



WHITE PAPER

The Top 5 Challenges of the Pharmaceutical Supply Chain Today



Introduction

Over the past decade, health systems and hospitals have transformed their medical-surgical product supply chains through enterprise-wide automation of warehouse management, distribution and transportation management, supply management at the point of use, and financial management. With full visibility and control over the products that are used in their facilities, healthcare provider organizations have the insights and information they need to perform forecasting, demand planning and other strategic analysis aimed at driving high quality, efficient and cost effective care.

In recent years, an increasing number of healthcare supply chain leaders have assumed responsibility for management of their organizations' purchased services as well. They have applied best practices garnered from medical-surgical product management to this traditionally disjointed area of spend.

Now, healthcare leaders are turning their sights on the highest cost area within their supply chains — pharmaceuticals. Supply chains represent approximately 30% of hospital spending, second only to the cost of labor, and pharmaceuticals represent 5-10% of this total cost.¹ As an area that has historically been plagued by decentralized management, disconnected IT systems with limited functionality and a heavy reliance on third-party distribution, pharmacy presents a significant opportunity for cost and labor savings.

In this paper, we present the top five challenges facing pharmaceutical supply chain operations in healthcare organizations today and examine how leading healthcare organizations are integrating pharmaceuticals into their overall supply chain operations.



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Throughout the paper we feature insights from Donna VanVlerah, SVP Supply & Support Services at Parkview Health in Fort Wayne, Ind., who has successfully aligned people, processes and technology for both medical-surgical and pharmaceutical product management within her organization.



“In order to meet the demands of a fast evolving marketplace and the shift from patient to outcome, the pharma supply chain will need to undergo a radical overhaul.”

PwC Report
Pharma 2020: Supplying the future²

The Top 5 Challenges of the Pharmaceutical Supply Chain Today

As a heavily regulated product area, pharmaceuticals are challenging for healthcare organizations to manage from a supply chain perspective.

External factors, including rising drug prices, continued shortages and an increase in drug diversions, as well as internal factors such as poor inventory management processes and outdated contracting, sourcing and distribution practices, all serve to increase costs, labor and risk for hospitals and health systems.

External Factors

The pharmaceutical industry has come under intense scrutiny and pressure from regulators, healthcare organizations and the public for its pricing strategies, quality issues, supply shortages and other factors that both jeopardize patient care quality and drive up costs for an already cash-strapped and overburdened healthcare system. Hospitals and health systems are forced to deal with the consequences of these issues as they manage their own internal drug supply chains.

“For many years healthcare professionals in the U.S. took drug quality for granted. Now, shortages, recalls, counterfeits, and contaminations seem to be in the news every other day, and Congress has passed legislation to secure the drug supply chain and better oversee imported medicines.”

Janet Woodcock, M.D.
Director, Center for Drug Evaluation and Research, U.S. Food and Drug Administration (FDA)³

1.

Rising drug costs

According to the American Hospital Association (AHA), “hospitals bear a heavy financial burden when the cost of drugs increases and must make tough choices about how to allocate scarce resources.” One AHA member reported that the price for four common drugs cost the same as the salaries of 55 full-time nurses.⁴

The AHA and Federation of American Hospitals, in conjunction with NORC at the University of Chicago, conducted a survey of U.S. community hospitals on drug spending. More than 90% of responding hospitals reported that “recent inpatient drug price increases had a moderate or severe effect on their ability to manage the overall cost of patient care, with one-third of the respondents indicating that the impact was severe.”⁵

2.

Continued drug shortages

Drug shortages have plagued the healthcare industry for many years, and according to the AHA are getting worse. In a November 7, 2017, letter to the FDA, AHA’s Executive Vice President of Government Relations and Public Policy Thomas P. Nickels wrote: “We are concerned that the shortages of widely-used and critical products are quickly becoming a crisis and looming threat to the public’s health.”⁷

On March 1, 2018, the American Society of Health-System Pharmacists (ASHP) reported 164 pharmaceutical compounds and products currently impacted by shortages.⁸ While pharmaceutical manufacturer supply chain issues (e.g. quality issues, recalls) are a prime driver of drug shortages, natural disasters can also have a tremendous impact on drug supply, as evidenced by Hurricane Maria in 2017. The hurricane devastated Puerto Rico, disrupting Baxter International’s intravenous (IV) fluid production facilities on the island, resulting in IV saline shortages, the impacts of which are still being felt many years following the disaster.⁹

With pharmaceuticals representing 72% of Puerto Rico’s 2016 exports, including 25% of total U.S. pharmaceutical exports, many other pharmaceutical manufacturers with operations on the island (e.g. AstraZeneca, Eli Lilly) experienced the effects as well.¹⁰



The price for four common drugs cost the same as the salaries of 55 full-time nurses.

“Pharmacies have to become drug procurement experts to minimize the cost and maximize the revenue of their drug supplies. Their margin of error is slim given the growth in value-based reimbursement models. Pharmacies must be as efficient as possible in ordering, packaging, receiving and storing their medications.”

Connecting Pharmaceutical Distribution and Supply Chain Management, McKesson⁶

3.

