RFID: Real solutions for health care.

RFID’s promise to transform
Radio frequency identification (RFID) is already proving it can cut costs by enabling more efficient and timely tracking of goods in industrial and retail supply chains. Similarly, the health care community is now seeing tremendous benefits in shipping and receiving efficiency, as well as patient identification, error reduction at point of care, medications management, and real-time asset and employee tracking.

Today, RFID offers the ability to improve patient care by utilizing the latest in medical applications, including:

- Implantaing RFID chips inside surgical instruments to ensure they're not left inside a sewn-up body
- Affixing RFID labels onto surgery patients to confirm their identity and the exact procedure to be performed
- Tracking the disposal of hazardous medical waste materials, such as needles
- “Tagging” patients with RFID chips containing complete medical histories.

Highlights

- Ensures greater patient safety and accurate patient identification at the point-of-care
- Provides asset tracking capabilities to reduce operational, inventory and labor costs
- Enables patient tracking to enhance safety as well as increase productivity of caregivers
- Improves medications administration to reduce medication errors
- Provides a simple tracking solution of medical supplies from the factory to storage shelves, enabling efficient inventory management
- IBM provides a total RFID solution, from business case and deployment strategies to solution build and pilot programs, enterprise rollout and integration
Bolstered by key advantages over barcoding, RFID clearly has the potential to transform health care. While the benefits can be substantial in terms of enhancing patient safety, reducing operating costs and optimizing assets, they do not come automatically. Companies need to have both the right solutions and the appropriate skills to take full advantage of this exciting technology.

IBM is implementing solutions now

Today IBM is providing the right RFID solutions, not just for supply chain management, but for the broader health care marketplace. Among those benefiting are the many small to mid-size providers and clinics looking for an edge — from improved operational efficiency to enhanced patient safety — against larger competitors. RFID solutions that IBM is now implementing include:

Patient safety at point-of-care

Everyone has heard about tragic wrong-site, wrong-patient and wrong-procedure surgeries. Using an RFID tag attached to a patient, a physician can now verify the correct patient, procedure and site — prior to the start of any invasive procedure. In the operating room, a handheld reader is used to confirm the information on the tag, the patient’s chart and ID wristband.

Patient tracking

Increasingly, hospitals want to track patients in real-time, and IBM is providing those customized solutions. RFID tags can be attached to ID bracelets of all patients, or just patients requiring special attention, so their location can be tracked continuously. Physicians can use the RFID system to easily locate patients, increasing their productivity on rounds. RFID tags can also be placed on door locks to improve safety for the infirmed, elderly and infants — or on bed rails, to reduce bed exit accidents. Additionally, tags are being used to reduce errors in patient identity authentication for admission, diagnostics, interviews and release.

Benefits of RFID over barcodes

RFID is the use of radio frequencies to read data electronically that is stored in small devices called tags. Anything that RFID tags can be placed on or in can be tracked, including drugs, hospital equipment, and, with prior approval, personnel or patients. The advantages of RFID over previous identification and tracking technologies, such as barcodes, include:

- No line of sight requirement, so there is no need to directly expose labels to readers.
- Multiple tags can be read rapidly and simultaneously, resulting in faster movement of goods in the supply chain and easier tracking of equipment in a hospital.
- More timely information for decision making, as RFID is able to track events, people and medical equipment in real time.
- Ability to read and write, providing greater flexibility.
- Ability to store a larger amount of data on smaller footprint.
- More robust form factors that can withstand chemicals, damage and other harsh treatment.

IBM is using RFID to help caregivers scan patient ID badges to authenticate and access appropriate levels of information and clinical data. For instance, RFID tags containing full patient histories can provide emergency workers with a potentially life-saving “head start” in making treatment decisions. Or alert a nurse to a patient’s medication allergy at bedside. Or inform a doctor making rounds to recent test results.
Asset tracking
IBM RFID asset tracking solutions are helping hospitals better manage highly mobile medical equipment, such as IV pumps and wheelchairs. Asset tracking uses RFID tags to transmit location data to workstation software, which displays the data on a floor plan of the hospital. Trained nurses can use the software to locate the items during their daily routines. Not only does the hospital reduce inventory and labor costs, but nurses save hours a day that they can devote to patient care.

Meds management
An RFID-enabled meds management solution allows a clinician to scan a patient’s wristband to validate identification and review current orders from a physician. Likewise, tagged medications can be scanned to verify that patient, medication, dose and timing are consistent and accurate. In another application, RFID-enabled prescription bottles have the potential of signaling when the container is opened and can provide caregivers with a record that indicates when medicines are taken properly. In each instance, IBM is developing a solution to assist caregivers and ensure patient safety.

Clinical supplies management
As in retail, RFID in health care provides a simple, low-cost solution that allows tracking of supplies from the factory to storage shelves. By enhancing supply chain efficiencies, hospitals and clinics achieve improvements in availability of supplies, less duplication and loss of equipment, and savings in inventory costs.

End-to-end, start to finish
Through our deep commitment and breadth of capabilities, IBM can help guide you through your RFID transformation—from business case and deployment strategies, to solution build and pilot programs, to enterprise rollout and integration.
The IBM advantage
IBM is now leading the way in the development and integration of custom RFID solutions to provide dramatic benefits for health care providers, caregivers and patients—as well as insurers, pharmaceuticals and medical manufacturers. At the same time, IBM is developing exciting solutions to integrate disparate IT systems for doctors and hospitals and capitalize on the benefits of RFID.

IBM’s RFID solutions enable users to essentially collect, integrate and manage data collected from tags, readers and even wireless Wi-Fi networks. Importantly, IBM systems are massively scalable, enabling hospitals and clinics to handle an unpredicably large stream of data, all transmitted without the normal, slowing factor of human input. These systems can be deployed in stages and are capable of scaling for full business utilization. RFID’s automation of many business processes will make your organization more responsive, flexible and cost efficient.

A leader in RFID solutions for more than 10 years, IBM offers the required business consulting, infrastructure consulting, integration services and scalable middleware, backed by proven industry-accepted standards. IBM also has strategic alliances with leading hardware and software vendors who are well versed in how RFID can help transform your hospital or clinic into a flexible, efficient health care environment.

For more information
To learn more about IBM RFID solutions in health care, please visit:

ibm.com/solutions/rfid