

# Using Advanced RFID to Support Medication Inventory Oversight of Shelved Stock in Hospital and Health System Pharmacies

*Benefits of advanced RFID technology to enable 100% medication visibility of both shelved and kitted medication inventory stock in hospital and health system pharmacies.*

## Overview

Advanced radio frequency identification (RFID) technology solutions are designed to eliminate manual, error-prone processes and provide 100% visibility and traceability to all inventory to which an RFID tag is applied – anywhere throughout an enterprise.

Utilizing RFID technology in hospital pharmacy operations is designed to save time, eliminate errors and provide actionable intelligence to optimize inventory. The best solutions understand hospital pharmacy operations and have developed technology and processes that optimize efficiency without workarounds. This white paper describes how advanced RFID technology can enable item-level traceability to procedural and emergency medication inventory in hospital and health system pharmacies.

*With that contextual background in mind, the following outlines the unique benefits of the IntelliGuard® Kit and Tray Management System to provide 100% inventory visibility of medication inventory stock (both shelved and “kitted” inventory) – without manual staff intervention - and contrasts that to other RFID solutions that describe the same benefits but fail to actually do so.*

## Situational Analysis

Management of medications destined for procedural and emergency kits, trays and carts distributed throughout a hospital or health system enterprise are the responsibility of the pharmacy department. These medications are ordered, managed and controlled by the inpatient pharmacy team and stored as shelf stock for use in replenishing these kits and trays when they are returned to the pharmacy for processing.

Keeping track of expiration dates, inventory quantities and managing recalls requires pharmacy teams to routinely spend time physically counting and checking hundreds of individual medications by hand. In the event of a recall, the urgency is even more immediate, to quickly and accurately ensure unsafe or ineffective medications are promptly removed from inventory before they are inadvertently administered to patients. Because of the large quantities of procedural and emergency medications involved, these tasks can be daunting and the risk for human error is significant.

## NOT ALL RFID IS CREATED EQUAL

Using RFID technology to track and manage high use and/or high value inventory eliminates the need for manual processes; however, **not all RFID technology solutions are created equal.**

The goals of an automated RFID solution for managing, processing and controlling medication kits and trays in hospitals and health systems are multifold:

- ✓ Item-level traceability, reporting, alerting and notifications across all RFID tagged medications managed in the system, without manual intervention
- ✓ Automated medication replenishment of procedural and emergency medication kits and trays to ensure nothing missing, not expired and nothing recalled
- ✓ Informed decision-making with accurate usage to help plan adequate inventory levels and minimize stock-outs

When deploying RFID technology, hospital pharmacy teams should expect 100% visibility of all tagged inventory details and attributes, directly from the software database — without requiring physical scanning of inventory shelf bins.

## Challenges with Some RFID Solutions

Documented challenges with another RFID solution confirm that in one acute care hospital with 14 operating rooms, it was consuming three (3) plus uninterrupted hours to check their RFID tagged inventory shelf stock – physically reviewing every vial for expiration and count. The report goes on to confirm that “anything beyond the main inpatient pharmacy can be even more daunting of a task, “If you were to expand this to our entire stock, you are talking about eight (8) plus hours to only get 50% counted.”

**Because this particular kit checking system does not provide 100% visibility of all RFID tagged inventory in the hospital’s database, the pharmacy team has been forced to implement a workaround to mitigate the “black hole” of enterprise inventory visibility – kitted plus shelf stock.**

The workaround describes a process in which each shelf bin must be manually and individually scanned to obtain counts, expiry and recall reports:

As you can see with this method, a complete inventory count is not easily summarized, and the count is only accurate at the specific time of the bin scan: Every time additional inventory is added or removed from a bin, it must be rescanned.

Items by Bin					
Name					
▼ FentaNYL Citrate 0.05 mg/ml					
Manufacturer -	Item -	NDC -	Package -	Strength -	Lot Number -
HOSPIRA	FentaNYL Citrate 0.05 mg/ml	0409-9093-35	5ml Vial	0.05 mg/ml	456456
HOSPIRA	FentaNYL Citrate 0.05 mg/ml	0409-9093-35	5ml Vial	0.05 mg/ml	456456
HOSPIRA	FentaNYL Citrate 0.05 mg/ml	0409-9093-35	5ml Vial	0.05 mg/ml	456456

While this workaround certainly provides incremental improvement to the manual process, it does not optimally solve the problem of ensuring inventory counts are accurate and up-to-date, nor does it automate expiry management.

