WHITE PAPER

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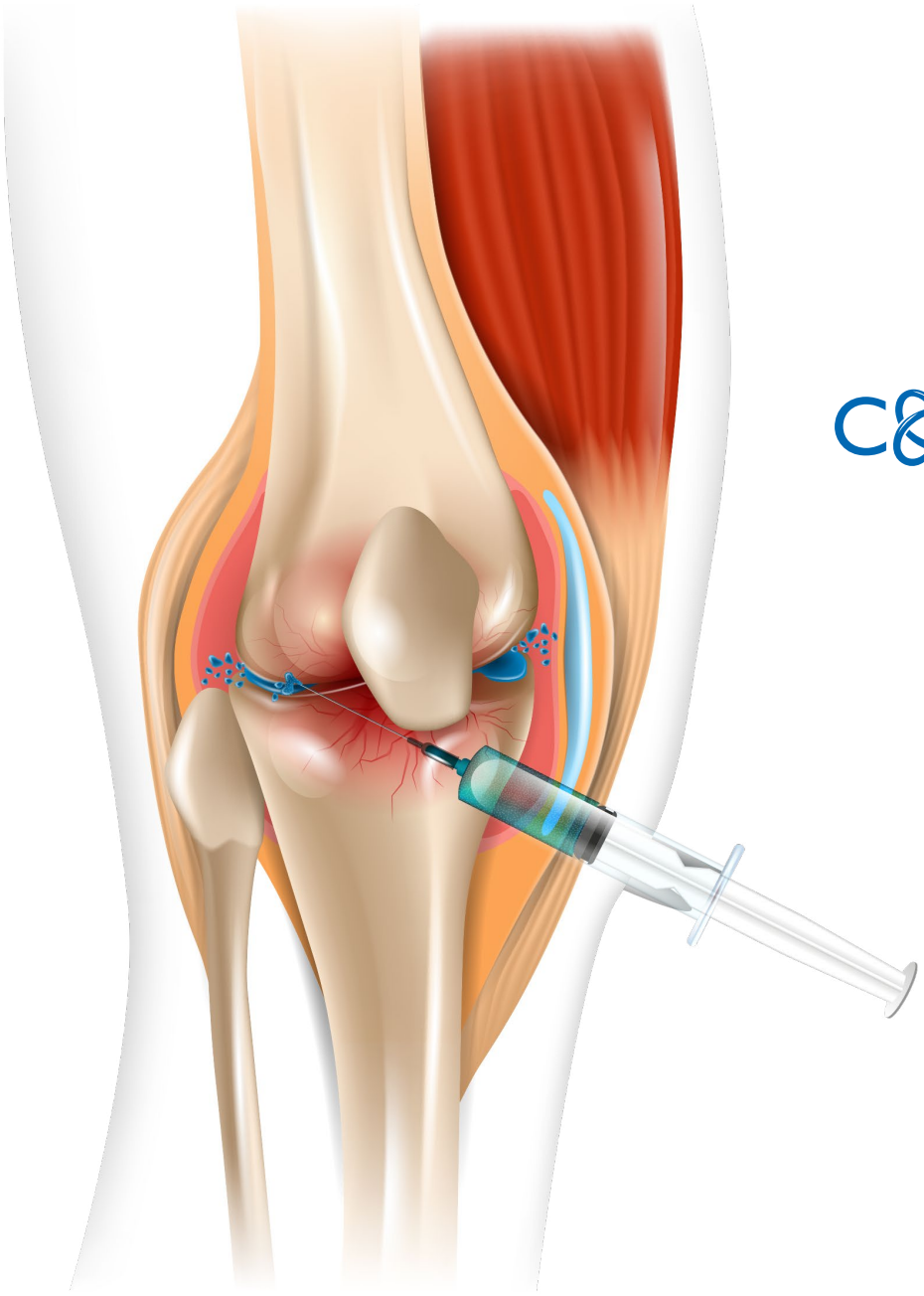
Injection Training

