

Go beyond inventory control

US-based St Elizabeth Medical Center has taken medical device inventory control to a higher level, leveraging analytics from its real-time **WaveMark** system to reduce costs, optimise facility and clinician performance, and improve overall patient care.

Manufacturer	Name	Product	Model	Change
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-00	100000
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-01	100001
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-02	100002
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-03	100003
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-04	100004
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-05	100005
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-06	100006
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-07	100007
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-08	100008
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-09	100009
Abbott	Abbott V 10	Abbott V 10 2.0mm x 10mm	100000-10	100010

The WaveMark system 'tags' and tracks all medical devices on hand and in use.

St Elizabeth Medical Center (SEMC) is a not-for-profit, 201-bed hospital in Utica, New York, US. Part of the Mohawk Valley Heart Institute – a collaboration combining the best cardiac facilities and professionals in central New York – SEMC's catheterisation laboratory consists of four procedure rooms and a large storage area.

In July 2005, SEMC installed the WaveMark system to track medical device inventory using RFID tags, RFID reading cabinets and stand-alone RFID readers.

Each medical device is 'tagged' with an adhesive RFID label with an embedded alpha-numeric ID. All the device information (manufacturer, type, size, expiration date and so on) is linked to this ID by scanning the barcodes on the device box and then waving the label by an RFID reader, which is connected directly to the internet and the WaveMark application. From this moment onwards, whenever a reader detects that RFID label, the system knows which specific device is being used.

Intuitive device tracking

The WaveMark system also includes a variety of smart cabinets (open shelf, closed shelf, hanging, tabletop and open bins) that read the RFID tags of devices stored in the cabinet every 20 minutes and transmit information about them to the WaveMark system via the internet.

This allows the WaveMark system to complete real-time, item-level tracking, maintaining a perpetual inventory of all medical devices on hand and in use. The system highlights lost and misplaced devices immediately, allowing the inventory control clerk to determine a solution quickly.

Initially, SEMC's WaveMark system comprised nine shelf cabinets, five open bins for tall catheters and two tagging stations.

XPOS point-of-care terminals

In 2010, SEMC upgraded the system by adding four XPOS terminals, one per procedure room. The XPOS includes a touchscreen display, an RFID reader and a barcode reader that allow the WaveMark system to capture not only the device ID, but also specific information about the encounter including patient data, all physicians and clinicians who have interacted with the device, and elapsed time since this interaction occurred.

The XPOS provides an additional safety check by automatically sounding an alarm if a scanned product has expired or been recalled.

With the addition of the XPOS, the WaveMark system is the primary source of information for managing the cost of cardiac encounters. Interfaced with SEMC's McKesson patient billing system to capture charges, the XPOS interfaces with the Merge Heartsuite haemodynamic system via a barcode feed to complete the clinical encounter record and electronic medical record (EMR).

“ SEMC documented inventory cost savings of \$700,000 during the first full year of the WaveMark system's operation. ”

Gaining cost savings and in-depth data

The initial purpose of the WaveMark system was to reduce the cost of inventory by adjusting par level to more closely match usage, eliminating waste from expired products. In addition, the system recommends and tracks bulk buys to ensure that they consist of items consumable within 90 days.

Director of cardiac services Halsey Bagg documented inventory cost savings of \$700,000 in the first full year of WaveMark's operation.

However, thanks to the extra XPOS stations, SEMC can conduct detailed analysis on device usage by room and physician. Reports on cost per encounter, items used by specific physicians and elapsed time since each encounter provide insights on how to lower costs and improve the efficiency of the entire department. ■

Further information

WaveMark
www.wavemark.com

