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Preventing Drug Diversion in Hospital-Owned Retail Pharmacies

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Introduction

Controlled substance diversion remains a costly and persistent issue in healthcare, with attention historically centered on inpatient hospital settings. However, **hospital-owned retail pharmacies (HRPs)** present distinct vulnerabilities that can leave health systems exposed if not properly addressed.

HRPs are designed to support care continuity, often operating within or near hospitals and handling high volumes of controlled substances under their own DEA registration. Many lack the automation and monitoring tools used in inpatient settings. Hospital pharmacy leaders may also be less familiar with the unique workflows and risks in retail operations, resulting in less robust diversion prevention.

As the DEA increasingly audits registrants, retail pharmacies, and health systems, organizations must ensure strong oversight across all settings. This white paper explores the risks and operational challenges of controlled substance management in HRPs and outlines practical steps to strengthen monitoring, accountability, and compliance – ultimately helping protect patients, staff, and the organization.

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The Evolving Role of Hospital-Owned Retail Pharmacies

Across the U.S., retail pharmacies are increasingly focused on patient care, with pharmacists often filling care gaps amid physician shortages. Patients typically see their pharmacists more frequently than their physicians, creating opportunities to support medication adherence and chronic condition management.

HRPs are well positioned to lead in this expanded role. Pharmacists at these retail pharmacies often have access to electronic medical records (EMRs), enabling informed clinical support at discharge and beyond. Many also partner with specialty pharmacies to manage complex therapies for oncology, transplant, and autoimmune patients.

In addition to clinical services, HRPs frequently run "Meds to Beds" initiatives to ensure patients are discharged with their prescriptions in hand – improving adherence and reducing readmissions – but often involving high volumes of opioids for surgical patients. If the retail pharmacies are not efficient in this process, patients may be left waiting in their rooms for prescriptions to be filled, delaying discharge and ultimately impacting patient flow. Similarly, employee mail-order prescription services, commonly run by HRPs, can significantly raise prescription volume and operational demands.

At the same time, hospital leadership looks to HRPs to deliver strong prescription volume, placing these sites under growing financial and operational scrutiny. While some diversion monitoring practices may mirror inpatient approaches, **differences in workflow, space, and staffing require tailored approaches.**

Handling Controlled Substances at Retail Pharmacies

By the Numbers

53%

Of hospitals and health systems operate outpatient pharmacies[1]

37.5%

Of total annual prescriptions dispensed in the US are for opioids[2]

$19,246

Per violation for failing to make, keep, or furnish records, reports, notification, or declaration of controlled substances[3]

$565K

Average fine per case of diversion[4]

$7.75M

In fines to a health system in 2021 to resolve controlled substance violations at inpatient and retail pharmacies[5]

Sources:

1. Pharmacy Purchasing & Products, 2024
2. U.S. Centers for Disease Control and Prevention, 2023
3. Code of Federal Regulations, 2025
4. U.S. Department of Justice National Drug Intelligence Center, 2020
5. U.S. Department of Justice, 2021

Operational and Compliance Challenges

Operational Constraints and Limited Physical Controls

Retail pharmacy environments inherently offer fewer layers of physical security for controlled substances. While Schedule II medications require secure storage, Schedule III–V medications are often stored on open shelves alongside non-controlled inventory, creating broad access for all pharmacy staff. Although some HRPs secure high-risk CIII–V drugs in safes, many do not, increasing opportunities for diversion during routine operations.

Physical space limitations add to the challenge. Many HRPs were added to hospital campuses post-construction and may lack secure storage or sufficient space for high-volume dispensing. Retail pharmacies must balance prescription filling, patient counseling, and administrative tasks within compact spaces that often lack room for additional security infrastructure. Without automated dispensing systems, pharmacies rely on manual counts and double-checks, increasing the risk of human error and making discrepancies harder to detect.

Many retail locations have cameras installed, however, without robust diversion detection practices, this security layer can go unused. Inadequate positioning, outdated camera systems, and limited video storage retention can further hinder investigations if diversion is suspected – especially when incidents occur over extended periods.

Inconsistent Use of Dispensing Platforms and Inventory Reconciliation

Technology limitations in HRPs add complexity to diversion monitoring. Pharmacy management systems (PMS) often vary in capability across retail sites, with some lacking integration with the health system's EMR. Even when the same PMS is used enterprise-wide, workflows frequently differ between locations.

For example:

- One pharmacy may allow count corrections during the receiving process, while another requires strict receiving as-is.
- Expiration handling may differ, with one site expiring medications upon shelf removal while another waits for reverse distributor pickup to expire the medications from the system.
- Tracking split NDC fills may vary between precise tracking via partial fills and post-hoc manual adjustments to counts.