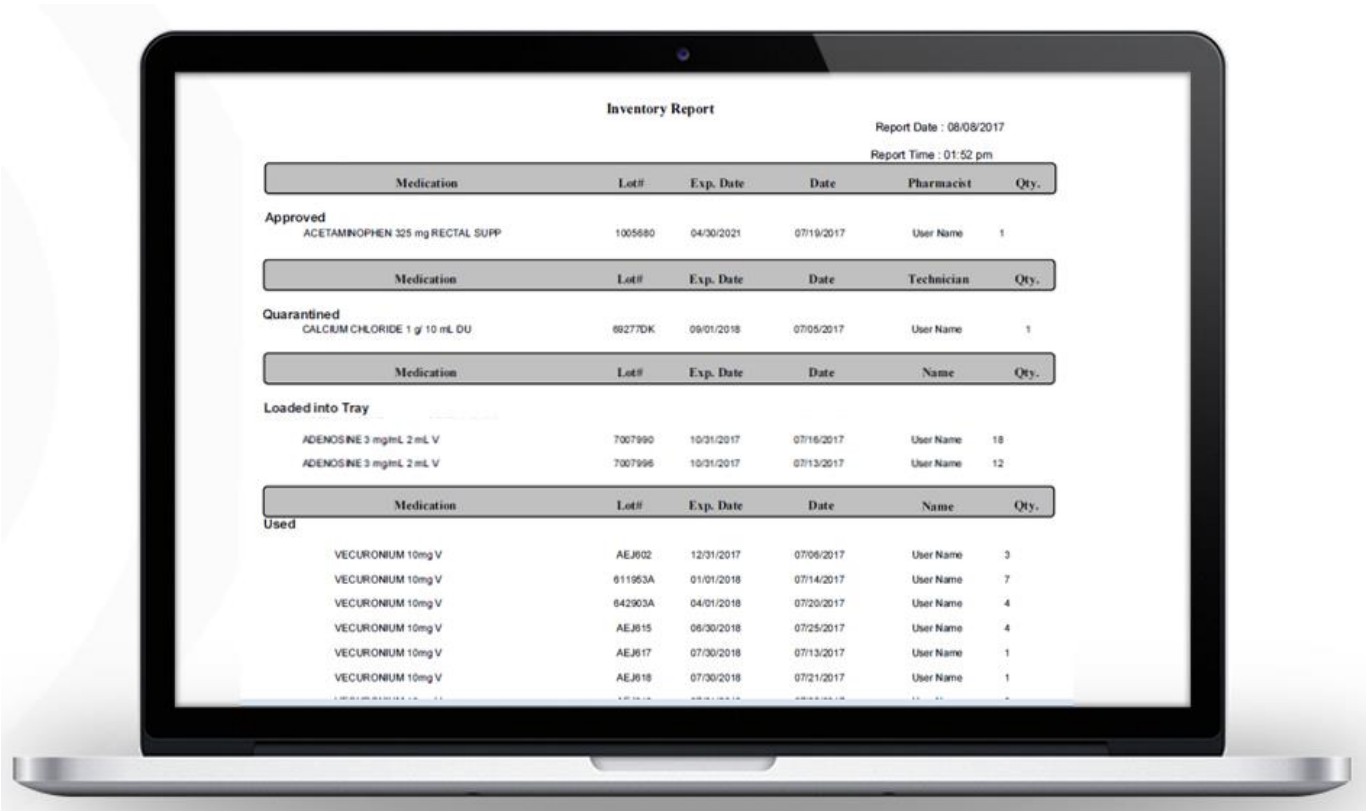
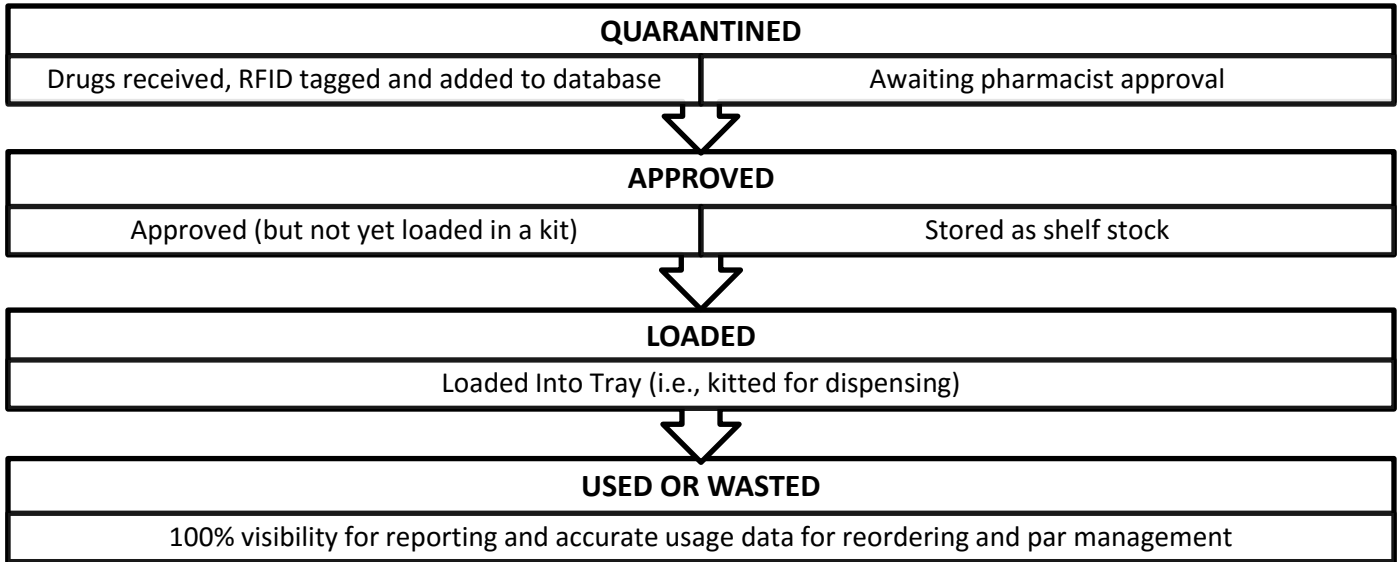
## The IntelliGuard® Kit and Tray Management System Difference: How it Works

