

2Bin Inventory Management in Hospitals and Health Systems

A Smart Approach for Lean Inventory Management

Premise

Inventory management is not always a one-size-fits-all process. Hospitals and health systems use a wide range of products and supplies to deliver patient care, ranging from very low cost, high velocity items to high-cost, regulated, sometimes implantable products that need to be managed and tracked as individual items. Looking at an organization holistically and applying inventory practices to fit the supplies used and care delivered in various areas can be highly beneficial, both in terms of labor and cost. In many areas, by taking an approach like 2Bin Kanban, hospitals can move low-cost, consumable, med-surg supplies used constantly at a high velocity rates to a lower cost, faster and more streamlined approach to inventory management.

What's Driving Change?

Changes to reimbursement and billing practices for many hospitals means low-cost supplies – those disposable/consumables that are most frequently used – are no longer billed separately. In recent years, many hospitals have reported shifting away from billing patients for low cost items and instead, instituting a minimum billing charge or small addition to a patient's room charge, not reflective of individual supply consumption. Making this change can save significant time, reducing the efforts to track and charge patients for the most commonly used products, and in turn, drive significant cost savings by eliminating tracking for each item at an individual level.

What is a 2Bin (or Kanban) Approach?

2Bin systems have been proven by LEAN manufacturing processes to be extremely effective at managing highly consumable items stocked at low units of measure, usually “eaches.” The 2Bin concept originated in Toyota manufacturing facilities during the middle of the 20th century as a way to reduce inventory costs and have a more responsive, error-resistant system for stocking the shelves inside its production plants. Along with a consistent supply chain process, this approach - still used by grocery store chains and manufacturers today – allows organizations to maintain a relatively small amount of inventory in their stockrooms and stop money from being tied up in slow-moving merchandise. Toyota adopted the practice for its manufacturing plants and codified it, introducing a new binary concept: with a 2Bin approach, a bin is simply either empty or full. Reordering happens when a bin is empty, for a pre-set number of items.

2Bin in Provider Organizations

2Bin approaches are now being specifically applied to the unique needs of provider organizations. Existing storage areas are being updated with shelving units to accommodate a system of bins - two for each product or product group - that contain the non-billable items previously stored in cabinets or other more restrictive systems. The 2Bin approach is based on a very simple concept: each item in a hospital's inventory is placed in two separate bins, placed end to end on a shelf.

The two bins combined contain the total amount of inventory required for the days of supply a department or unit plans to keep on hand.



Throughout the day, staff members take what they need from the bins:



Once a bin is empty, the nurse takes the bin and places it on the empty top shelf and pulls the second bin forward. The top shelf of the storage shelves is reserved for empty bins. At specified times, supply technicians visit supply locations and scan the barcodes on the empty bins using a compact “key-fob” scanner or a smart phone or tablet.



Hospitals using an inventory management solution with their mobile devices will see their system automatically calculate the order to refill the empty bins based on reorder levels an organization has established in the system. Requisitions are created and approved, and orders are submitted directly to a hospital's vendors, the materials or ERP system, or any other preferred ordering system. When an order arrives, the supply technician simply refills the bins and scans any remaining empty bins. This continual process ensures supplies are there, when and where nurses need them.

Benefits of Using 2Bin Kanban

Hospitals using a 2Bin Kanban approach are seeing a number of benefits, including:

- Lower overhead costs
- Standardized reordering amounts
- Increased efficiencies (for both nurses and supply techs)
- Reduction of obsolete inventory
- More control over supplies
- Improved responsiveness to changes in demand
- Improved reporting
- Increased teamwork among supply chain and nursing staff
- Reduction of inventory, up to 75% for some items / in some areas



Additionally, provider organizations using 2Bin have measured greater satisfaction among nurses:

- Because nurses can find what they need, in less time, with fewer stock-outs, nursing satisfaction climbs. In one organization nursing satisfaction with supply management went from 10% to 92% after implementing a 2Bin Kanban system
- Another organization measured a 65% reduction in time nurses spend in stockrooms, freeing up nursing time to return to the patient bedside

Many health systems share the goal of improving inventory management. To take advantage of the many benefits available of better inventory management – including reduced costs, improvements in cash flow, reduced staff time, increased productivity and greater automation and efficiency – more and more often, hospitals are looking at 2Bin Kanban as a way to adopt lean inventory management practices.



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