



The KL60 Robotic Dispenser from Kirby Lester

By Katherine Lee-Mosio, PharmD

University Village Pharmacy is one of seven outpatient pharmacies operating at the University of Illinois Medical Center (UIMCC) in Chicago, Illinois. They serve the University of Illinois at Chicago (UIC) campus community, which includes patients of the medical center, university employees, and students. It also serves three UIMCC physician-based clinics located in the same building. The staff consists of three pharmacist FTEs and two technician FTEs.

There was a time, only a couple years ago, when we actually chose to reduce our automation by removing an automated dispensing device that was technologically outdated. At the time, due in large part to our experienced and efficient staff, the transition to operating without dispensing automation was not overly disruptive to our workflow. However, dispensing activities, prescription volume, and patient care responsibilities have all expanded significantly since. As negotiating these activities became more of a challenge, especially during high-stress peak periods, it became evident that a reevaluation of automated dispensing technology would be necessary.

Determining Need

In the period between automated processes, we manually filled prescriptions using counting trays and a small, tabletop pill counter. After reviewing our processes to determine where we needed the most help, our overall goals in implementing an automation product were to enhance patient safety and streamline drug dispensing through maximized prescription accuracy, expedited vial labeling and sorting, and the ability to customize and deliver data and usage reports. We also needed a machine that integrated with our prescription data software system, came in a compact size, and required little maintenance, yet had accessible customer support. Around this same time, Kirby Lester contacted the UIC College of Pharmacy about participating in a pilot of their KL60 robotic dispenser. During our review, we found that the KL60's specifications met our goals for an automatic dispensing system. With three other UIC outpatient pharmacies already using automation, University Village Pharmacy was the best fit for the pilot and we began using the KL60 in June 2010.

Workflow Impact

As a stand-alone piece of equipment, the compact unit was fairly easy to install, and we saw a rapid improvement in our workflow process by reducing the labor-intensive tasks associated with filling prescriptions. Taking up a very limited amount of floor space—the KL60 fit between two drug shelves—the device's 60 storage and dispensing cassettes effectively met the needs of our mid-volume pharmacy, as many of our top-dispensed drugs are prepackaged (in-

halers, topical preparations, birth control packs, etc). Though the cassettes cannot be calibrated onsite for new NDCs, we are able to order new cassettes and receive them in a few business days.

In addition to improving workflow processes, the essential function of robotic automation is that it must improve patient safety. To ensure dispensing accuracy, the KL60 system offers bar code verification, drug image display—including drug name, NDC, and prescription number—and user fingerprint identification and validation during cassette replenishment and restocking. Drugs also are dispensed directly from the cassette to the vial, thereby eliminating the risk of cross-contamination.

The KL60 accommodates two vial sizes (we use TriState 16 dram and 40 dram vials), and vial replenishment is as easy as pouring the vials into the designated storage bins. Cassette maintenance is also minimal, only requiring canned air to occasionally clean dusty cassettes. Users can set cleaning reminders that will appear on the main screen at designated times. In addition, the KL60 labels and sorts all completed prescriptions.

As expected with the installation of any new technology, there were some obstacles to overcome. Though we experienced some challenges in integrating Kirby Lester's software with our prescription software system, Kirby Lester's technical support team worked with our information technology pharmacist to resolve these issues.

Conclusion

Though there are some clear-cut benefits to automating a process, many of the benefits are what I would consider to be intangible. Most important, the integration of the KL60 elevated the level of patient safety and has resulted in greater peace of mind for our staff. When verifying prescriptions, it is reassuring to know that it was properly labeled and counted. Ultimately, an automated dispensing system is a valuable tool to standardize the prescription filling process by preparing prescriptions exactly the same way every time, and this automation helps us maintain high levels of accuracy, efficiency, safety, and productivity. ■



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