

Company Overview

ClearCount Medical Solutions is the first and only patient safety technology company to develop an extendible and flexible platform that prevents retained foreign object (RFO) incidents while improving efficiency. ClearCount has been recognized with an expanding list of awards that reflect the innovative value of the company's RFID platform technology, such as being named one of the top 100 technical innovations of 2009 by *Popular Science*, receiving the 2009 Wall Street Journal Technology Innovation Award, the International Design Excellence Award (IDEA) and more. ClearCount's SmartSponge® and SmartWand-DTX™ systems are the only FDA-cleared, RFID enabled systems for counting and detecting surgical sponges, thereby improving patient and O.R. safety, enhancing productivity, and reducing cost.

Products Overview

SmartSponge® System

The SmartSponge System is the world's first and only RFID-enabled system for counting and detecting surgical sponges that significantly improves patient safety and O.R. efficiency by reducing the incidence of retained surgical sponges. The SmartSponge System seamlessly integrates into the hospital O.R. The SmartSponge System sponges are permanently affixed with a passive RFID tag (smaller than a dime). Because each sponge is uniquely identified, and the technology provides multiple checkpoints with an average of 80,000 counts per procedure, sponge counts can be quickly and easily reconciled. The SmartBucket™ screen highlights any count discrepancies. A quick SmartWand™ scan will identify any sponges remaining in the patient. A SmartTag™ under the patient provides the user with notification that a scan is proceeding properly. As the only closed-loop sponge count reconciliation and sponge detection system, the SmartSponge System saves hospitals time, prevents unnecessary X-Rays, reduces the possibility of user error, minimizes delays in procedures and reduces the hassles associated with count discrepancies.

SmartWand-DTX

SmartWand-DTX is the only RFID-driven detection solution that allows hospitals a low-cost way to begin a retained sponge prevention program. By virtue of its ability to both count and detect, the system can be used to validate manual counting of all tagged sponges before, during, and after surgery. Further, the surgeon is able to scan the patient before closing to identify and locate unintentionally retained surgical sponges. The SmartWand-DTX is easy-to-use and provides more information than other detection systems. The system is not only compact and portable, it also allows for less waste than other options because it is reusable.

Management Team

- David Palmer, Chief Executive Officer
- Steven Fleck, Co-Founder and Chief Technology Officer
- Curtis Groppe, Vice President, Sales
- Dave Haffner, Chief Financial Officer
- Jim Srock, Vice President, Engineering and Operations
- Jim Sweeney, Vice President, Marketing

Contacts

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Prevention of Lost Surgical Sponges: The Drivers

- Published studies (Gawande 2003) indicate that today one in every 1,000 to 1,500 intra-abdominal surgeries results in a surgical sponge being left behind in the patient.
- A retained sponge incident can lead to serious complications, including sepsis, unnecessary X-rays, need for repeat surgeries and even death. Retained objects represent the most frequent and most costly surgical complication, and a leading Sentinel Event reported by US hospitals.
- In October 2008, these “Never Events,” such as sponges left behind after surgery, became unreimbursed by the Centers for Medicare and Medicaid Services (CMS) and an increasing number of private insurers.
- According to the Federal Register (2007), the average Medicare payment for admissions in which an object is left behind during surgery is \$61,962. A recent study by Aon / American Society of Healthcare Risk Management quantified the cost of the average settlement greater than \$100k/incident plus legal fees.
- Research indicates that the large majority of retained sponge incidents – 85% in a recent study by the Mayo Clinic – occur when the counts are believed to be reconciled (“false correct count”).
- One in eight surgeries features a miscount which requires additional surgical time to resolve. A recent large multicenter study of 300,000 procedures demonstrated that a thirty minute increase in O.R. time could nearly double the risk of infectious complications. The authors conclude that strategies to reduce operative time can reduce infectious complications and length of stay.
- Hospital infections add an estimated \$30.5 billion to the nation's hospital costs each year. Patients, insurers and taxpayers pay part of that cost, but hospitals have to absorb much of the cost, according to the Committee to Reduce Infection Deaths. As a result, infections erode hospital profits. Preventing infections can turn a financially failing hospital profitable.

Patient Safety: The Numbers

- The Institute of Medicine reported that deaths from preventable medical errors may reach 100,000 annually: more than those from AIDS, breast cancer and auto accidents combined.
- The Committee to Reduce Infection Deaths reports that a person living in the U.S. is five times more likely to die from visiting a hospital than from not having health insurance.
- National Center for Health Statistics data show that in 2002, there were 33,051 deaths involving complications of medical or surgical care. More from the NCHS:
 - In 2003, there were approximately 1.7 million visits to the nation's Emergency Departments (EDs) for adverse effects of medical or surgical treatment.
 - There has also been an increase in complications of surgical procedures among hospitalized patients over time. From 1990 to 2002 the number of hospitalized patients with a complication rose from 1.4 to 1.9 million or from 4.4 to 5.5% of all discharges.

The ClearCount RFID Technology Platform

RFID readers use antennas to power and communicate with RFID tags. RFID tags contain tiny microchips that hold digital information about the items being tracked. For sponge counts and tracking, only RFID is:

- Highly reliable even in harsh environments
- Able to count multiple sponges without separation
- Faster than manual counting
- Able to read through blood and tissue
- Smart — always unique, always ready

ClearCount products have passed all required electromagnetic compatibility (EMC) testing to ensure compatibility with other devices in the hospital environment.