

# CASE STUDY

## PRESCRIPTION FOR SAFETY: TECHNOLOGY IS IMPERATIVE TO DETECT AND PREVENT DRUG DIVERSION



SENTARA®

Sentara and Bluesight Collaborate to Protect Patients, Staff, and the Community



**Catherine Floroff, PharmD**

Pharmacy Manager

~ Sentara Norfolk General Hospital

### INTENDED OUTCOME

The first 'Sentara Promise' we make to patients is to always keep you safe. For patients who are prescribed controlled substances, the health system must account for every dose for every patient and prevent diversion of those drugs into the wrong hands. Drug diversion by healthcare workers can lead to patient harm. Sentara Health uses advanced medication intelligence software to detect and prevent drug diversion which protects patient safety.

"I oversee the diversion responsibilities for my hospital, and my charge is protecting patients and our community," said Catherine Floroff, PharmD, Pharmacy Manager at Sentara Norfolk General Hospital, and lead for Sentara's drug diversion program.

Sentara's initial success with ControlCheck in nursing care areas in 2019 led Sentara Norfolk General Hospital (SNGH) to add the pharmacy module in 2022, expanding their use of the solution within the hospital. After SNGH saw initial success post-implementation, the rest of Sentara Health adopted the pharmacy module across all 12 hospitals in June 2023. Specifically, Sentara's leadership wanted complete visibility of all controlled substance transactions throughout the health system. They wanted to focus a spotlight wherever a risk of diversion was identified.

"It comes down to knowing when, where, and why one employee is administering more narcotics than another," said Floroff. "We want a trusted drug monitoring system to answer those questions."

### CASE STUDY SUBJECT

Sentara Health is an integrated, not-for-profit healthcare delivery system with 30,000 employees and 12 hospitals in Virginia and Northeastern North Carolina, serving patients across the Mid-Atlantic and Southeastern states. The health system is nationally known for its clinical quality and focus on safety.

The health system pursues a disciplined strategy to achieve top 10% performance in key measures across the system. Central to that success is Sentara's pharmacy services, which helps improve patient outcomes. The Sentara Norfolk General Hospital pharmacy department employs 55 clinical pharmacists and 45 pharmacy technicians.

Pharmacy services houses the drug diversion program to protect the pharmacy supply chain across the system, reducing risk and protecting patients. Floroff has overseen Sentara's drug diversion detection and prevention program for four years with interdisciplinary support from a variety of departments including executive leaders, nursing, anesthesia, security, and HR.

Representing pharmacy services, Floroff meets quarterly with stakeholders from Sentara Norfolk General Hospital's executive leadership, nursing administration, security, human resources, and facilities.

During these meetings, she updates the multidisciplinary

# CASE STUDY



team on the status of the diversion program and reviews recent diversion cases and policies that need updates to strengthen the diversion prevention program.

In 2019, Sentara Health implemented a diversion monitoring software solution from Bluesight for its nursing and OR patient care areas. Based on the software's success and user satisfaction, Sentara's leadership opted to expand ControlCheck into pharmacy in 2022. By expanding into pharmacy, Sentara could now have complete accountability for the movement of controlled substances from purchase to receipt into inventory and from dispense to the medication's final disposition. In addition, the software provides reconciliation tools to close the loop when a discrepancy is identified.

This case study details the decision by Sentara to expand drug diversion technology into pharmacies across their vast health system. This analysis profiles Floroff, who provided insight into Sentara's diversion prevention program and the technology chosen to enhance controlled substance accountability.

## THE CHALLENGES OF DRUG DIVERSION

"The threat of drug diversion always exists," said Floroff. "You don't know what is going on within the four walls of a room until you do. I am responsible for ensuring all rooms are diversion-free and that no narcotics get out onto the street."

Prior to implementing diversion prevention technology, unless a nursing leader brought forth a concern, uncovering medication misuse proved difficult because of the manual processes involved. Floroff had been a part of an investigation in which an employee was suspected of misappropriating drugs for their own use. However, the manual processes involved in evaluating medication transaction data were slow, inefficient, and not thorough or evidence based. An improvement was needed.

