10 Reasons Why Hospitals Implement RFID
Impinj, Inc. holds the #1 market share in the UHF RFID industry for tag chips, reader chips and fixed readers. Working with a global network of partners, Impinj provides high-performing RFID solutions to end users around the world.

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Our Expert

Tracy Hilstrom is a Sr. Product Line Manager who focuses on Impinj’s Reader & Antenna products. Tracy analyzes trends in the healthcare industry to identify ways that RFID can help hospitals locate assets, optimize inventory, manage patient care and improve overall operations.
Running a hospital is an enormous logistical challenge. Many hospitals have relied on barcodes and other labor intensive processes to track and manage assets, patients, medications, and more. But these methods divert time and attention away from the primary focus of quality patient care and are often inaccurate measurements as they rely on busy staff members with other priorities.

Today RFID is helping hospitals throughout the world to improve organization, cut costs, and eliminate healthcare risks. Read more to learn about the reasons it benefits hospitals to deploy an RFID solution now.
RFID Helps Locate Assets

Hospitals are tasked with keeping track of an incredible amount of equipment. Much of this equipment, including patient monitoring devices, wheelchairs, mobile workstations, stretchers, portable x-ray machines, infusers, and pumps, is very expensive.

Because these assets are continually moving from place to place, they are easy to lose. Ekahau Inc. estimates that there is nearly $4,000 worth of hospital equipment per bed lost or stolen in the average hospital every year.

Hospitals must then lease new equipment, which can cost hundreds of thousands of dollars annually.
At King Hamad University Hospital (KHUH) in Bahrain, RFID technology was integrated into the operation of the hospital from the day it opened its doors in 2012. The hospital sought a **fully automated solution to assist in the management of its vast array of assets**. KHUH’s RFID system has not only automated the tracking of assets, it has allowed for better security of those assets decreasing unnecessary replacements of expensive medical equipment.

This is where RFID can help. By tagging hospital assets and installing RFID readers at key locations throughout the facility, items can be easily monitored. Hospital staff gains real-time knowledge of each asset’s location, as well as status information about whether the item is in-use or available.

**Tracking equipment with RFID prevents loss, and saves hospitals associated replacement costs.**
RFID Improves Emergency Response Time

The ability to locate all hospital equipment in real-time has more benefits than just reducing asset loss. It also allows hospital staff to respond more quickly and accurately to emergencies.

Finding important equipment quickly is essential in the event of a crisis. Staff cannot afford to waste precious moments searching an area for a defibrillator, for example. Tracking assets with RFID gives medical professionals real-time knowledge of where the nearest necessary device is located, and speeds up their ability to provide quality medical care.

RFID can also be used to guarantee the presence of certain essential items in a designated zone, making sure that assets are properly distributed and restocked throughout the medical center in case of emergency. Some medical centers have been tagging emergency medical kits in addition to larger assets to ensure that they are filled with the proper tools and medication, and distributed properly throughout the hospital.
TOP 10 REASONS WHY HOSPITALS IMPLEMENT RFID

3» RFID Improves Staff Utilization

At the Ohio State Medical Center, nurses are often called “hunters and seekers”, because they spend so much of their time searching for equipment and consumables. More than one third of nurses spend at least one hour per shift searching for equipment—a waste of valuable medical staff.

Using RFID to track assets means that staff can spend less time conducting inventory or searching for lost items. An RFID system provides a comprehensive picture of the hospital’s inventory, including item status, expiration dates, and amount of usage, all without relying on arduous manual processes.

This means that hospital operations are more efficient and cost-effective, and that the staff is able to spend more time with patients to assess their health problems, provide guidance and support, and perform post-operational monitoring. In this way, the staff provides higher quality healthcare for their patients.
4» RFID Enables Access Control to Improve Security

Hospitals also utilize RFID technology to restrict access to equipment, medication, or information, thereby improving facility security.

For instance, hospitals can configure equipment to require the presence of an RFID-enabled staff badge to activate or move a device. In this way, management can limit the use of certain valuable assets. RFID-based restricted access both prevents and deters theft, as it makes stealing equipment more difficult, and requires a properly-programmed staff badge to use it, once stolen.

RFID can also be used to restrict access to areas, such as pharmaceutical supply rooms and patient records, by making RFID badges programmed with the proper entry codes necessary for entry. This access control can prevent the theft of hospital supplies and drugs, and the trespass into secure, confidential records by unauthorized persons.
5. RFID Helps Monitor Patient Location

By outfitting patients with RFID-enabled wristbands or ID tags, hospitals have the ability to keep track of all patients. This is particularly helpful in mental health care or elder care facilities, where some patients—such as those suffering from Alzheimer’s—may become confused or lost.

