

Solution Guide

Automation Improves Hospital Care



Manual Hospital Logistics Processes

Patient care is the number one priority for any hospital. From facility maintenance and materials management to nurses and doctors, any distraction from their responsibilities results in time away from patients. Whether it be an incorrect tool for the operating room or the wrong size bandage from the supply cabinet, this downtime creates another set of problems from increased expenses to variable inventory counts.

Many hospitals are using outdated, manual processes to store and retrieve supplies. This requires hospital staff to walk to a storage closet overflowing with supplies and search the shelves for supplies needed for a particular patient or operating room (OR). With the chance for human error, manual picking processes can be a nightmare, taking time away from patient care.



Automation Improves Patient Care

Hospitals are under pressure to treat an increased number of patients, often without additional resources. To maintain excellent patient care, staff need the correct supplies at the right time to keep operations running smoothly. In an effort support their staff, hospital managers are looking to increase efficiencies throughout the facility.

Automated storage and retrieval systems (ASRS) can benefit many areas of a hospital. Operating on the goods-to-person principle, stored items are delivered directly to an operator with the touch of a button. Implementing high-density automation can consolidate inventory storage, reducing the footprint required for supplies management which allows hospitals to repurpose this space for other requirements such as additional beds for patients.

Automated storage and retrieval systems can support hospitals by:

-  Minimizing downtime (in the OR)
-  Increasing inventory control
-  Increasing pick accuracy
-  Reducing labor requirements

Ultimately, the added efficiencies automation brings to a hospital allows staff to keep their focus on patients.



Sterile Processing Department (SPD)

Many Sterile Processing Departments (SPD) are challenged with storing sensitive supplies in a safe and secure environment. Traditionally stored on wire racks or shelving, manual processes can have a significant impact on product damage. A proper storage solution to protect “blue containers” is essential so they remain in useable condition. When any part of the blue packaging is ripped, the kit is considered unusable and inventory costs are suddenly on the rise.

Operating rooms generate revenue for hospitals. Downtime in an OR leads to significant costs for everyone involved. Once a patient is ready for surgery, if a nurse accidentally pulls the wrong kit from SPD (or isn't familiar with the hospital organization and can't find the right one), the doctors, support staff and the patient are left waiting. The incorrect kit must be returned to SPD and either disposed of or restocked and the correct blue container needs to be picked and delivered back to the OR. Every minute spent waiting means operating costs are rising and the patient is waiting (sometimes under anesthesia).

Space and capacity restraints in racks or shelving can lead to double stacking blue containers and inventory control becomes a nightmare. Putaway errors or misplaced inventory add to the problem leaving kits on the shelves past their expiration date.

With strict guidelines on how to handle the blue containers, time really is money. Nurses and support staff need to be able to find the right blue container at the right time, quickly and damage free – and ASRS allows them to do just that.

Implementing ASRS in the SPD – blue containers are stored securely and safely, delivered to the operator with the push of a button. With staffing shortages, many hospitals are using traveling nurses. The ASRS are easy to use and easy to train new staff quickly to keep operations running smoothly. Inventory can be tracked using integrated inventory management software increasing inventory control and accuracy.

Materials Management

The materials management department usually has shelves overflowing with everything from bandages, bedpans, gloves and bed sheets. Supplies tend to be a low priority when really, they are essential to keeping operations afloat. Finding capacity within the hospital to store supplies in an organized system can be difficult.