"Diversion is a serious problem in the U.S. and more so in the last four years. Hospitals are still facing staff shortages and burnout. Onboarding and workflows require a faster pace," said Floroff. "All these factors can lead to diversion. You need sufficient time to assess risk, or you might miss a link in the chain of custody. My constant worry is that medications can get into the wrong hands."

## ANALYSIS OF THE EXPANSION OF BLUESIGHT'S MEDICATION INTELLIGENCE SYSTEM ACROSS SENTARA HEALTH

Sentara's leadership wanted a comprehensive approach to managing diversion across its health system. The expansion of diversion software into the pharmacy aligned with their goals for systemwide standardization, integration, and emphasis on monitoring and reporting.

Floroff and her team assessed drug diversion technology vendors in 2019. Bluesight rose to the top based on its proven ability to identify risks, increase safety, improve workflows, and provide solid evidence-based reporting and analytics. The team also reviewed technology must-haves that addressed specific requirements related to Sentara, such as the need to:

- Offer an integrated approach to other systems with nursing and pharmacy modules.
- Provide opportunities for the anesthesia department.
- Track formularies across 12 hospitals.
- Customize dashboards and reports for leadership.
- Provide strong customer support.

Ultimately Bluesight's ControlCheck was chosen as the drug diversion prevention software in 2019 and remains the solution of record today because of its proven capabilities and consistent outcomes. ControlCheck met Sentara's need for a multi-pronged approach to preventing drug diversion. The software solution provides comprehensive audit coverage of nearly 100% of controlled substances across pharmacy, nursing, OR, procedural, and perioperative environments.

# CASE STUDY

*“We didn’t want a plug-and-play approach, but rather a holistic, source-of-truth solution. We have more control with Bluesight and its integrations with Epic and Omnicell. We’re putting everything together and closing the loop with a wider net.”*

**Catherine Floroff, PharmD**  
Pharmacy Manager  
~ Sentara Norfolk General  
Hospital

“Bluesight was always one step ahead. Technology allowed us to address vulnerabilities. Bluesight and ControlCheck had successfully delivered for leadership, which led us to select and onboard more of their products,” said Floroff.

Bluesight harnesses the power of the latest drug diversion advancements with scalable risk-reduction solutions for Sentara. Specifically, Bluesight provides unmatched technology and tools, resulting in the following advantages.

## INCREASED PATIENT SAFETY

“I position myself as a family member. I would never want an impaired hospital employee treating my loved one,” said Floroff. “My responsibility is to keep patients safe every day, so we want the best surveillance and monitoring to detect misuse and prevent harm to our patients.”

ControlCheck traces every drug dispensed through the corresponding administration, waste, and return to ensure the full dose is accounted for across all documentation systems, care providers, and handoffs. If there is a discrepancy in the math across these transactions, ControlCheck identifies it and provides reconciliation tools to close the loop.

“In one facility, it takes 12 minutes to walk from the pharmacy to the ICU. These are the times and spaces where drug diversion can occur. That’s what I think about, day and night, and that’s why we needed advanced technology,” said Floroff.

## ENHANCED STANDARDIZATION THROUGH SCALABILITY

“We didn’t want a plug-and-play approach, but rather a holistic, source-of-truth solution,” said Floroff. “We have more control with Bluesight and its integrations with Epic and Omnicell. We’re putting everything together and closing the loop with a wider net.”

Bluesight pulls in data from automated dispensing cabinets and electronic medical records to provide controlled substance accountability and maintain uniform documentation practices and procedures across the entire health system. The solution proactively identifies users from high to low risk of diversion. Benchmarking reports identify patterns in medication documentation, allowing Sentara to standardize medication use and improve documentation in every corner of the healthcare facility.

## IMPROVED PROCESSES

Drug diversion is complex, but the ControlCheck system is not. “I can access or switch from nursing to pharmacy modules from the same application,” Floroff said. “What I see is what I need to see. I don’t have to worry if I’m missing anything. It’s easy to filter data and add comments.”

