



IV robotics produces reliable source of ready-to-administer (RTA) syringes at Moses Cone

Customer Profile

Moses H. Cone Memorial Hospital is a 628-bed, acute-care hospital, the flagship institution of the five-hospital Cone Health located in Greensboro, NC.

The Challenge

When premix, RTA (ready-to-administer) drugs go on shortage, it results in having to resort to other sourcing or production methods. This increases complexity and risk, both in preparation and administration of IV drugs.

Supply chain disruptions were causing issues for Moses Cone caregivers. Outsourcing for some products led to restricted catalogs, look-alikes, limited labeling options, restricted allocations, and other issues. “It was very frustrating for the staff,” said Kevin Hansen, Assistant Director of Pharmacy. “One day our anesthesiology staff would have a syringe in the tray, the next day they would have a vial. It was very disruptive and potentially unsafe.”

The Solution

Moses Cone conducted a detailed evaluation and subsequent implementation strategy for IV robotic insourcing of compounded sterile products using Omnicell’s Central Pharmacy IV Compounding Service.

The subscription model included two IV robots with two dedicated technicians. Moses Cone also assigned an IV specialist technician and a quality assurance pharmacist to the operation.



Moses H. Cone Memorial Hospital Greensboro, North Carolina

Challenge

- RTA drug shortages caused supply chain disruptions
- Outsourcing and finding alternatives created safety issues

Solution

- Omnicell Central Pharmacy IV Compounding Service
- Subscription model includes IV robots with dedicated technicians
- Extended BUD (beyond-use dating) with stability-indicating method studies using the Formulary Toolkit (FTK)

Impact

- Enhanced patient safety
- Reduced IV medication costs – **50% cost savings** for select IV preparations
- Improved operational efficiency
- Stabilized supply chain of RTA drugs

The Impact

The IV Compounding Service enabled Moses Cone to enhance patient safety, improve efficiency, and reduce IV medication costs – they achieved a 50% cost savings for select IV preparations. Specific benefits include:

- Regained control over the quality and quantity of IV dose preparation
- Significant decreases in drug waste
- Improved turnaround times in many OR case procedures
- Prevented prep work by anesthesiologists/CRNAs
- Extended BUD for select IV preparations

Evidence-based Approach

Moses Cone sought to meet the ISMP (Institute for Safe Medication Practices) best practice recommendations to maximally provide RTA syringes by standardizing wherever possible on RTA drugs. This would help ensure the highest quality and safety of compounded sterile preparations and meet patient needs where FDA premixes don't exist.

An analysis led the team to focus on batch (non-patient specific) production of 18 non-hazardous RTA preps that would have the greatest impact to patient safety.

ROI Proof

While evaluating the current medication use process throughout the operating room (OR) settings, Hansen uncovered an opportunity to benefit practice with implementation of RTA drugs. As a traditional practice, many syringes in the OR are drawn up in advance of them being needed in case of emergency. If they were not used within an hour's time they were wasted. Hansen believed insourcing with robotics to provide RTA drugs could substantially reduce waste, since the syringes would not need to be wasted if they were not used.

To build the business case, pharmacy teamed with internal financial analysts. They built a cost accounting model to show a percent return at the drug level. All costs were included, such as drugs, materials, labor, overhead, and other expenses. Robotic insourcing also made it possible to begin an extended BUD program with sterility testing of each batch, further reducing waste.

“ IV robotic insourcing allows us to protect our supply chain, to continue providing ready-to-administer products and to avoid switching to other products that could be less safe.”

“ It was important to evaluate the goals of the program and ensure that each preparation included was meeting those goals. This required us to review how these drugs are used throughout the institution and determine the value each brings.”

- **Kevin Hansen, PharmD, MS, MCPS**
Assistant Director of Pharmacy
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