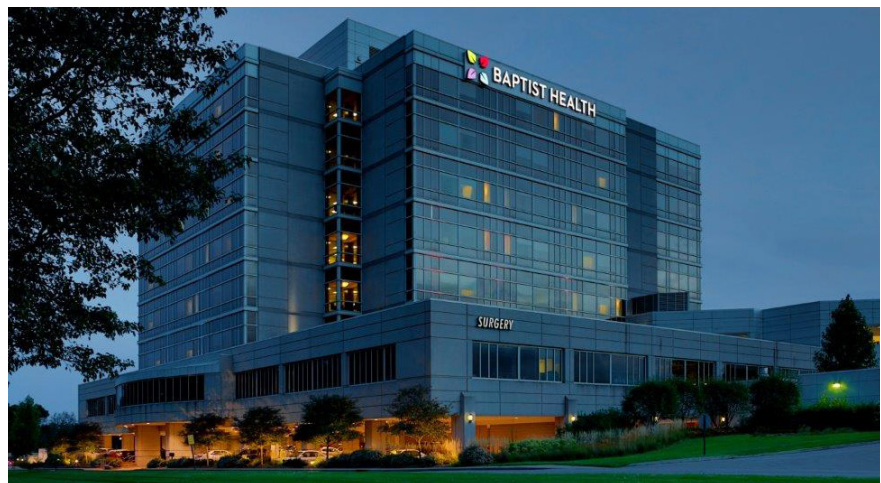
Improving efficiency through enhanced supply delivery and inventory management processes.

Cindy Gueltzow

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Baptist Health, Louisville, KY

Kim Prather

System Director,
Materials Management



Our Health System

Headquartered in Louisville, the Baptist Health family of hospitals, care centers, physician offices and health facilities is the largest not-for-profit health system in Kentucky. We own or manage nine hospitals totaling more than 2,700 licensed beds. Baptist Health has more than 300 points of care, including outpatient facilities, which offer urgent care, express care, occupational medicine, physical therapy and diagnostics.

Home care is also available in 39 Kentucky counties, six counties in Illinois and six counties in Southern Indiana. Our physician network of more than 3,000 employed and affiliated physicians continues to grow as we endeavor to improve access to healthcare and enhance the health of Kentucky as a whole.

Our Challenges

As part of an overall effort to centralize our supply chain activities, we looked at our supply inventory systems and delivery methods to reduce costs, improve par optimization and enhance efficiency.

Specifically, Baptist Health Louisville, our system's largest hospital with 519 beds, had been using automated point-of-use cabinets to store and replenish supplies in our nursing floor par location areas for more than 20 years. This system's current technological platform was approaching end of life within the next few years and required a substantial upgrade that would be costly and time consuming. Given these challenges, we decided to pursue other opportunities and platforms for par management.

At the same time, we also looked at our supply logistics for those facilities that utilize delivery in lowest unit of measure (LUM). We were using custom palletization, but this process wasn't as efficient or cost effective as hoped.

The Solutions

2-bin inventory replenishment program

As we searched for more cost-effective, efficient ways to manage supplies in par location areas, we approached our supply distribution partner, Medline, and discussed implementing a 2-bin system for nursing floor par location areas at our Baptist Health Louisville hospital. It's effective, cost efficient and simple for our staff to use. Based on lean Kanban methods, the 2-bin system allows us to confidently maintain accurate par levels of products in well-organized bins while eliminating the traditional par item counting process.

We were also attracted to the 2-bin system because it had an appealing par management option that allowed us to use our existing point-of-use

cabinets with only some minor retrofitting. By simply removing the cabinet doors, we avoided the cost of redesigning all of our par location areas.

In February 2017, we piloted the system in one location before rolling it out to our other par location areas in the facility. We solicited feedback from clinical and materials management staff, and tweaked the system for the other 65+ departments.

Seamless rotation

Here's how it works. Based on historical usage, predetermined quantities of each item are placed in two separate bins on a shelf — one bin is placed in the front and the other behind it.