These inconsistencies complicate reconciliation across purchasing, receiving, and dispensing records, making diversion detection more difficult. Built-in PMS reconciliation tools are often cumbersome or poorly optimized for controlled substances, leading many HRPs to rely on manual processes. These workflows are time-consuming, error-prone, and inconsistently documented – leaving gaps in controlled substance monitoring.

Staffing Pressure

Staffing limitations further compound diversion risks in HRPs. These pharmacies often operate with small teams under high prescription volume pressures while maintaining patient-facing responsibilities. Pharmacists in charge frequently juggle operational and clinical duties alongside leadership tasks, leaving limited time for controlled substance monitoring and inventory management.

Staff turnover is often a more prominent issue in retail pharmacies than in inpatient settings, driven by higher prescription volumes, patient-facing responsibilities, and limited opportunities for career advancement. In these small, high-turnover teams, training gaps are common, and separating duties across ordering, receiving, and inventory management is often impractical.

The Unique Complexities
Of Hospital-Owned Retail Pharmacies

- **Meds to Beds Programs**
- **Employee Mail Order Prescription Programs**
- **Limited Physical Space**
- **Lack of Pharmacy Automation and Unsecured Controlled Substances**
- **Manual and Inconsistent Inventory Reconciliation Practices**
- **Technology Gaps**
- **Staffing Constraints and High Turnover**

The Imperative for Retail Diversion Oversight

While inpatient settings have traditionally led the way in diversion prevention, retail pharmacy sites must be held to similarly rigorous standards. Given the unique challenges HRPs face, a robust diversion prevention strategy hinges on three pillars: **training and competency development, technology, and interdisciplinary collaboration.**

Training and Competency Development

Retail pharmacies often experience significant training gaps compared to inpatient settings. While inpatient pharmacies typically fall under hospital policies and receive structured training similar to nurses and other hospital staff, retail pharmacies may be managed separately and are frequently excluded from these broader training initiatives. As a result, it falls to retail leadership to facilitate and prioritize consistent diversion prevention training within HRPs.

Educate on the Signs and Symptoms of Diversion

Establishing a culture of accountability begins with comprehensive, structured education and clear expectations for all staff involved in handling controlled substances. First, staff should be trained to recognize the signs and symptoms of impairment in coworkers, including bloodshot eyes, frequent tardiness, erratic behavior, or sudden mood changes. Equally important is understanding why diversion may occur, whether due to financial pressures, addiction, burnout, fatigue, or external influences from friends or family.

Develop Policies and Training on Regulatory Requirements

Training and education should also reinforce the regulatory requirements that support diversion prevention. For example, maintaining accurate controlled substance inventories, ensuring pharmacy and DEA licenses remain current, properly filing power of attorney documentation, and securing DEA Form 222s are foundational practices that should be reinforced during training.

Best practices for day-to-day operations should also be standardized, incorporated into training, and consistently reinforced. Recommended practices include:

- Reinforce the pharmacist's corresponding responsibility during dispensing.
- Require double-verification of controlled substance purchasing records whenever possible.

• Perform double counts on all controlled substances dispensed to patients

• Store schedule II controlled substances in locked areas with clear separation from CIII–V medications, including expired stock.

• Allow CIIs to only be accessed by registered pharmacists.

• Separate CII prescription, purchasing, and reverse distribution records from CIII-V documentation.

• Prohibit pharmacy staff from accepting dispensed controlled substance medications back from patients.

• Regularly audit camera and security systems to ensure functionality, storage, and appropriate positioning.

Tailor Education and Responsibility Based on Role

Role-specific training modules can help align responsibilities with diversion prevention strategies. For example, consider limiting the ability to perform cycle counts or adjust inventory on controlled substances to designated staff and restrict ordering to select individuals. Ongoing education, including quarterly drug diversion training for new staff and annual refreshers for all employees, helps maintain awareness and competency.

Offer Resources for Accountability and Safety

Creating a safe, approachable reporting culture is another critical piece of the puzzle. Staff should have access to anonymous reporting mechanisms to raise concerns without fear of retaliation. Education should include clear guidance on how to report concerns via email, anonymous hotlines, or direct contact with higher management, reinforcing that reporting concerns is a professional obligation and a core component of patient safety. Organizations may also have a pathway for employees to receive addiction treatment without fear of losing employment.

