Getting a Handle on Your Inventory

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There are many benefits to using an inventory management system in your pharmacy. The software needed is probably included in your pharmacy management system. If not, you may be able to purchase an inventory management application that interfaces with your pharmacy system. Inventory management can help ensure the proper amount of product is in stock at the right time, while reducing inventory costs and increasing inventory turns. The inventory management system can also suggest, place, and receive orders, reducing the need to engage a pharmacist or technician in a labor-intensive process.

System setup steps need to be completed before the system can automatically place orders with your supplier. This requires entering on-hand quantities and min and max values or reorder points and quantities in the system for the products currently in your inventory. Entering the correct on-hand quantity and setting accurate min and max values will help keep your inventory management system working efficiently and accurately.

Proper setup of the min and max values or reorder points and quantities allows you to carry the appropriate amount on hand to fill all prescriptions presented between orders and deliveries. Pharmacies may order once a week or five days a week. Therefore, order delivery frequency will factor into the determination of min and max values. Some systems include a feature that looks at drug use over a specified period of time and provides a suggested min and max for each drug. Seasonal drugs like antibiotics during the winter or inhalers for allergy season typically have the min and max values adjusted for the off-season to reorder less to avoid product going "out of date" while on the shelf.

If your system doesn't offer functionality to suggest min and max values, PHSI consultants have explored and developed methods for using drug use data to calculate those values. Our methods look at averages and deviations from the averages, along with other dispensing patterns, to come up with an algorithm to determine the appropriate min and max values.

If you are interested in talking to PHSI about how this can work for you, please contact me using the email address noted at the end of this column.

For the drugs that you use to fill prescriptions for a patient once every 30 or 90 days, your inventory management system may offer a feature that allows for "just in time" ordering. Systems employing an automated refill process can trigger the inventory system to order the drug when it is needed to fill the prescription. Another feature may allow the user to delay the order of the drug until a defined date, usually just before the refill is due.

Addressing Out-of-Stocks

One of the fears of implementing an automated inventory replenishment system is that it will cause the pharmacy to run out of stock. It takes time to build trust in the automated system. Here are a couple of points to remember to help fine-tune the ordering process.

- Make sure the min is not set too low to provide "safety stock." The min quantity should be an amount that is enough to fill prescriptions from

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the time the order is placed until the next order is delivered.

- Make sure the max is not set too low for proper replenishment. The max quantity should be an amount that is enough to fill prescriptions from the time one order is delivered until the next order is delivered.

This is not to recommend that all mins and maxes get bumped up to provide a safety net, because that results in increased inventory investment. Paying attention to and adjusting the individual reorder points and replenishment quantities can help to fine-tune the process.

The goal of fine-tuning the inventory management process is to meet prescription demand without carrying excessive inventory. However, the system should also ensure the total value of the inventory remains consistent, meeting the goals of the business. A measure commonly used to determine the effectiveness of the inventory management process is inventory turns. This is the number of times the pharmacy cycles through or turns over its inventory during a year. It is calculated using the total cost of the drugs sold (COGS, or cost of goods sold) over a year divided by the value of the inventory at cost.

In the example, 12 turns per year indicates the pharmacy theoretically cycles through its inventory once a month. A higher number of turns, such as 20, means a more efficient inventory management process that is not tying up as much money in inventory. A lower number of turns means the amount of inventory could be reduced, thus reducing the amount of money tied up in inventory.

$$\frac{\text{COGS} = \$3{,}600{,}000 \text{ per year}}{\text{Inventory at cost} = \$300{,}000} = 12 \text{ turns per year}$$

The pharmacy's inventory value is usually determined by a physical count of the product on hand. However, your pharmacy system should also keep track of that value as long as the correct product acquisition cost and on-hand quantities are loaded and maintained in the pharmacy system. Along with decrementing the on-hand quantity for each prescription dispensed, the system can also keep track of the COGS for each prescription. Using data from the system, you can calculate your inventory value and inventory turns.

There is also a method to track inventory value on a perpetual basis, which can be performed weekly. Beginning with the value determined by a physical count, add the amount of inventory purchased during the week, using suppliers' invoices. Then subtract the COGS for the week. The result is the current value of the pharmacy inventory.

Managing Price Changes

As mentioned above, the system can calculate COGS for each prescription filled based on the acquisition cost loaded in the system for the drug when the prescription is processed. When the acquisition cost of a drug changes, that should be reflected in the system's cost file. However, once the cost changes in the system, that may affect the cost used when a prescription is filled using a product purchased before the cost change. Some systems may be able to track the exact cost of the product in inventory, accounting for a cost change that occurs while the product is on the shelf.

This situation creates inventory holding gains when the cost increases or holding losses when the cost decreases. Typically with an increase in cost comes an increase in the retail price of the product. However, the real cost of the product on the shelf is still the cost on the invoice when the order was delivered. The cost may have subsequently increased and caused an increase in the retail price; the product has increased in value. Conversely, a decrease in cost may result in a decrease in the retail price of the product. Again, the real cost of the product on the shelf is still the cost on the invoice when the order was delivered.

Because of this, COGS and inventory turns can become inflated or deflated. Some accounting processes require an adjustment to these numbers based on the inventory on hand when the cost changes, so that COGS and inventory turns reported are trued-up. The gain or loss is not "realized" until a prescription is sold to the patient.

Your inventory management system is a tool that will help keep track of your controlled substances by recording the amount of each drug ordered and received and the amount dispensed.

If you thought about needing to reduce or just better control your pharmacy inventory and have not implemented an inventory management system, then you need to check to see what your pharmacy software vendor has to offer either in its system or via an interface to an adjunct application. **CT**

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