

ASD Healthcare Deploys RFID Refrigerated Drug Cabinets

More than 50 hospitals are using the units, which monitor the quantity and temperature of refrigerated medicines that ASD provides on consignment.

By Beth Bacheldor

Sept. 24, 2007—ASD Healthcare—a division of AmerisourceBergen Specialty Group that distributes NovoSeven (a treatment for hemophilia) and other specialty life-saving pharmaceuticals—is now offering hospitals an RFID-enabled tracking service. This service automatically monitors the inventory of refrigerated medicines the company provides on consignment.

To date, more than 50 hospitals are using the consignment service, which relies on RFID-enabled Cubixx refrigerators developed by ASD (see Drug Distributor Uses RFID to Vend Meds) and manufactured by Helmer. The refrigerated cabinets are fitted with RFID antennas and interrogators to regularly receive data transmitted by active 433 MHz proprietary RF Code tags that ASD affixes to the shrink-wrap surrounding the drugs' packaging. Each tag contains a unique ID number associated with a specific medicine to which it is attached. The ID number and drug information, including the product's expiration date, is stored in a database maintained by ASD.

Blue Vector's Edge Manager intelligent appliances, installed on the top of each refrigerator, act as RFID middleware. The appliances are wired to the refrigerator's interrogator, as well as to a digital thermometer installed inside the unit. This enables the middleware to continually monitor the quantity and quality of each drug by collecting tag and temperature data. Software built into the appliances can filter out duplicate reads and execute rules governing business intelligence, to create events, alerts and RFID data that are securely transmitted via the Web to a Blue Vector Network Manager at ASD. The Network Manager controls all appliances out in the field, and also shares the data with ASD's customer service and fulfillment systems.

The RFID technology enables ASD to distribute the life-saving, high-cost medicines on consignment. Previously, the company was not able to offer them on consignment. The medicines must be stored at specific temperatures to maintain quality, and it was difficult for ASD to closely monitor the drugs' storage temperature and the length of time they were left outside the refrigerator, and to keep tabs on expiration dates. "Now we are able to offer this valuable service because we have very detailed, real-time information on all the pharmaceuticals, back here in our database," says Chad Herron, ASD's manager of business development. The distributor is currently tagging hundreds of unique products.

Whenever a drug is taken from a Cubixx unit, its removal is documented, thanks to an electric switch in the refrigerator door, which activates the RFID interrogator each time the door is opened and closed. This, explains John Beans, Blue Vector's VP of marketing, triggers the device to read all tags on the pharmaceuticals within the unit. Each reading compiles an inventory of all that is stocked in the refrigerator. Customers are only charged for drugs that have been removed from the refrigerators and kept out for at least three hours, unless state pedigree laws require an instant transaction. The service also regularly records

temperatures within the refrigerators via a digital temperature gauge inside each unit.

Because each tag ID number is associated with the drug's expiration date, the RFID service helps keep tabs on a product's remaining shelf life. The system alerts ASD six months before a specific medicine is about to expire, Herron says, enabling ASD to call the hospital consigning that drug and request that hospital staff move it to the front of the refrigerator to make sure it is used first. Another expiration alert is triggered at the three-month mark, at which time ASD asks the hospital to return the pharmaceuticals to the distributor. ASD also replenishes the original customer's supply with a new batch. According to Herron, products stored at correct temperatures generally have a shelf life of two to three years.

RELATED_ARTICLES ASD tracks the drugs from the time they leave ASD's distribution center to the point of arrival at the customer's site. The pharmaceuticals are then placed within the RFID-enabled refrigerators. "One of the big differences between what we do with our consignment program and what others are doing," Herron states, "is we can offer 100 percent, iron-clad pedigrees for all our products. We track each pharmaceutical from the time it is shipped to our distribution centers, and we buy only direct from manufacturers and authorized distributors, so we can make sure they are cold-chain-compliant, and that product integrity is being upheld."

ASD began testing the service late last year, and started rolling out a commercial service in June. The company provides the RFID-enabled Cubixx refrigerators and access to a secure Web-enabled site, where customers can view inventory data for free, as part of its consignment service.

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