

CASE STUDY:

ROI and Patient Impact Results of Hospital Based IMS and Pick-to-Light Technology at Maury Regional Medical Center



Maury Regional Medical Center (MRMC)
Columbia, TN

MRMC was the first hospital in the country to utilize “Beacon” pick and put-to-light inventory management system. Both hospital errors and inventory have been positively impacted.



PROJECT SUMMARY

CHALLENGES:

First, improve medication filling accuracy from the pharmacy to the ADMs and dispensing accuracy to the patient. Second, achieve this goal within the pharmacy’s existing space and increase staff efficiency and productivity. Third, achieve a standardized approach for quarterly inventory counts in an efficient and accurate manner.

SOLUTIONS:

ATP® – High Speed Unit Dose Packager

Beacon® – Pick-to-Light IMS

RESULTS:

- **Accuracy:** A 50% initial reduction in medication errors tagged as “dispensing errors” (Note: dispensing errors can also occur in other locations, such as from the ADM). The pharmacy experienced a 65% decrease in dispensing errors over a three-year period.
- **Efficiencies:** The pharmacy’s new design and systems improved workflow by reducing the time to accomplish dispensing tasks. The system provided high-density storage, which reduced the pick and fill time while allowing multiple users to perform stock and pick functions simultaneously.
- **Savings:** Carrying inventory costs were reduced by \$645,325.00 over a four-year period for an average savings of \$161,331/year. The system’s perpetual inventory accuracy resulted in a cost savings of \$24,000 annually to conduct a physical inventory count.

Beacon® and ATP® Systems Focus on Patient & Staff Safety

Maury Regional Medical Center (MRMC), located in Columbia, TN, is the largest medical center from Nashville to Huntsville, and was recognized by Truven Health Analytics as a '15 Top Health System' in 2015. The Center operates three hospital pharmacies, an outpatient oncology clinic pharmacy, and serves 275 beds throughout middle Tennessee state. In their search for a new pharmacy solution and already limited by space constraints, they identified a key requirement—a system that would allow them to barcode products for bedside medication verification. After conducting a formal review of five vendors, they narrowed their search and formally reviewed the three top candidates.

TCGRx BEACON AND ATP SYSTEMS EMERGE AS CLEAR CHOICE

After a thorough review, TCGRx's Beacon® and Automatic Tablet Packaging (ATP®) systems emerged as the clear choice. Two important factors in the selection of the Beacon system, were that multiple users could simultaneously pick orders and stock medication with the pick-to-light feature, and the absence of mechanical parts that could potentially increase system downtime. Furthermore, driven by the goal to improve accuracy prior to bedside administration, the selection committee felt that ATP's unit dose pouch labeling, coupled with Beacon's barcode scanning of orders and medications dispensed, best supported this goal. A bonus was the ability to track utilization for improved inventory control.

BAR CODING & UTILIZATION STUDIES REDUCE INVENTORY LEVELS

Maury Regional's initial objective was achieved, despite an aggressively tight time frame. The ATP packager aided the "cart-fill" portion of their daily meds (their hybrid system provides approximately 75% dispense through ADMs and 25% as daily cart fill). Gaining increased efficiencies over time (with the assistance of TCGRx), MRMC realized additional benefits from the utilization information and the perpetual inventory system. They realized an immediate decrease in inventory cost of 8% and a 4-year decrease in carrying inventory cost of 43.7%, despite an average annual medication cost increase of 3-8% per year. Additional benefits of the Beacon/ATP systems include space savings, ordering assistance, creation of drug families that connect multiple NDCs to one unique identifier, and system redundancy so inventory information is always available.

"With the Beacon and ATP solutions, employee confidence in the accuracy of the dispensing process has soared."

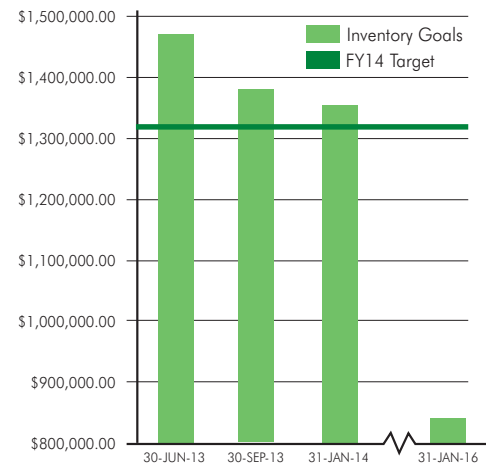
MINIMIZING SPACE LIMITATIONS VIA WORKFLOW EFFICIENCIES

From an efficiency perspective, MRMC's workflow has been greatly enhanced. Dispensing requires fewer physical steps to complete, and several users can perform the same tasks simultaneously. Layout efficiencies reduce the amount of time required to conduct a physical inventory. A new quarantine process allows new meds, not in the system, to be registered in the system prior to placement in inventory. Overall, the Beacon and ATP systems have created a more efficient inventory management system for Maury Regional.

TCGRx: A TRUSTED, STRATEGIC PARTNER

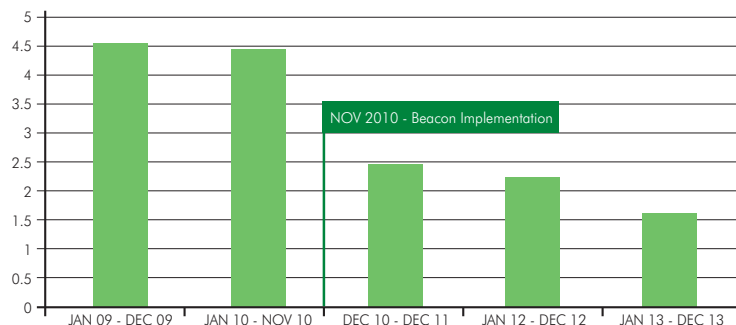
TCGRx provided on-site training to all MRMC staffers for both ATP and Beacon and assigned a large implementation team to assist with the initial set-up and go-live process. According to Jeff Binkley, Director of Pharmacy at MRMC, "with the Beacon/ATP solution, employee confidence in the accuracy of the dispensing process has soared, which means patient

Pharmacy Goals FY2014



safety is optimized, while multiple users can also simultaneously contribute to workflow—a win/win for everyone." With an initial 65% reduction in reported medication errors tagged as "dispensing errors", TCGRx has become a trusted strategic partner with Maury Regional Medical Center pharmacy, ensuring a safe medication environment for both patients and pharmacy staff alike.

Pharmacy Dispensing Errors as a % of Total Medication Errors Reported



For more information, visit us on the web at www.TCGRx.com