Increasing drug diversion

Maintaining control over controlled substances in healthcare facilities is a major challenge to healthcare supply chain professionals. Drug diversion is a costly and dangerous problem. The total economic burden of prescription drug abuse was estimated to be \$78.5 billion in 2013, according to the U.S. Department of Justice Drug Enforcement Administration 2017 National Drug Threat Assessment (NDTA) Report. Prescription opioid analgesics – specifically those containing oxycodone and hydrocodone – are the most common types of CPDs diverted and abused.¹¹

In a recent Becker's Hospital Review article, executives from Visante, a medication management consulting firm, commented on the impact of drug diversion on hospitals, stating: "As the opioid epidemic continues to rise and regulators clamp down on prescribing requirements, hospitals become bigger targets for diversion of controlled substances."¹²

In many cases, it is the hospital pharmacists, clinicians and other staff members who are stealing the prescription drugs to feed their own addictions. USA Today estimates more than 100,000 doctors, nurses, technicians and other health professionals across the U.S. "struggle with abuse or addiction, mostly involving narcotics such as oxycodone and fentanyl."¹³

Recent examples of drug diversion by hospital staff include:

- A pharmacy supervisor at Salt Lake City VA Hospital who is suspected of stealing more than 24,000 painkillers and 25 vials of testosterone over five years.¹⁴
- Two pharmacy technicians at Emory University Hospital Midtown were accused of diverting more than 1 million doses of controlled substances over the course of five years. As a result, the hospital received a \$200,000 fine and had its pharmacy license placed on probation for three years.¹⁵
- A pharmacist at Abington Memorial Hospital (AMH) was found to have stolen more than 35,000 units of a controlled substance, including oxycodone, on 85 occasions, which resulted in the hospital paying \$510,000 in fines.¹⁶

Internal Factors

In addition to the outside challenges facing pharmaceutical supply chain operations, there are a number of internal factors that drive costs, inefficiencies, risk and waste.

Donna VanVlerah, SVP Supply & Support Services at Parkview Health in Fort Wayne, Ind., equates the current state of pharmaceutical supply chain in most hospitals and health systems to medical-surgical supply chain management processes 15 years ago. Many healthcare organizations struggle with outdated processes, inadequate information technology (IT) systems and lack of visibility to data on which to make strategic decisions.



“Because pharmacy’s main focus has been providing the right drug to the right patient, many of those individuals responsible for pharmaceutical supply chain management were never taught best practices in acquisition and logistics, therefore, they don’t think like supply chain leaders in other areas.”

Donna VanVlerah
SVP Supply & Support Services at Parkview Health

4.

Inventory mismanagement

In its Guidelines on Medication Cost Management Strategies for Hospitals and Health Systems, the ASHP describes pharmaceutical inventory management as a “balancing act,” stating: “It involves meeting patient and internal customer needs while committing the least amount of dollars possible to drugs on the shelves or in automated cabinets.”¹⁷

While the use of drug-dispensing carousels, carts and cabinets for automation of pharmaceutical inventory management is commonplace among hospitals, in most cases these technologies have been deployed in the absence of supply chain best practices. In an Institute for Safe Medication Practices national survey, 20% of practitioners reported that adverse patient outcomes occurred because of a lack of inventory management and monitoring of supply levels.¹⁹

“While automation technology in the pharmacy provides opportunities to streamline processes, the focus has primarily been on maximizing patient safety, improving narcotics security, ensuring charge capture and achieving high service levels for nursing. These areas are a good start, but hospitals and health systems are leaving money on the table if they stop there. Supply chain executives must partner with pharmacy leaders to address broader opportunities to improve efficiencies in medication inventory management across the entire system.”²⁰

In addition to jeopardizing patient safety, poor inventory management practices result in added cost and waste. In its report, “Evaluating Hospital Pharmacy Inventory Management and Revenue Cycle Processes,” the Association of Healthcare Internal Auditors (AHIA) states:

“The pharmacy revenue cycle typically includes the following areas: pharmacy purchasing data, dispensing transactions, charge description master (CDM), pharmacy charges, and patient billing. The amount of inventory a pharmacy carries may have a significant financial impact given that a drug resting in inventory has minimal payment/reimbursement value until it is dispensed. Some drugs, such as oncology drugs, are extremely expensive and have limited shelf life. Mismanagement and discarding of expired medications has a potentially costly impact.”²¹

“Pharmacy inventory management is a complex but critical process within the healthcare delivery system. Without adequate pharmacy inventory management practices, hospitals run the risk of not being able to provide patients with the most appropriate medication when it is most needed. Additionally, pharmacies’ dispensing patterns and drug selection choices may have a direct effect on the affordability of care. Utilizing drugs that are non-contracted or not on the formulary may be more costly to the patient or may result in a lower than expected reimbursement.”

Evaluating Hospital Pharmacy Inventory Management and Revenue Cycle Processes, Association of Healthcare Internal Auditors (AHIA)¹⁸

5.

Outdated contracting, sourcing and distribution practices

When VanVlerah assumed management of pharmaceutical supply chain operations at Parkview Health, she found many of the health system's practices in this area were outdated when compared to the organization's management of medical-surgical products.

According to VanVlerah, the health system had defaulted to an existing contract it had in place for pharmaceutical products versus proactively applying best practices in strategic sourcing to negotiate lower costs and greater savings opportunities. Furthermore, the pharmaceutical supply chain was aligned to a single distributor that managed its sourcing and stocking levels without much thought to the added value this third party provided.

VanVlerah's experience is not uncommon. Industry research has found that most hospital pharmacies purchase 80% or more of their drug products from a distributor.²² With regards to contracting, it has been estimated that outmoded buying methods result in hospitals investing an average of 40% of their pharmaceutical supply spend on off-contract items.²³

There is a significant opportunity to reduce cost and waste and achieve greater savings within the pharmaceutical supply chain through the application of best practices. For example, Cleveland Clinic was able to save \$90 million by reining in drug spending without harming patient care quality. Approximately 45% of that savings "was achieved on the inpatient side by reinforcing traditional pharmacy management approaches, such as inventory control, formulary management, procurement and drug-utilization review."²⁴



Cleveland Clinic was able to save \$90 million by reining in drug spending without harming patient care quality.

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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.



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