Utilizing RFID to help prevent charge errors and expiration



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RFID

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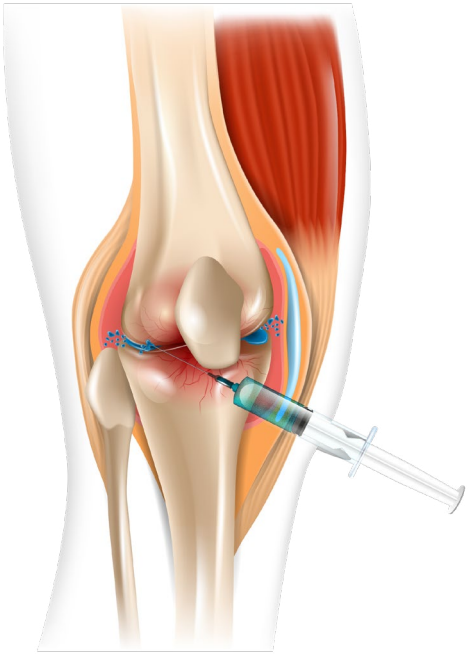

INJECTION TRAINING

Utilizing RFID to help prevent charge errors and expirations

Introduction

Today's health care economy pressures orthopedic physician offices and surgery centers to eliminate costs while continuing to improve patient care and experience. Healthcare facilities must maintain an accurate inventory of medical devices (i.e., bracing and joint injections) to ensure the patient receives the necessary intervention prescribed by the physician. Inventory management represents a significant burden in time and cost to ensure patients experience optimal care. For reimbursement of the medical device, Medicare and insurance companies expect healthcare providers to provide extensive documentation to prove that a patient received the service or device as ordered by a physician. This process places a time burden on nurses and clinician support staff to manually complete the documentation, thus reducing time spent with the patient. To maximize time with the patient, clinicians sometimes rush to complete this process resulting in documentation errors. A mistake in this process leads to a loss in revenue, increasing financial pressure on the facility. Automation of inventory management from receiving to the point of use with Radio Frequency Identification (RFID) technology represents a potential solution to the challenges faced by orthopedic physician offices and surgery centers in managing inventory.

The Continuum® Inventory Management Solution:

The Continuum® inventory management system utilizing an RFID "vault" and electronic proof of delivery helps to automate supply chain processes while eliminating the manual process involved with the inventory management of the facility. The Continuum® Vault provides real-time monitoring of inventory levels, maintains a secured digital chain of custody, and automates re-ordering based on usage of devices at the facility. The Continuum® Vault's installation occurs in a facility's existing storage area, retrofitting the space to allow the use of RFID technology. Each item placed in inventory receives an RFID tag encoded with pertinent UDI device information (i.e. lot number, serial number, expiration date). Following initial implementation, the customer may print RFID tags for stocked devices, purchase preprinted tags or order items from DeRoyal with an RFID tag already in place.

To enter a Continuum® Vault, clinic personnel must authenticate their identity to establish an initial chain of custody. The clinician then selects their device(s) and exits the Vault. Upon exiting, the system determines what item(s) the clinician removed from the room and places the item(s) in the clinician's custody. At this point, the clinician assign the item to a patient and obtains electronic proof of delivery using another part of the Continuum® System, a tablet. Once assigned to the patient, the Continuum® System has the capability for bi-directional interfaces to automatically transfer necessary information to the facility's electronic medical record system to meet insurance documentation requirements. The Continuum® System is currently integrated with the largest electronic medical record systems used by orthopedic practices. If a clinician fails to assign the item to a patient, then the device remains in the clinician's custody until resolved. The Continuum® System reports allow the facility to identify unassigned items and custody status, item costs, and items assigned to a patient. This capability provides the facility with the necessary tools to resolve charge capture errors. For devices with an expiration date (e.g., injections and biologics), the Continuum® System can monitor expiration dates and alerts when an item nears expiration. This feature allows clinicians to use the device, preventing lost revenue.

Helping Eliminate Billing Errors Through Automation:

A case study recently completed at an Orthopedic Center demonstrates how the Continuum® RFID Vault helped prevent DME charging errors and expiration of items. Fifteen providers provide medical care, and 110 staff members provide support. Annually, the facility distributes over 4500 orthopedic devices to patients. Before installing the Continuum® Vault system, the center determined that the prior manual process resulted in a 38% charging/billing error rate. This deficiency resulted in approximately $100,000 in lost charges and revenue.

