

Safe Label System SLS 500i from Codonics

By David Brudapast, RPh

In the fast-paced environment of the OR, errors in syringe preparation and selection as well as documentation inaccuracies can occur for a number of reasons. Prepared medications are often in similar bottles with little to indicate a difference in dilution, introducing the potential for dosing errors. The labeling process can be time consuming, and too often a product double-check is not conducted at the moment of preparation, risking mislabeled syringes. In addition, unused syringes that cannot be properly identified are disposed of, resulting in inventory loss and inaccurate billing.

Prior to 2012, anesthesia personnel in the OR at St. Vincent Charity Medical Center labeled each syringe with a handwritten, color-coded adhesive tape that included the anesthesia drug's name, strength, dilution, and final concentration. This process was prone to human error due to illegible handwriting and the possibility that a syringe could be incorrectly labeled. It was also very time-consuming and difficult to develop pre-made labels for the most frequently used anesthesia products. We needed a new, automated system.

A Labeling System That Enhances Formulary Creation

St. Vincent Charity Medical Center is a 438-bed Catholic hospital located in downtown Cleveland, Ohio, with specialties in spine and orthopedics, bariatric surgery, and cardiology. The hospital currently uses automated dispensing cabinets, electronic health records, and bar code scanning at the bedside to manage, track, and dispense medications. We sought a labeling system that would help improve patient safety within the OR, as well as help our pharmacy to comply with TJC's standards and requirements for syringe preparation and handling.

We chose the Safe Label System SLS 500i from Codonics in the spring of 2012 after participating in a six-week trial demonstration within the OR. This system provides labeling options that include the drug name, diluents, expiration, warning and message alerts, as well as notes to indicate who prepared the medication, the preparation and expiration date, and the dilution percentage. The labeling system is user-friendly, creates 2D bar codes that interface with our anesthesia information management system (AIMS), connects to our electronic health record, and allows us to extend our current BCMA initiatives into the OR.

The SLS 500i Administration Tool permits us to easily create a drug formulary that reflects TJC requirements and American Society of Anesthesiology (ASA) and ISO labeling guidelines to ensure labeling

compliance and error reduction. We can customize the formulary, and set up real-time e-mail alerts to notify appropriate staff of key events, including when a drug cannot be found, is not approved, or should not be used with a specific patient. We also can add audio files of the spoken drug name to the formulary.

Meet Safety and Productivity Goals in the OR

Our anesthesia staff operates the SLS 500i machines. In addition to the training received during the trial period with the system, the staff received hands-on instruction from Codonics' personnel over two days once the system was purchased and installed in the OR. The pharmacy department is responsible for the implementation and maintenance of the formulary, which we developed during the trial period. It is recommended to keep

the formulary as concise as possible, however, you also have to be flexible enough to respond to drug shortages as they occur.

Patient safety is always our first concern, and initiating BCMA has helped our facility meet our patient safety goals. We now have these safety benefits in the OR with the automated labeling system in place, which allows for scanning of both commercial single-use medications and compounded medications with diluents, scanning for pre-check and post-check on all syringes, and the use of audio and message alerts for special situations. All of these steps have helped increase patient safety and reduce medication errors. Any errors are documented through SLS so that in time we will gather enough data to report on the percentage reduction in errors achieved with the new system.

We have received positive feedback from nurses, anesthesiologists and other surgical personnel, and have witnessed many benefits from implementing the SLS 500i during the past year. Not only have we averted the need to hire additional FTEs to maintain our formulary, but we have also experienced increased productivity in the OR as the time required for label creation has diminished. Likewise, we have enjoyed improvements in medication management, patient safety, medication accuracy, and overall compliance. We hope to purchase additional machines for each operating room in the facility so that we can use this system to further enhance our bar coding and patient safety initiatives. ■

Create Customized Labels

The SLS provides a multitude of labeling options including drug name, diluents, expiration, warning and message alerts, preparation notes, and 2D bar codes. All labels are TJC compliant, can be produced in full-color, and are specific to a facility's own formulary.



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