The IntelliGuard® Solutions process begins by placing a small RFID tag onto medications. The RFID tag consists of an antenna and a chip that contains a Unique Identifier. Using the IntelliGuard® System Workstation, information such as manufacturer, medication name, NDC number, lot number and expiration date are associated with each tag’s unique identifier. This association immediately places inventory details into the hospital’s database to be utilized throughout the software.

The moment new medications are RFID-tagged and associated; inventory counts, expiry reports and recall management are immediately enabled. When a report query is initiated, the IntelliGuard® System automatically searches across all tagged inventory, regardless of whether the inventory is in Quarantine, Approved Shelf Stock or Kitted status.

**Only the IntelliGuard® Kit and Tray Management Solution guarantees 100% visibility and actionable insight to all tagged drugs, whether shelved stock or kitted, without the physical scanning of shelf bins.**

With IntelliGuard® Solutions, Inventory, Expiry and Recall reports search across ALL tagged inventory in the software database. System reports search across all inventory - whether shelf stock or kitted. Tagged medications are further identified by a descriptor to allow seamless and accurate management of stock rotation for near expired items and systematic removal of recalled or expired items, regardless of the item's kitted status or storage location:



## 100% Inventory Visibility – No “Black Holes”

Only the IntelliGuard® Kit and Tray Management System tracks all medications in the database from the moment they are tagged - whether they are stored as shelf stock (and not yet kitted for distribution) or already distributed in kits or trays.

With IntelliGuard® Solutions, all RFID tagged drugs can confidently be placed into shelved stock inventory with assurance of continuous 100% item-level visibility via the tracking and reporting software. **Reports search across all inventory** to provide accurate counts, expiry data and enable efficient recall management without awkward, error-prone or ineffective workarounds.

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To discover if IntelliGuard® Intelligent Inventory Solutions are right for you and learn how we’re different, contact us for a demo or request our checklist for evaluating RFID medication management technology for your hospital or health system pharmacy.

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