The Definitive Guide to Hospital Pharmacy Inventory Management
Best Practices: Achieving Efficiency, Control and Quality Care
Drugs are a costly and complex asset to manage, with most hospitals lacking visibility across their entire pharmaceutical supply chains. The net cost of prescription drugs in the U.S. rose more than three times faster than inflation over a decade, and health systems are facing a 3.29% increase for pharmaceutical purchases made in 2021.

At the same time, the U.S. healthcare system faces an increasing threat of drug shortages, with the American Medical Association (AMA) calling it “an urgent public health crisis.” A survey of U.S. hospitals found every single one had experienced a drug shortage, with 38% believing medication errors were directly linked to lack of drug availability and that shortages led to procedure and care delivery delays and cancellations.

Hospitals that lack visibility across their pharmaceutical supply chains risk lost, stolen and expired inventory. They tend to engage in inefficient and costly inventory management practices, such as overordering and stockpiling in an effort to avoid shortages. Without system integration, it is a tremendous challenge to link drug purchase and consumption data for accurate demand planning and forecasting. While hospital leaders know their organizations are spending substantial dollars on pharmaceuticals, they don’t have the information they need to manage this spend or contain it.

Poor pharmaceutical inventory management practices also threaten patient care and safety. The dependance on hospital pharmacy technicians and clinicians to manage drug inventory takes resources away from patient care. Among healthcare practitioners surveyed, 20% said lack of drug inventory management and the inability to monitor supply levels resulted in adverse patient outcomes.

In recognition of these threats to the financial health of their organizations, and the physical health of their patients, U.S. hospital supply chain leaders and other members of the C-suite have turned to the pharmaceutical supply chain as the next frontier for transformation. In doing so, they have secured control over this significant area of spend and gained visibility to drive informed decision-making.
Hospitals that have attempted to automate individual segments of pharmaceutical supply management often find themselves with disjointed hardware and software platforms that operate independently from one another. While supply chain leaders can access reports from each system to evaluate supply consumption in specific product areas, lack of integration prevents them from seeing the whole picture across all drug supply categories. Data analysts often attempt to draw data from these system silos and table it together, but by the time this manual work is completed, the data is outdated. This leads to retroactive versus proactive decision-making on drug supply purchases and management.

In order to truly impact pharmaceutical inventory management and its associated costs and risks, hospital leaders need visibility across their entire pharmaceutical supply chains. A holistic, hardware-agnostic inventory management platform for managing all pharmaceutical supplies across the enterprise is far more efficient and cost-effective compared with system silos. It also provides access to accurate, relevant and timely data that physicians, the supply chain and the C-suite can leverage to make better decisions for their organizations.

Based on their success in this area, here are six best practices you need to implement into your hospital pharmacy inventory management operations in order to achieve efficiency, control and quality care.

1. Achieve Global Visibility

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While all hospitals can benefit from end-to-end pharmaceutical supply chain visibility and control, it is important to note that there is no “one-size-fits-all approach” to medication distribution.

Supply management is impacted by many factors, such as geography and demographics. An integrated delivery network (IDN) based in a population-dense metropolitan area will have different needs compared with a small rural hospital serving patients dispersed throughout the county or state. Some pharmaceutical products are temperature sensitive, which means even the climate in which the hospital operates can impact drug supply distribution, storage and management.

Furthermore, regulations for drug distribution can vary from state to state, with some states requiring a hospital with a centralized drug distribution model to be licensed as a distributor or wholesaler. This gets particularly complicated with health systems operating across multiple states that must transport medication across state lines. Hospitals that participate in the 340B program face their own unique set of challenges when it comes to drug distribution in order to maintain program compliance.

When exploring medication distribution models, each hospital must evaluate its operations, patient populations and pharmaceutical supply needs to determine which approach works best, whether it is centralized distribution, decentralized or a hybrid method. A supply chain technology partner that has experience working with a wide range of healthcare organizations on different approaches to pharmaceutical distribution – including central supply distribution (CSC), hospital model, and hub and spoke to service external clinics – can share best practices and lessons learned to help guide you through your decision-making process.
Pharmacy technicians spend nearly one-quarter of their workday maintaining medication and inventory control systems. In most cases, the hospital pharmacy is ordering drug products from a variety of wholesalers and manufacturers, each with their own ordering platforms. The technician must physically log into each portal to place drug orders per manufacturer, which is a time-consuming, manual process prone to human error.

Streamline supply and demand by leveraging a single technology platform integrated with your hospital’s enterprise resource planning (ERP) system to order and receive from any supply source (e.g., wholesaler, manufacturer) versus transacting with each one individually. Your technology partner should implement this platform based on the pharmaceutical technician’s point of view to minimize steps and boost process efficiency.

For example, if the technician is scanning a drug into one system as part of the current process, the technology partner could potentially interface its system so that this single scan populates both platforms, thereby eliminating the need for an additional scan. By automating ordering and receiving processes, the hospital can save time and labor, while improving process accuracy and reducing the risk for error.
Automate Replenishment Processes

While effective replenishment processes are critical to avoiding drug shortages and disruptions to patient care, many hospitals still rely on manual processes to maintain drug inventory levels. Not only are physical inventory counts by pharmaceutical technicians extremely inefficient and prone to human error, they also prevent a hospital from electronically collecting timely and accurate data for demand planning.

