

Fine-Tuning Materials Management in the Health-Care Industry

Exploring the benefits of standardizing your inventory management system all the way to the supply closet

By Erik Eisenman

As the ramifications of the world financial crisis become more apparent, businesses, institutions and organizations

are taking stock of how they operate in an effort to cut costs and cope with budgetary problems. Those who de-

pend, in part, on endowment income, including hospitals and health-care organizations, as an example of a major seg-



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ment in the service industry, have less money to work with and are hard-pressed to maintain standards with shrinking budgets. By fine-tuning their materials management, they can save money and also serve as an example for a wide variety of businesses and institutions.

Virtually every hospital, medical center and ambulatory clinic has a materials management department that is responsible for receiving supplies, maintaining a central inventory and delivering supplies throughout the organization. Unfortunately, this is usually where the scope of the materials management department ends.

A closer look into a nursing unit, OR suite, or exam floor reveals a smaller, self-managed inventory in supply closets, nurses' stations and individual rooms. Although this is often necessary to keep supplies readily available at the point of use, the burden of maintaining the supply falls on the nurse and detracts from his or her primary job function: providing patient care.

Every patient-care area is unique within an organization and has different supply requirements based on the types of patients being seen, the level of care being provided and even provider preference. Expecting a materials management organization to understand patient and provider needs may be a tall order, but with a historical look at what an area uses, and input from

clinical staff, an inventory management system that extends all the way to the point of care is not out of reach.

True demand for supplies

The challenge in extending the control of a materials management department is mainly in understanding the true demand for supplies from each patient-care area. Nurses order supplies when they "feel" like they need more, or when inventory "looks low," because they lack the tools to understand when the inventory is actually running low.

Applying lean principles to get rid of waste and organize can help clarify the situation by removing materials that are not needed to provide patient care and creating standard locations for supplies so there is no "hidden inventory" in closets and cabinets.

Unfortunately, the question of how much to keep on hand remains. To create a guideline, use the historical ordering patterns of the area. Orders might come grouped in large numbers on a weekly basis, but the unit volume can be used to understand the daily demand of the area. Keep in mind that demand numbers need to be vetted with the clinical staff to make sure they are realistic. Once a daily demand has been established, a "par level" can be defined based on the organization's preference for frequency of replenishments and tolerance for stock-outs. The inventory locations can

then be labeled with the type of supply and the par level, so anyone walking into a supply closet or opening a cabinet can quickly assess which supplies are running low.

As supply locations become standardized, individual units and patient-care areas will no longer have outlandish supply requirements that materials management cannot understand; rather, it becomes just another inventory location with part numbers and par levels that need to be maintained. Inventory turns increase as levels are changed to reflect demand, and outdated material is virtually eliminated as FIFO strategies that are applied in warehouses are brought to the unit level. An expediter can assess inventory levels on a regular basis and place orders on behalf of the unit, removing this responsibility from the nursing staff. Changes in demand can be quickly addressed because orders are based on usage rather than gut feeling, and the materials management department can adjust par levels and order quantities appropriately.

Setting inventory schedules

This standardization can result in improved efficiency, as set schedules are established for inventory counts and replenishment. Rather than delivering to every floor every day, inventory levels can be set to accommodate a strategy of defined order and delivery

days for each area. This strategy should account for area proximity and supply commonality to reduce overall delivery time for each expediter.

The extension of materials management into clinical areas also has implications for central inventory. As order quantities and timing become more predictable, inventory levels in the central stores can be driven lower. Central stores no longer have to be prepared for large orders that could come in at anytime; instead, they can expect orders that arrive at standard intervals for known quantities. The inventory manager will have better insight into the organization's needs and be able to set par levels accordingly.

More sophisticated organizations take this practice a step further and use it as an enabler for vendor-managed inventory. Either in the central stores area or within the clinical space, a clearly defined inventory management strategy for each supply allows strategic suppliers to manage their own inventories, greatly reducing inventory levels throughout the organization and reducing the demand for materials management personnel.

Inventory levels in hospitals or any organization can be enhanced by studying the warehouse or central storing area more closely. Delivery times can be improved by determining which departments should get their deliveries at different times during the day,

taking into consideration that the last shipment of the day should be appropriate for the next morning's needs.

If the health-care provider can reduce its inventory of medical and other supplies, it will improve its cash flow; if lower-paid employees can manage the inventory instead of highly paid staff, money can be saved.

Instead of having nurses manage the inventory, materials management personnel using bar-coding and automated dispensing machines can manage more expensive unit-price items, such as medicines. Replenishment cycles can be further improved by using interchangeable drawers in storage containers to replace expensive workers.

As health-care budgets swell and patient demand increases, it's increasingly important for health-care organizations to focus on the effective use of their resources. Increasing the scope of the materials management organization is a relatively easy way to improve resource utilization: nurses spend more time delivering patient care, the materials management staff can better plan its work to meet the needs of clinical areas without increasing FTEs, and the organization's financial resources are no longer tied up in high and hidden inventory.

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