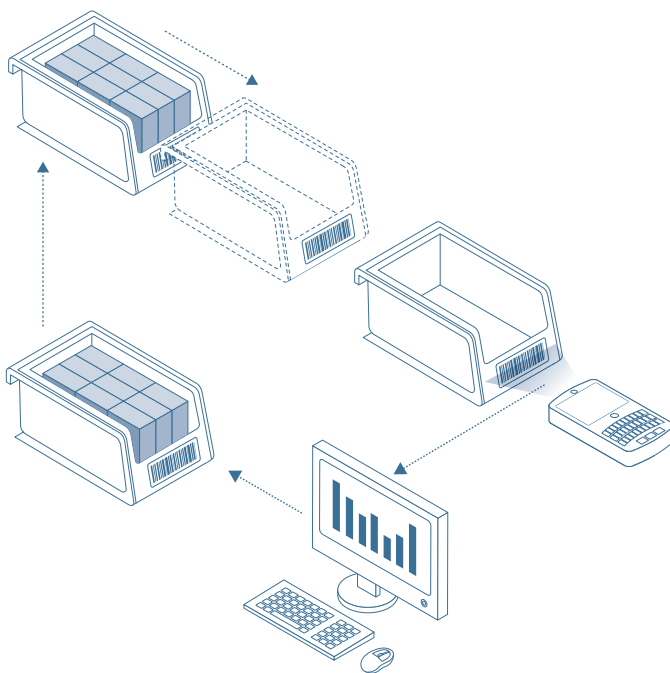
When the front bin is depleted, the nurse puts it in a designated area for the materials management staff to pick up. The back bin is then pulled forward on the shelf to be utilized by the staff. That empty bin is our trigger for replenishment. Our materials management staff restocks the bin and places it back on the shelf *behind* the

first bin — achieving automatic, stock rotation. It's a very simplistic, low-tech system, but very efficient for clinical staff and materials management.

If our par levels are set correctly, products will never expire, and we greatly minimize stockouts. This system also eliminates the tedious task of par counting.

The key to success is establishing accurate par levels before implementation. We worked closely with the Medline team to analyze and establish par levels. In our case, a four-day par was implemented — two days for the front bin and two days for the back bin.

Each product has two assigned bins and each bin has three labels. One is a bar code for our materials management team that tells our inventory replenishment system which product and how many go in the bin. This part of the process is a huge time saver compared to our previous system. The second is a clinical staff-friendly item description that is placed on the front of the bin



2-bin par inventory program — no more counting

The 2-bin system allows us to confidently maintain accurate par levels of products in well-organized bins, eliminating the traditional par item counting process. When the front bin is depleted, the nurse puts it in a designated area for the materials management staff to pick up. The back bin is then pulled forward on the shelf to be utilized by the staff. That empty bin is our trigger for replenishment.

“Clinicians are comfortable using the system (2-bin) and, most importantly, have a high level of trust that they can get the products they need to take care of their patients.”

for easy identification for our clinical customers. The third sticker is a color-coded dot to easily identify the bin by product category, so respiratory products go together, wound care products are together, and so on.

Easier, accurate system

We had frequent calibration sessions with our nurses to make sure this process was working for them and products were readily available for our patients. Ease of use of this system was a key selling point with our clinical staff.

When we scan the bin to replenish each product, our PeopleSoft ERP system decrements the inventory. The advantages from our old system are clear: nurses no longer have to key in an ID number to open the cabinet, and they no longer have to count and record how many products they removed from the bin. They can now walk into a par location and grab what they need and get to the business of why we're all here — to care for our patients.

To date, we've converted more than 50 locations at Baptist Health Louisville and still have about 15 more to go. We're also rolling it out at our other hospitals on a piloted basis.

So far, we've received positive feedback from our clinical and materials management teams. Clinicians are comfortable using the system and, most importantly, have a high level of trust that they can get the products they need to take care of their patients. For our materials management team, this system has saved so much time that we've been able to reallocate some of our team members' time to work on other tasks.

