NXP technology aids 'no sponge left behind' in surgical procedures

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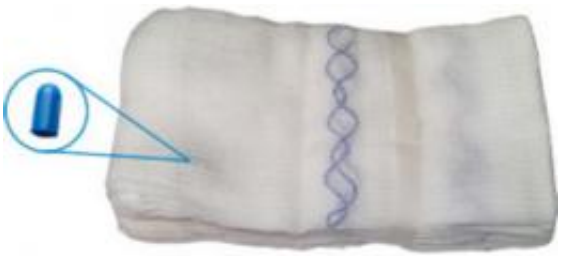

SmartSponge Disposables
Non-intrusive RFID tags do not need a battery and are only about ½" in size.

NXP Semiconductors, the RFID leader for multi-applications, announced that ClearCount Medical Solutions has selected NXP RFID solutions to enable its SmartSponge System. The SmartSponge System can easily and accurately detect and account for surgical sponges placed in a patient's body when undergoing surgery, so that no items are "left behind," thus improving patient safety.

The SmartSponge System is comprised of RFID-enabled surgical sponges; an embedded RFID reader within a user-friendly automated software accounting system; an accompanying SmartWand to detect sponges accidently retained within the body; and a smart disposal system to account for discarded sponges.

David Palmer, CEO of ClearCount, said: “Our SmartWand-DTX and SmartSponge System, the first Food and Drug Administration-cleared RFID-based platform for the operating room, can help save patients from serious complications that can arise when surgical sponges are left behind. Our solutions also provide renewed confidence – for doctors, hospitals and insurance agencies – that they are providing the highest level of patient safety.”

The incidence of retained foreign objects (RFOs) in surgical patients is difficult to estimate, partly because they can remain in the body undetected for years. A 2008 study published in The Journal of the American College of Surgeons reported that foreign objects were left behind in 1 out of every 5,500 surgical procedures. In abdominal surgeries, retained foreign objects are estimated to occur in one out of every 1,000 to 1,500 surgical procedures.

Surgical sponges are widely reported to be the most common RFO, because they can be difficult to visually detect once they are saturated in blood. A landmark article in The New England Journal of Medicine reported that sponges accounted for 69 percent of the retained foreign objects studied. Further, even when counts of sponges and other surgical instruments had been performed, 88 percent of cases involved a final count that had been falsely thought to be correct. In complex, time-critical operations, especially where multiple surgeons are involved, the possibility of retained foreign surgical devices within the patient is unfortunately a reality, and the results can be life-threatening.

Victor Vega, RFID marketing director, NXP Semiconductors, said: “Surgical sponges could be counted manually or with the assistance of a barcode reader, but neither of these methods is able to identify any blood-soaked sponges that are hidden in the body. NXP’s RFID-based system enhances accountability with a unique read before, during and after the surgery, which dramatically improves accuracy as well as

patient safety.”

Each surgical SmartSponge is uniquely identifiable with a serial number that can be acquired wirelessly, even if accidently left within the body, by waving the SmartWand over the patient. RFID-enabled SmartSponges are packaged in pre-defined quantities. As the package is waved over an RFID reader, the unique serial numbers of the SmartSponges are read and the system ensures a match with the pre-determined package count. A SmartBucket™ configured with an RFID reader enables the ClearCount system to directly account for and reconcile all sponges entering into and exiting the sterile field. As final assurance, the SmartWand is used to scan the patient to ensure no sponges are left inside of the patient.

Provided by NXP