A structured and automated replenishment process saves time, reduces data entry and improves accuracy while optimizing inventory and service levels. When replenishment processes are performed within an integrated, enterprise-wide pharmacy supply management platform, hospital leaders have real-time visibility into inventory status to ensure adequate inventory remains on hand, while preventing overordering or stockpiling of supplies.

In today's environment of rising drug prices coupled with shortage risks, demand planning is more critical than ever. Hospital leaders must have access to data on past drug purchases and consumption in order to accurately project their organization’s future needs, and plan accordingly. Gartner has stated that measurable successes from more accurate demand forecasting can include a 15% reduction in inventory as well as improvements in fill rates, revenue and gross margins.⁷

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Gartner
As pharmaceutical costs continue to rise, it is imperative that hospitals take advantage of wholesaler and manufacturer discounts and rebates. The challenge today is that most hospitals do not apply medical/surgical supply chain procure-to-pay best practices to their pharmaceutical operations. Typically, pharmaceutical procurement is completely separate from the rest of the hospital’s supply chain operations.

Most hospitals do not have systems and processes in place to reconcile drug purchase orders (PO) with invoices during the accounts payable process (AP). Therefore, they do not have an automated way to identify and resolve costly pharmaceutical price discrepancies, leading to overpayments and missed savings opportunities.

A complete, end-to-end pharmaceutical supply chain solution facilitates not only ordering, receiving and inventory management, but the full procure-to-pay cycle, including three-way match of contracts, POs and invoices. A complete solution verifies contract prices with manufacturers, keeping contracts up-to-date so that the hospital can capitalize on discounts and rebates. Automated price matching removes the need for manual intervention and the risks for human oversight and errors.

When looking for a holistic solution to pharmaceutical supply chain management, ensure all of the data flowing through the system (e.g., procure-to-pay, contracting, inventory management) ties back to a comprehensive analytics platform that leaders can leverage for informed decision-making. Through integration with clinical systems (e.g., EHR), hospitals are successfully assimilating medical/surgical and drug purchasing data with patient usage data in order to generate a complete picture of overall care costs per patient and per procedure.
Whether a hospital’s goal is to contain drug costs, limit inventory spoilage, monitor prescription inventory turn days, better manage recalls or prevent drug shortages — or all of the above — enhanced inventory monitoring is the answer.

A pharmaceutical supply chain solution should provide visibility into drug supplies not only in all pharmacy inventory locations, but all the way through to the point of consumption, while consolidating demand and automating purchasing throughout the organization. Centralized and automated supply management, along with centralized order processing and inventory management, provides hospital leaders with the level of control needed to address all of the challenges they face in relation to pharmaceutical supply chain today.

With a system that scans a drug’s movement at every step — from receipt to storage to deployment to usage — a hospital has a complete chain of custody for compliance with the Drug Quality and Security Act (DQSA). By tracking each drug product’s lot, serial number and expiration date, throughout its journey to the patient’s bedside, a hospital can better manage its inventory to avoid waste in the form of lost or expired products and minimize the risk that an expired product is used on a patient. The ability to track drugs to ensure proper storage conditions are maintained, such as those requiring temperature control, further enhances cost containment and safety by maintaining drug product integrity.

Those pharmaceutical supply chain technology systems that provide drug usage history by facility and patient, with aggregated views, facilitate better management of drug shortages, adverse events and recalls. Furthermore, with a clear picture of actual drug supply use (not just purchase history), a hospital can make more informed decisions on product standardization, sourcing and contracting.
Conclusion

Hospitals simply cannot afford the costs and risks that result from poor pharmaceutical inventory management. Supplies are second only to labor when it comes to hospital expenditures, and drug prices will continue to rise. Beyond cost, the ability to accurately and efficiently manage drug inventory and perform demand planning to meet future needs is critical to navigating the ongoing challenges of drug shortages. The ongoing COVID-19 pandemic and Hurricane Maria in 2017 have demonstrated the importance of hospital supply chain resiliency in the face of unexpected disruptions.

Beyond the availability and price of the drugs themselves is the greater cost and labor burden of managing pharmacy supply chain processes. Pharmaceutical technicians and other clinicians waste countless hours of their valuable time keeping track of drugs within facilities and documenting their usage. Technology exists today that can automate this process to increase efficiency, reduce the risk for errors and allow caregivers to focus on patients not products.

At the same time, inventory automation enhances patient and care safety by helping to ensure drug products are available when and where they are needed, facilitating efficient and accurate adverse event reporting and recall management, and avoiding product expiry or diversion from healthcare supply chain channels.

Speak to a healthcare pharmacy supply chain expert
Sources

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About Tecsys

Since our founding in 1983, so much has changed in supply chain technology. But one thing has remained consistent across industries, geographies and decades — by transforming their supply chains, good organizations can become great.

Our solutions and services create clarity from operational complexity with end-to-end supply chain visibility. Our customers reduce operating costs, improve customer service and uncover optimization opportunities.

We believe that visionary organizations should have the opportunity to thrive. And they should not have to sacrifice their core values and principles as they grow. Our approach to supply chain transformation enables growing organizations to realize their aspirations.