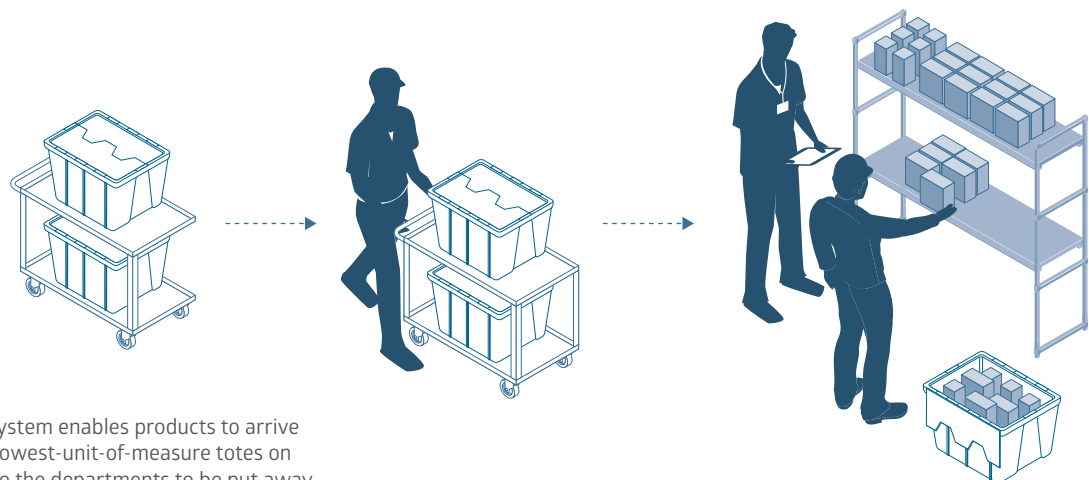
“Put-Away-Ready” – Enhanced LUM

For several years, we've been utilizing LUM logistics for specific par location departmental delivery at our Baptist Health Lexington, Louisville and Richmond hospitals.

A major challenge with this system was we had to take the extra step to transfer the totes from the pallet to a separate cart, which was then delivered to the specific departments.

Working with Medline, we no longer have to put the totes on the cart. That step is completed at Medline's nearby distribution center. When Medline's MedTrans trucks arrive at our docks, the products arrive LUM in totes, and on carts, pre-sorted based on our team's putaway path, ready for delivery to the departments to be stocked on the shelves.

Medline puts a sort code on each tote that corresponds to a specific department. Generally each cart contains bins for two or three departments that are geographically located near each other for the most efficient delivery.



Enhanced LUM

The “Put-Away-Ready” system enables products to arrive at the hospital's dock in lowest-unit-of-measure totes on carts ready for delivery to the departments to be put away on the shelves. This improved process saves us at least one man hour a day because it eliminates the need for staff to pull the totes off the pallets, re-sort them and then put them on carts to take up to the floors.

“Supplies are delivered to our LUM facilities already on carts ready to be transported to our departments. This eliminates the time-consuming step for our staff of putting the totes on the carts and frees up their time for more important tasks.”

Time saving

This improved process saves us at least one man hour a day, eliminating the need for our staff to pull the totes off the pallets, re-sort them and then put them on carts to take up to the floors.

Par optimization

We continue to achieve further savings with par optimization efforts. We no longer drive efficiency and reduce cost by ordering every item by the “each.” We now analyze our ordering patterns on a monthly basis and use a “best unit-of-measure” ordering approach for our facilities. For example, we target items that we order in a higher quantity, yet use a “less-than-case” unit of measure. By aggregating our ordering per line into a higher unit of measure, we’re mitigating — and sometimes eliminating — the associated LUM service fees.

Summary

Process improvement for supply chain logistics doesn’t always mean adopting a high-tech approach. We implemented a 2-bin par model in our largest hospital, which was a significant improvement over our previous system for achieving replenishment, par level optimization and cost efficiency. Ultimately, 2-bin required no additional technology than we were already using via our PeopleSoft ERP.

Similarly, we made a relatively simple enhancement to our LUM logistics service that made a big difference in our efficiency and time management. Working with our distribution partner, Medline, supplies are delivered to our LUM facilities already on carts ready to be transported to our departments. This eliminates the time-consuming step for our staff of putting the totes on the carts and frees up their time for more important tasks.

According to Baptist Health’s Chief Financial Officer Steve Oglesby, “The improvements we’ve made in inventory management over the past couple of years have been remarkable. Chief among them are the enhancements to customer service to our physicians and other clinicians that ensure they have the right supplies, in the right place, at the right time and at the right price. Accomplishing this requires efficient and effective daily inventory management. Other benefits include lower inventory carrying costs through reductions in expired, damaged or lost items and better matching of expenses with revenues, which has improved financial statement reporting and cost accounting data.”

About the authors

Cindy Gueltzow is the Executive Director of System Services Supply Chain at Baptist Health in Kentucky/Indiana. In this role, Cindy is responsible for developing and executing the system-wide supply chain strategy for eight hospitals and over 300 outpatient sites. Cindy has been with Baptist Health for over 18 years and has been in a leadership role over Supply Chain for six years. Cindy holds a Bachelor of Arts degree in Business Communications from the University of Louisville.

Kim Prather is the System Director of Materials Management at Baptist Health. In this role, Kim and her teams are responsible for the distribution and management of supplies from the dock to the bedside, for Baptist Health’s eight hospitals. She has worked closely with Baptist Health for 19 years, initially as the system’s medical supply distribution partner and the last two and a half years in the Supply Chain Materials Management role. Kim holds a Master’s Degree from the University of Louisville.



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