RFID tracking also allows staff to view and improve patient flow. For instance, if a patient is sent from the ER to radiology, and then on to a different room to get a blood test, wait times at each new room can be lengthy.

RFID not only makes these wait times and inefficiencies visible so processes can be streamlined, but it also allows for the automation of caregiver notifications.

Monitoring patients with RFID has the potential to reduce wait times, and increase patient satisfaction and safety.
6» RFID Ensures Authenticity and Quality of Pharmaceuticals

According the United States Food and Drug Administration, 10% of the medicine sold in the US market is fake. In a world with such high levels of drug counterfeiting, it is important to authenticate hospital pharmaceuticals to ensure patient safety.

By working with pharmaceutical companies and pharmacies to tag and trace drugs across the supply chain, hospitals can be assured of the authenticity of their drugs. They can also use RFID to gain real-time data on parameters such as temperature and moisture levels, and configure their RFID systems to provide alerts in the case of conditions that could threaten medication quality.
7» RFID Can Prevent Substance Misidentification

Misidentification of drugs can have very serious consequences. For instance, a dialysis patient in 2011 was accidentally given a lethal dosage of a drug that induces paralysis instead of the prescribed antacid. The nurse who administered the medication cited the similar packaging as the reason for the mistake.

When drugs carry RFID tags that identify them, healthcare professionals do not have to be relied on to identify drugs by containers. By scanning a drug’s tag, a staff member is able to access all the information about it, and verify that it is the correct drug to administer.

The misidentification of blood types is also a danger in health centers; blood transfusions of the incorrect type of blood can result in death. Using RFID tags to identify blood containers can help. A hospital staff member can conduct a final scan of the tag on a blood container to verify that the type being used is correct. The misidentification of other substances in use in the hospital can be similarly prevented with RFID as well.
RFID Helps Correctly Identify Patients

Many health professionals are concerned about the growing number of patients who are misidentified before, during or after medical treatment. **Patient identification errors can cause patients to receive improper dosages of medication, or completely wrong treatment.** Other related patient identification errors could lead to inaccurate lab work and results reported for the wrong person, resulting in misdiagnoses related medication errors.

Some hospitals are using RFID to correctly identify patients, and prevent the above errors. By giving each patient an RFID-enabled bracelet encrypted with confidential medical history and treatment information, medical professionals are able to easily identify patients, access their records, easily see patterns, and update medical information.
9» RFID Improves Inventory of Consumables

Hospitals have massive inventories of consumables with diverse expiration dates. Because of this, many products are simply thrown away unused. Tagging consumables with RFID allows hospitals to not only eliminate manual inventory processes that waste time, but enjoy greater inventory accuracy and better utilize their consumables.

Drugs can be tagged with their national drug codes (NDCs), and LOT numbers, which denote the specific batch of the drug, and can contain their expiration dates. When items are inventoried via RFID readers, software can issue alerts about which are recalled or expired. This allows staff to remove all compromised items from use, and make sure the use of soon-to-be-expired products is prioritized over other products.
Tagging consumables with RFID also means that hospitals can move toward **vendor-managed inventory**. With vendor-managed inventory, the vendor is responsible for placing products in the hospital, and retains ownership of the given products until they are used.

In this model, the **hospital pays only for the products it uses, which reduces costs.**

Additionally, because responsibility for maintaining the inventory is placed with the vendor, the hospital spends less time managing and ordering products.
10» RFID Enables Wireless Temperature Sensing

Storing pharmaceuticals, tissues, organs, vaccines, reagents, biohazard material and other consumables at the proper temperatures and humidity levels is crucial to hospital operations. If a single material is not properly stored, it can endanger lives, cost a hospital millions of dollars and destroy its reputation. In spite of the importance of accurately monitoring temperature and humidity, most hospitals continue to rely on manual documentation, which is time-consuming and subject to error.

**RFID-enabled sensors placed inside refrigerators can help ensure that consumables are not compromised** by transmitting radio signals to readers that include environmental data. Integrated software is then able to issue alerts to staff members when temperature or humidity exceeds software-programmed thresholds.
As you can see, RFID technology enables hospitals to drive new operational efficiencies through automation. Eliminating redundant tasks allows hospital staff to focus on improving patient care and safety.

In summary, hospitals can gain the following value from RFID solutions:

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✓ RFID Improves Emergency Response Time
✓ RFID Improves Staff Utilization
✓ RFID Enables Access Control to Improve Security
✓ RFID Helps Monitor Patient Location
✓ RFID Ensures authenticity and quality of pharmaceuticals
✓ RFID Ensures authenticity and quality of pharmaceuticals
✓ RFID Can Prevent Substance Misidentification
✓ RFID Helps Correctly Identify Patients
✓ RFID Improves Inventory of Consumables
✓ RFID Enables Wireless Temperature Sensing
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