PharmScript, LLC case study

Transforming medication management: The impact of BD Pyxis™ MedBank™ Solutions in long-term care facilities

BD

In long-term care (LTC) facilities, the difference between timely medication and delays can have a profound impact on patient outcomes, as well as operational costs. Closed-door pharmacies (CDPs), which serve the needs of thousands of LTC facilities, are under constant pressure to provide fast, reliable and compliant access to medications. Yet, many have been stuck with inefficient manual systems for years, leading to medication delays, operational bottlenecks and costly errors. Alex Black, Vice President of Operations at Somerset, New Jersey-based PharmScript, a closed-door pharmacy serving 1,100 facilities throughout the country, agrees, saying, "When I think of PharmScript pre-automation, the best word to describe it would be 'archaic.'"

With these challenges in mind, PharmScript adopted BD Pyxis™ MedBank™ Automated Dispensing Cabinets (ADCs)—a solution that automates medication inventory management processes. This case study explores the impact that implementing BD Pyxis™ MedBank™ ADCs has had on multiple LTC facilities served by PharmScript.

Evaluating ADC impact

To assess the effect of implementing BD Pyxis™ MedBank™ ADCs, a mixed-methods study was conducted in two LTC facilities served by PharmScript. Historically, these facilities relied on manual emergency medication kits and were transitioned to a BD Pyxis™ MedBank™ ADC equipped with BD Pyxis™ CUBIE™ Pocket technology. These electronically-encoded medication storage pockets are prepared in PharmScript's CDP and securely transported to the LTC facilities, where they automatically integrate with the ADC system for real-time inventory tracking and medication management.

The study employed qualitative and quantitative evaluation methods, including ethnographic workflow modeling, inventory tracking and nurse perception surveys. The goal was to determine how replacing manual medication systems with BD Pyxis™ MedBank™ ADCs affected clinical workflows, medication availability, cost and overall efficiency.

Results

Implementation of BD Pyxis™ MedBank™ ADCs resulted in substantial improvements for the LTCs in critical areas:[1]*

Operational efficiency

The study revealed an 87% reduction in the time required for a nurse to access a controlled medication, and a 71% reduction in the time needed for a non-controlled medication, freeing clinicians to **spend more time on patient care**.

Pharmacist check-time labor was reduced by 80%, while technician preparation time decreased by 59%, **streamlining workflow and eliminating unnecessary manual processes**.

"The time savings resulted in better patient care, faster access to medications and significant cost savings for both the pharmacies and the facilities."

–Alex Black, Vice President of Operations, PharmScript

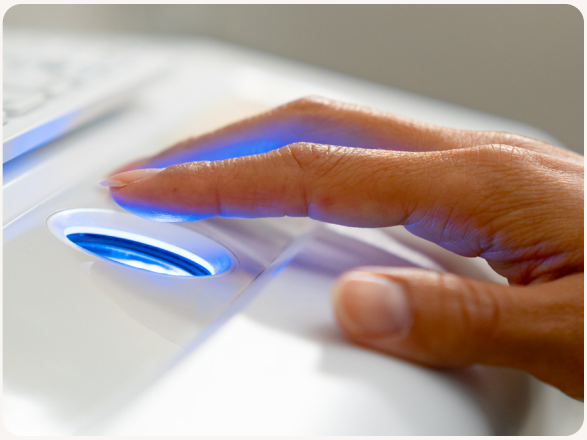
Cost savings

Pre-automation, the two facilities relied on local retail pharmacies to fill urgent medication needs, resulting in high delivery costs. After BD® Pyxis™ MedBank™ ADC implementation, **unscheduled deliveries were greatly minimized** (reduced by 84%), resulting in a 96% reduction in related costs.

Regulatory compliance and safety

The BD® Pyxis™ MedBank™ ADCs provided greater control over medication tracking and compliance, particularly with controlled substances. By limiting access to specific medications and automatically logging all transactions, the system **improved both regulatory compliance and medication safety**.

Nurses reported that the ADC system made medication management **easier and more secure**, with 71% of survey respondents expressing satisfaction with the switch from manual kits and 81% agreeing that **locating specific medications was easy** with BD® Pyxis™ MedBank™ ADCs.



Patient care

"We were able to increase the medication footprint in each facility by an average of 36 medications," Black highlighted. This expansion **improved patient access to essential medications** and **increased access of emergency medications** by 40%. The reduction in the time required to access medications also supports timely patient care.

Conclusion

BD® Pyxis™ MedBank™ ADCs have reshaped how PharmScript and the LTCs they serve manage medications. What began as a strategy to improve efficiency has delivered far-reaching benefits: **reduced labor costs**, **faster medication access** and **enhanced regulatory compliance and safety**.

This case study illustrates the significant financial and operational benefits of adopting automation in LTC settings. ADCs can play a vital role in reducing costs and enhancing care delivery in the LTC industry.

1 Black A, Tribble D, Strumpf J, et al. Impact of automated dispensing solutions in long-term care facilities and closed-door pharmacies: A mixed methods study of medication management. *J Am Pharm Assoc (2003)*. 2024;64(3):102065. doi:10.1016/j.japh.2024.102065

*The following results were observed over a 90-day period after replacing manual emergency medication kits with the BD Pyxis™ MedBank™ automated dispensing cabinet (ADC) system at two long-term care facilities serviced by an off-site pharmacy

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