Technology

In inpatient settings, most health systems rely on dedicated diversion software that integrates data from wholesaler purchasing systems, controlled substance vaults, automated dispensing cabinets, and electronic health records to proactively identify and investigate potential diversion. This routine, technology-driven monitoring helps to standardize accountability and reduce opportunities for diversion. Although not yet widely adopted in retail settings, diversion monitoring technology can bring significant value to outpatient settings – enhancing oversight while reducing the manual burden on staff.

Inventory Accuracy and Reconciliation

At a minimum, retail pharmacy leaders should understand how to audit data within their dispensing platforms. Ideally, retail sites are monitored with analytics and dashboards that send real-time alerts and support inventory reconciliation, rather than relying solely on month-end reports. Technology should enable reconciliation across key operational checkpoints – ensuring that all controlled substances ordered were actually received, that damaged or expired medications are sent to the wholesaler or reverse distributor, and that dispensing data aligns with point-of-sale and return-to-stock records. Reconciling dispensing records with point-of-sale data helps confirm medications are appropriately billed and dispensed, while reconciling return-to-stock prescriptions prevents unlogged reintegration of controlled substances into inventory, potential diversion of unsold prescriptions, and medications that were picked up by the patient without recorded sale. Real-time access to this data allows for more accurate, proactive intervention before small discrepancies build to serious noncompliance or diversion events.

Conducting inventories of controlled substances may also be tracked and enforced through software – prompting pharmacy staff to perform these counts accurately and on biennial frequency as required by DEA and state boards to maintain continuous compliance. Tracking more frequent counts can also be used during a controlled substance reconciliation or investigation to determine the time frame or length of a potential diversion or inventory discrepancy.

> **"Community pharmacies should consider having auditing systems in place to track and validate inventory adjustments performed by staff. Audits should also be routinely conducted to ensure CS purchases are reconciled with quantity dispensed and on-hand inventory to identify discrepancies in inventory and dispensing trends"**
>
> *- ASHP Guidelines on Preventing Diversion of Controlled Substances*[6]

Source:

6. American Journal of Health System Pharmacy, 2022

Monitoring Inventory Adjustments and Other Behavior Patterns

Count corrections, or manual adjustments to inventory levels in the PMS, may be indicators of diversion. While major adjustments could indicate large-scale diversion events, small adjustments over time can indicate skimming activity – and is just as critical to detect. With software, you can accurately monitor such adjustments compared to historical trends, benchmark against other retail sites, and drill down into medication types or staff members to see when count corrections truly indicate abnormal or suspicious behavior. Each retail pharmacy's PMS should also be configured to require a reason or comment whenever a controlled substance count is changed, and leadership should review these justifications regularly. Technology that facilitates this workflow not only creates a clearer audit trail but also holds staff accountable for every adjustment made.

Outside of inventory counts and adjustments, technology can identify other suspicious behavioral patterns. One example is using tablet counting technology to identify or prevent fill errors when filling high-quantity scripts for controlled substances. Beyond this, questions that pharmacy leadership should be proactively exploring for their retail sites include:

- Does one pharmacy consistently fill a certain class of medications more than other pharmacies, beyond what would be expected based on patient population or care setting? E.g., a pharmacy near an ambulatory surgery center may have different patient needs than a pharmacy within a physician office building.
- Is there a specific pharmacist or technician consistently filling a certain class of medications more than other staff?
- Is a retail pharmacy continuously ordering a controlled substance, despite no patients receiving it through dispensing records?
- Is there a specific provider excessively prescribing a certain class of medications more than other providers in a similar role or setting?

Proactive Monitoring and Alerts

Modern diversion prevention efforts hinge on proactive, real-time monitoring. Technologies that send automated alerts to leadership when anomalies arise in purchasing quantities, dispensing patterns, or inventory adjustments allow for faster responses and interventions. Real-time access to dispensing, receiving, and destruction data empowers leaders and diversion teams to conduct timely reviews before potential diversion or noncompliance escalates.

Metrics to Monitor

Inventory Accuracy: Align purchased, received, on-hand, dispensed, expired, and returned inventory.

Count Corrections: Manual inventory adjustments entered into the PMS.

Excessive Dispensing: Dispensing activity outside expected thresholds by medication, staff, and site.

Prescribing Habits: Provider-level prescribing trends, such as sudden uptick in order frequency from a specific department or provider.

Inventory Counts: Frequency and completion of counts as required by organizational determined policies.

Interdisciplinary Collaboration

Interdisciplinary collaboration is essential to effective drug diversion prevention. While many health systems have established diversion oversight committees, these groups often focus primarily on inpatient settings – leaving retail pharmacies underrepresented or overlooked. This is a critical gap: hospital-owned retail pharmacies are subject to the same regulatory expectations as other departments, meaning that lapses in retail oversight can expose the entire organization to significant compliance and safety risks.

