

CASE STUDY

IntelliVault & IntelliCab Transform Prescription Management at OHSU

**Oregon Health & Science University
Pavilion Pharmacy**

RFID-based technology from GSL Solutions delivers safety, efficiency, and financial benefits at health system.

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— Michael Deam, RPh

PRIMARY INTENDED OUTCOME

Safely, accurately, and efficiently dispensing medications to patients is the primary function of pharmacies. Oregon Health & Science University (OHSU) teamed up with GSL Solutions as a beta partner, utilizing its family of RFID products to physically track medications while achieving efficiency in operations, accountability, reduction of labor hours, increased compliance, and higher user and patient satisfaction.

GSL Solutions IntelliCabs for filled prescriptions (Will Call) and IntelliVault for controlled substances (C2’s) stock storage are integrated in a single software for a fool-proof system. The IntelliCab Will Call storage cabinets replaced the manual “hanging bag” system, and the IntelliVault Controlled Drug storage cabinet replaced the manual biometric “steel safe” and manual perpetual log book.

THE CHALLENGE

With its manual “hanging bag” will call system, OHSU was prone to long patient wait time, lost or missing prescriptions, and labor-intensive return to stock activities. Controlled drug storage and management was heavily controlled by pharmacist time and process and procedures (P&P) to maintain inventory control and reporting requirements. OHSU pharmacy rules required pharmacy technicians to have a pharmacist be the only contact with controlled substances.

“Before, the process was pharmacist driven because they were the only ones with access,” says Matthew Spinar, PharmD, pharmacy supervisor of the OHSU Physicians Pavilion Outpatient Pharmacy. If technicians saw an order for a narcotic, they put it to the side because they had to wait for an available pharmacist to actually retrieve the product from their steel safe that was enabled with fingerprint technology. This workflow process caused bottlenecks and periods of long wait times for patients.

OHSU also wanted to improve its inventory management, replacing the error-prone manual perpetual log with an automated and electronic log – and also providing an electronic record of all transactions and user activities of anything that is touched, discretely and in real time.

THE DECISION

Due to the success of the IntelliCab Will Call cabinet program at OHSU, the decision was made to install the IntelliVault Controlled Drug storage cabinet.

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Similar to the IntelliCab's RFID-based random storage and "pick to light" technology, the IntelliVault system provides discrete stock storage and prescription filling of controlled medications (C2-C5), therefore helping OHSU meet several objectives.

First, because users must use their badge to open the IntelliVault and can only access the specific medication that is needed, loss is virtually impossible. Simply using the system creates an automatic log without repetitive scanning. An automated C2 log, "AutoLog", with 100 percent user accountability and medication product tracking vastly increased efficiency and any potential for diversion. This real-time tracking capability provided the level of security that empowered OHSU management to let technicians fill C2 prescriptions, freeing pharmacists to work to their licensure and focus on skilled clinical work.

Michael Deam, RPh, Assistant Director of Outpatient Pharmacy, likes that the IntelliVault system allows for tracking of every single drug movement. He also appreciates that they no longer need to spend as much time in the perpetual inventory log manually recording each prescription dispensed. He estimates savings of up to an hour a day just on the log.

Installation of IntelliVault took some work but it went off without a hitch, says Spinar, thanks to thorough planning. Spinar oversaw extensive dry testing to make sure the server they set up was going to work. Closer to the transition, they integrated the system with OHSU firewalls and brought the physical piece of hardware on site. During an overnight installation, Spinar and his team, as well as a GSL Solutions crew put the new IntelliVault safe in place.

"We prepared for a long time to make sure it would go as planned." The staff had an adjustment period, he says, mostly due to the changed workflow. IntelliVault provides "full autonomy for technicians. It put pressure on the technicians at first because there's really no excuse for them not to integrate any prescription [narcotic] into their normal workflow," Spinar says. "We had to get them to build that into their mindset."

It only takes one time to see just how easy it is to use IntelliVault, he adds. Users simply scan the prescription label and the appropriate drawer and cell lights up. "It's so simple. It tells you what to do next. Staff-wise, the learning curve is very, very small."

THE RESULTS

Spinar's pharmacy is right on the hospital's main campus and dispenses a lot of medications for post-surgical patients. While they don't handle a large quantity of narcotics, Spinar says the volume of prescriptions is high. This means they might fill up to 100 prescriptions for 10 oxycodone pills a day, which represented a lot of pharmacist time. Shifting this workload onto technicians was meaningful, along with pharmacist time saved from eliminating the manual perpetual log and providing better user accountability.

By utilizing technicians to fill C2's, "we've definitely seen a lot less people waiting in the waiting room," he says. Prescriptions are now ready for pick up by the time the patient comes down from the floor. "We didn't imagine before the installation how much of a difference this would really make, but it's huge."