The center reduced charge/billing errors to 12% in the first year after implementation. After further process improvements and education on auditing, the center experienced an additional reduction in annual charge/billing error rate to 8% (Figure 1). A review of the primary charge/billing errors allowed the center to rectify 98.2% of errors. Overall, the center experienced a 99.6% charge/billing capture rate, with the remaining seven missing charges attributed to billing process errors. The Continuum® System accurately tracked 100% of the items distributed during the evaluated 12-months. The chain of custody records maintained by the Continuum® System allowed the orthopedic center to determine clinician specific error rates. The analysis found that seven clinician staff members were responsible for 49% of errors. This analysis allowed the facility to identify opportunities for retraining to ensure charging and billing compliance.

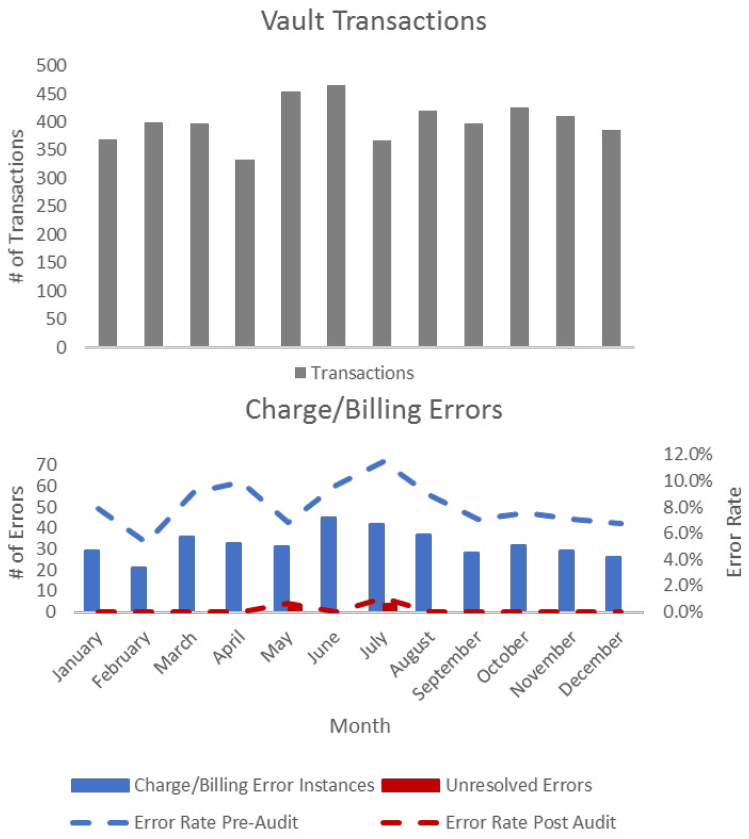

Figure 1: The Continuum® System minimizes charge and billing errors associated with distribution of durable medical equipment

Helping Prevent Expiration of Orthopedic Injectables:

Continuum® RFID Vaults allow accounts to secure expensive devices and monitor expiration dates. Within an orthopedic practice, viscosupplementation injections represent a common early intervention for osteoarthritis, and manufacturers provide the injections in a series of three. Providers perform these injections as needed by the patient, and patients may discontinue injections at any time. As a result, single injections may go unused.

Providers can use single injections in a series on different patients; however, the effectiveness of this strategy depends on the proper management of all visco injections. During process improvement efforts, the orthopedic practice identified that single injections went unused because providers stored single injections in unsecured locations anticipating that the patient would complete the series. The improperly stored injections would expire when patients did not complete the sequence leading to reduced revenue for the practice. The account decided to utilize the Continuum® Vault to secure viscosupplementation injections and use first in, first out process to prevent expiration of the devices. At implementation of this process improvement, the practice identified and discarded $4,000 (16 – 27 total injections) in expired products. No additional occurrences of expiration have occurred since the facility implemented the process improvement.

Conclusion:

The Continuum® System optimizes supply chain management in healthcare facilities through automation. The technology ensures device availability when needed by a patient; however, the system provides healthcare providers the opportunity to improve processes to maximize revenue. The Orthopedic Center subject to this case study utilized the automation and reporting capabilities of a Continuum® RFID Vault to realize a 99.6% charge capture rate. Additionally, the Center used the system to manage viscosupplementation injections to optimize inventory levels and prevent the expiration of this product. These demonstrated capabilities minimize revenue loss thus helping the center to control escalating healthcare costs and provide quality care.

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