Between 2024 and 2025, health system diversion committees became increasingly collaborative, with more consistent inclusion of nursing (+6%), compliance (+14%), and anesthesia (+11%) stakeholders[7]. However, representation from or oversight of retail settings remains inconsistent. Health systems that have not yet integrated HRPs into diversion oversight structures should prioritize doing so.

Establish a Retail-Specific Diversion Oversight Group

Creating a dedicated oversight group for HRPs – either as a standalone committee or a subcommittee of an existing systemwide diversion team – ensures these pharmacies receive focused attention. This group should include representatives from:

- Retail pharmacy leadership
- Compliance
- Legal
- IT
- Security
- HR
- Executive leadership

When retail leadership faces staffing constraints or lacks diversion expertise, other teams such as inpatient pharmacy, compliance, or quality should support inventory reviews and flag discrepancies. Cross-functional coordination helps create accountability and ensures continuous monitoring, even in resource-limited retail environments.

Standardize Documentation and Oversight Tools

The oversight committee should develop and implement two critical tools for all HRPs:

1. Risk Rounds Documentation Checklist: A standardized tool to track compliance with internal diversion prevention practices. This checklist may include:

- Verification that all controlled substance invoices are double-signed
- Accurate completion of scheduled cycle counts
- Timely and complete documentation of inventory adjustments
- Proper documentation wasting or returning a controlled substance to stock.

2. DEA Preparation Binder: A centralized resource with all documentation required during a DEA inspection, including:

- Current Board of Pharmacy and DEA registrations
- Power of attorney forms
- Annual controlled substance inventory records
- Security measures and access logs
- Purchasing and disposal records

DEA regulations require that records be accurate, complete, and readily retrievable for at least two years. Noncompliance can result in fines of up to **$19,246 per instance of improper or incomplete documentation** – a risk that extends to all pharmacies under the hospital's DEA registration, including retail sites.

DEA Requirements

DEA regulations state that all applicants and registrants shall provide ***effective controls and procedures*** to guard against theft and diversion of controlled substances[8].

Effective Controls:

- ☑ Alarm and surveillance systems
- ☑ Recordkeeping and inventory systems
- ☑ Employee screening, supervision, and access control
- ☑ Theft and significant loss reporting
- ☑ Audit readiness
- ☑ Secured storage

Sources:

7. Bluesight, 2025; 8. Drug Enforcement Agency (DEA), 2025

Practical Strategies and Recommendations

In summary, hospitals and health systems should enact the following key initiatives to effectively monitor, detect, and protect their retail pharmacies from drug diversion and regulatory noncompliance.

Policies, Procedures, and Education

Establish clear, role-specific policies and procedures for handling controlled substances in retail settings. Provide ongoing, structured education on identifying signs of diversion, regulatory requirements, and proper documentation practices to ensure staff understand both the "what" and the "why" behind diversion prevention efforts.

Standardized Inventory Reconciliation Protocols

Implement consistent, repeatable inventory reconciliation practices across all retail locations. This includes monitoring and matching counts across inventory purchased, received, on-hand, dispensed, expired, and returned – then investigating any unexplained variances. Standardization helps ensure that all staff are following the same process and that discrepancies are promptly addressed.

Enhance Data Integration and Use of Analytics

Utilize drug diversion monitoring software to streamline clerical tasks like accountability reviews and reconciliations. Software with real-time alerting and analytics capabilities can reduce the manual burden on staff, enable proactive identification of suspicious patterns, and support compliance across the medication use lifecycle.

Foster a Culture of Accountability and Transparency

Promote a culture where diversion prevention is viewed as a shared responsibility. Encourage anonymous reporting and ensure that staff understand reporting concerns is a professional obligation, not a punitive act. Visibility, documentation, and open communication should be standard across all retail pharmacies.

Adopt and Evolve the Inpatient Model for Drug Diversion Monitoring and Prevention

Establish an interdisciplinary response team for retail pharmacy drug diversion detection and prevention. This team should operate as a subgroup of an existing hospital-wide diversion committee and ensure operational separation from retail staff. In other words, the diversion monitoring responsibilities should not fall to retail pharmacists or technicians who work directly with controlled substances day-to-day.

Hospital and health system pharmacy leaders who oversee retail pharmacy operations should hold these locations to the same diversion prevention and compliance standards as inpatient settings. By applying inpatient best practices – tailored to the workflow realities of retail – health systems can close the gap and build a diversion prevention strategy that protects all corners of the enterprise.

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