ControlCheck allows users to audit all controlled substance administrations and ensure best-practice documentation across multiple and diverse clinical care areas. In the pharmacy module, the solution reconciles purchases of controlled substances from the wholesaler with electronic vault data to close the loop and identify if a purchase was not received into inventory.

The wholesaler data is now delivered through an electronic data interchange (EDI) as shipments are delivered to the pharmacy. Before the EDI integration, 75% of variances were auto closed by ControlCheck. After the EDI integration, 97% are auto closed.

“We have less manual auditing and improved medication mapping with the pharmacy module,” said Floroff.

## ACCURATE RECONCILIATION AND TIME SAVINGS

“The government requires a reconciliation record from when the facility receives and administers a drug. We can’t have any variation or medications missing,” said Floroff. “When we had

# CASE STUDY

“*The system-wide approach to drug diversion was vital to our constant focus on patient safety. The investment to expand with ControlCheck saves time, resources, and money. This initiative also resulted in greater cross-departmental collaboration to prevent diversion.*”

**Catherine Floroff, PharmD**  
Pharmacy Manager  
~ Sentara Norfolk General  
Hospital

to conduct a manual reconciliation, there were lots of moving parts, which wasn't efficient.”

During the COVID-19 pandemic, ordering patterns changed, as did those who did the ordering and administering. The solution addresses these changes and catches discrepancies.

Before leveraging the pharmacy module, reconciling controlled substance purchases took at least eight hours a month, adding to staff burnout. Thanks to ControlCheck's pharmacy module, Sentara has shifted that time to patient care activities while still meeting all the requirements from the Board of Pharmacy and DEA.

“The automatic medication mapping is a considerable time saver,” said Floroff. “After leveraging the pharmacy module, it now takes less than an hour a month.”

## ANALYTICS AND REPORTING

Satisfying leadership entails having data from multiple sites in one place and a report with visuals that are easy to read. Bluesight provides this and more by continuously gathering and analyzing data on drug diversion trends, which allows Sentara to adapt strategies and policies effectively.

The expansion of ControlCheck into the pharmacy has increased visibility for hospital leaders to know the status of purchasing, dispensing, and administering controlled substances in nearly real time. In addition, the technology identifies user behaviors that deviate from the norm, allowing prompt and appropriate intervention.

“If the Department of Health Professions or the Boards of Nursing or Pharmacy require data, we can now provide it in a timely, easily interpreted manner, eliminating back-and-forth requests,” said Floroff.

Accurate data is essential to prove diversion. ControlCheck uses sophisticated artificial intelligence algorithms to provide actionable analytics from multiple data streams. Some of these analytics include waste patterns, action times, and user mobility. Unusual patterns identified in these analytics could be indicative of diversion.

## RESULTS

“The system-wide approach to drug diversion was vital to our constant focus on patient safety,” said Floroff. “The investment to expand with ControlCheck saves time, resources, and money. This initiative also resulted in greater cross-departmental collaboration to prevent diversion.”

Sentara takes a multi-faceted approach to stop drug diversion, and its medication intelligence strategy has proven vital to leadership's plan. The sophisticated algorithms and analytics deliver trusted answers, informing Floroff and the team when there is more to know.

“We can rely on the accuracy of the data from ControlCheck to inform diversion cases. The analytics from multiple sources open our eyes and provide a 360-degree view of all our medications,” said Floroff.

## CONCLUSIONS

The key takeaway is that Floroff and her team received buy-in from leadership to expand diversion software into the pharmacy because they understood the growing problem of drug diversion. They implemented technology to stop it in its tracks.

Whether it is one hospital or a major health system, both require a proactive approach to drug diversion. Staying reactive can harm patients and reputations. ControlCheck provides advanced technology that takes diversion prevention to a new level while increasing efficiency for those who use it.

“If you don't uncover drug diversion, you're doing something wrong,” said Floroff.