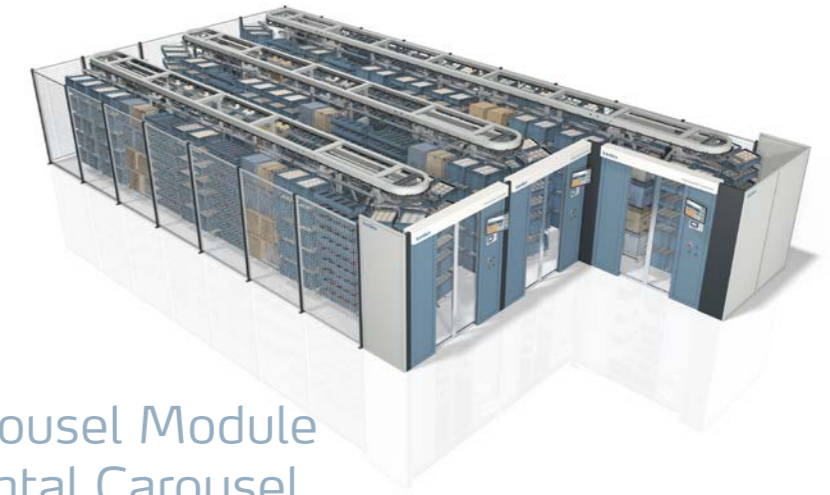
The labor and time required to efficiently manage materials and supplies so patients can receive the best care is another challenge. If materials are stored in one centralized location, often in the basement, a staff member must walk down to the supply room, pick up the supplies they need and return to the patient. This is a labor intensive, time consuming task. Not to mention, manual processes are subject to human error. Meaning they could return to the patient's room only to discover they've picked the wrong item. It now takes even more time to correct the error which again pulls them away from the patient leaving them unable to receive care.

Alternatively, using ASRS in the materials management area saves space and organizes inventory in a compact footprint. These systems help staff retrieve the correct supplies easily and accurately so they can be delivered to the right place in a timely manner.



Automated Solutions for Hospitals

To become more efficient, hospitals are considering automated storage and retrieval systems (ASRS) for better inventory management, saving time, space and money. ASRS deliver stored items directly to an operator eliminating the time it takes to walk to a pick location. Integrated with inventory management software and pick-to-light technology, hospitals will see improved productivity, inventory control and accuracy, reducing downtime and keeping staff focused on their patients.



Horizontal Carousel Module Kardex Horizontal Carousel

The Kardex Horizontal Carousel can be integrated in rooms with low ceiling height to maximize capacity in a smaller footprint than racks or shelving. Wire carriers are mounted to a track which rotates horizontally. With the touch of a button, or scan of an order barcode, items are delivered to an operator without having to walk up and down aisles, searching through shelving for supplies. Ideal for hospital supplies, carriers can be adjusted to manage small inventory or bulky items as needed.

Order Fulfillment System Kardex Power Pick System

Integrating Kardex Power Pick System inventory management software ensures accurate inventory counts are always available. Closely monitoring inventory leads to a reduction in wasted or expired products as well as maintaining visibility to supplies on hand and what might need to be reordered.

With additional inventory control measures, Kardex Power Pick System can be used to track inventory back to an individual user. Password protected accounts can be used to restrict or grant access to certain items within a unit.

Pick-to-Light Technology

To reduce the risk of human error, integrating ASRS with pick-to-light technology can increase pick accuracy up to 99.9%. Barcode scanners can be mounted near a unit to scan orders or confirm picks. This eliminates picking errors and allows for staff to pick items quickly and accurately.

In addition, the Kardex Megamat and Kardex Shuttle can be integrated with Display LED-Navigator which uses lights to communicate to the operator information such as part number, quantity to pick and where the items are located on the carrier for accurate picking the first time.



Vertical Carousel Module Kardex Megamat

Compact in design, the Vertical Carousel Module Kardex Megamat consists of a series of carriers mounted to an oval track rotates forwards and backwards in a vertical path delivering stored items directly to the operator with the push of a button. The carriers can be sub-divided to accommodate varying sized parts. The Kardex Megamat is an enclosed system ideal for managing blue containers, linens, small parts and files.



Vertical Lift Module Kardex Shuttle

The Vertical Lift Module Kardex Shuttle features an enclosed shelf-based storage system designed to increase capacity in a compact footprint. Items are stored on trays and are delivered to an operator with the push of a button. Additionally, the Kardex Shuttle can be equipped with multiple access openings to allow access to stored inventory from several different floors. The Kardex Shuttle is ideal for storing a variety of items as trays can be subdivided for inventory from bandages and steri-strips to bedpans and bulkier items.



ASRS for hospitals

Automated storage and retrieval systems can be implemented in many areas of the hospital. Essential supplies can be consolidated in a more compact footprint and organized efficiently to keep inventory under control. Inventory is delivered quickly and accurately to hospital staff which reduces downtime in the operating room and in-room with patients. Automation can alleviate the headache of inventory management, ensuring hospitals can focus on providing their patients with the best care possible.