Another benefit centers around reconciling inventory. Before partnering with GSL Solutions, Spinar says they spent more time auditing errors that were self-inflicted than actual discrepancies in that manual log.

"All it takes is one prescription you forgot to log," says Deam. "The counts are off and you're spending [pharmacist] time trying to figure out the missing prescription so your counts balance at the end of the day. You just don't have that with IntelliVault," says Deam, illustrating the high intelligence of the system that enables everything to be accounted for and resolved in real time.

CASE STUDY

AFTER



Return to stock processes have been simplified as well, Spinar says. Only the user conducting the return to stock function can pull medications from the IntelliCabs for will call. When a prescription is pulled from will call, the user has one-time access to the IntelliVault C2 safe. The return goes into the IntelliVault, and the door closes back up for a closed loop. The system then automatically increments the correct NDC inventory.

IntelliVault's receiving process adds another layer of safety check, Spinar says. The staff now scans and links the stock to RFID-enabled SmartBaskets, and the system automatically knows the drug name, strength, and more. They also can enter in the lot and expiration date. The linked basket is returned to the IntelliVault anywhere it fits, and this workflow alleviates time spent manually logging the right NDC, doing the math, and rotating stock.

"We've eliminated sifting through our physical inventory to find any outdated or recalled lots," Spinar says, since they now can easily track lot and expiration dates. We do a simple electronic database search when there is a recall and mark the product for destruction or return to vendor, he says. They can even track if someone historically received a recalled medication.

IntelliVault provides immediate reports of what the pharmacy has on hand. "It's nice to have a system that's always tracking real time what's available in your safe to be dispensed," says Spinar.

Prior to implementing IntelliVault, OHSU saw great success with the IntelliCab Will Call solution. The system provided for more efficient and accurate prescription filling and retrieval of prescriptions ready for patient pick-up, says Spinar. IntelliCabs eliminated misfiling, picking errors, and wasted space while reducing wait times and improving patient satisfaction.

Spinar also appreciates the clean, professional appearance of the system. Staff no longer rummage through dozens of bags to find the right prescription. In the past, they used clear hanging bags, which were very error prone and inefficient. People in the lobby could potentially see identifying patient information through the clear bags. Now, with IntelliCabs, randomly filed prescriptions ensure patient privacy. If a staff forgets to link a prescription to a RFID SmartBasket, the system automatically alerts to help correct the issue. The system is self healing and self correcting.

THE CONCLUSION

It's hard to put a specific number on the time and cost savings OHSU has experienced with GSL Solutions, Spinar says. Preventing miss-sells and bundling errors with IntelliCabs "is worth its weight in gold for patient safety." Improvements in turnaround at the pharmacy counter are hard to measure "but I know it's a lot faster."

Implementing IntelliVault allows OHSU to use its staff members more efficiently. "Pharmacists don't have to mess around with the C2 safe all day," he says.

"It's a great product," says Deam. "We've definitely streamlined our workflow and become more efficient [on how we use our staff]. I would certainly recommend."

OHSU has plans to implement IntelliCab at its second busiest location on campus, which fills 400-500 prescriptions a day.

Spinar and Deam both say the systems have more than met their needs and goals. "Staff members at the pharmacy tell me they don't know how they'd operate without that technology," says Deam.

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CONTROLLED DRUG STORAGE, PRESCRIPTION FILLING, AND RETRIEVAL SYSTEM

- Eliminates shrink and drug loss by replacing today's "open face / open access" controlled drug storage cabinets
- Replaces today's error-prone and manual perpetual log book
- Logs ALL transactions and user activities automatically
- Replaces pharmacist labor with technician labor for C2 filling
- Maintains complete chain of custody and pedigree from stock receiving to prescription filling and patient pick up
- Payback from labor savings in as little as 1 year

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NEW SYSTEM TO SUPPORT STREAMLINED DISPENSING OF PRESCRIPTION MEDICATIONS AT PATIENT'S BEDSIDE

- Physical chain of custody is maintained from filling of prescription through receipt by the patient
- Easy integration to RN notification system and dashboard when prescription is ready
- Signature Capture stores the patient's signature confirming receipt of medications from their bedside
- Real-time inventory of cabinet contents
- Secure storage of patient's home medications
- Patient monographs printed on demand

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THE LEADER IN WILL-CALL STORAGE



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STANDS ALONE OR INTERGRATES WITH INTELICAB

- Secure storage for will-call
- Proven ROI based on labor cost savings
- Improves customer service through a decrease in wait time
- Sends the patient a text message when RXs are ready with AutoNotify
- Integrates with Central fill
- Maintains drug pedigree, lot, and expiration date when integrated with IntelliVault



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