Modern technology streamlines receiving and delivery

Name: Mount Sinai Health System
Location: New York City, NY
Established: 1852
Size: 3,494 beds

Overview

The Mount Sinai Health System (MSHS), which staffs 3,494 beds, combines the Icahn School of Medicine at Mount Sinai and seven hospital campuses to provide high-quality healthcare throughout the New York metropolitan area. With more than $350 million in Med/Surg supplies delivered through the system annually, the MSHS supply chain faces a daunting task — ensuring that clinical teams have everything they need while coping with the limited storage capabilities that major urban hospital systems often face.

MSHS's upper east-side campus (The Mount Sinai Hospital or MSH) receives as many as 2,000 packages per day with approximately 700 to 800 packages from UPS and FedEx alone — many are urgent or perishable items needed for research and surgical care. The receiving team is comprised of approximately 20 receiving staff members who would manually process incoming packages and deliver them throughout the campus. This was a time-consuming and labor-intensive process that gave clinical staff limited visibility into which items had been received and when deliveries might occur. For example:

- It took roughly an hour for two employees to fully process 25 packages using the paper-based system (receive, verify contents, close out PO).
- Clinical and supply chain had limited visibility to incoming shipments, forcing staff to spend valuable time each day verifying that receipts/deliveries were in house.
- The receiving team had no formal methodology to process and prioritize urgent incoming shipments.
- Proof of delivery records were paper-based, with a limited audit trail.

Adopting a better system

In 2015, MSHS partnered with Jump Technologies Inc. to develop and expand their use of JumpStock to meet the demands of a major health system. The cloud-based solution required no servers and no rack space in the hospital data center and hardware requirements were minimal and focused on mobility: two wireless printers, two iPad minis, 15 iPod touches, and 15 wireless scanners.

Over the next two months, MSHS receiving and delivery staff would refine the application, providing feedback from the ground-up – working on everything from user interface design, to workflow requirements, to reporting and performance metrics. The platform soon expanded to include detailed delivery performance reporting, integration with MSH's McKesson Materials Management system, visibility into incoming shipments through direct interface with UPS and FedEx, a priority work-stream for urgent deliveries, and creation of an enhanced electronic record and audit trail, including recipient signature.

Over the course of four weeks, the JumpStock implementation and training took place in three segments: 1) Proof of concept – discovery of current processes. 2) Set-up – installation of software on mobile devices and interface with the Materials Management Information System. 3) Training – conducted multiple hands-on-training sessions using the software on devices for Unload, Stage, Load, and Deliver processes; actual walk-throughs of offloading trucks and receiving incoming shipments from FedEx and UPS.

The MSH team has been using JumpStock successfully for more than 12 months, and in 2016, all MSHS acute care facilities adopted the solution.

"At this point, our employees are able to train each other as we roll the product out to other campuses," stated Les Grant, Corporate Director of Materials Management for

MSHS InnerTrack productivity gains

	Manual	InnerTrack		
Date	6/15/15	6/15/15	6/15/15	6/16/15
#Packages	25	25	136	301
# Personnel used	2	2	4	5
Total time (mins)	55	38	96	119
Time per package (mins)	2.2	1.52	0.71	0.40
Time per package (seconds)	132	91.20	42.35	23.72
Packages per minute	0.45	0.66	1.42	2.53
Packages processed per minute per employee	0.23	0.33	0.35	0.51
Productivity increase per employee		45%	56%	123%

MSHS. "They definitely take pride in having had a role in the development process and feel a sense of ownership in the overall business process."

The investment pays off

Using time-motion studies, MSHS has recorded a more than 100 percent increase in overall productivity, as measured by Packages Processed/Minute/Employee (see table) and saw an immediate improvement in their existing workflow. Four to five team members can use JumpStock to process packages by taking an "assembly line" approach to fully leverage the receiving stages built into the application.

Resource redeployment: With JumpStock, the productivity gains enabled MSHS to redeploy a receiving office staff member into an implant management support role.

Visibility: InnerTrack provides clinical end users with near real-time updates on the status of surgical product deliveries. "Especially in the case of custom-made or case-specific implants, it's incredibly valuable to be able to communicate to your clinical staff exactly where an item is in the delivery process — and prioritize delivery if needed," said Grant.

Audit trail: The receiving system creates an end-to-end electronic record of every incoming package, from the off-loading of the shipment from the truck to staging and then delivery to the final destination, capturing an e-signature of the final recipient for audit trail tracking of each incoming package.

Performance metrics: MSHS can now track delivery performance by facility, package type, and even by individual staff member. "Our same day delivery confirmation rate is approaching 99 percent this month, comparable to (or better than) UPS and FedEx benchmarks nationally," said Grant.

Going forward

MSHS and JumpTech continue to refine and develop the application with a goal of using the tool to track and monitor incoming freight charges. Also, Grant said they plan to adopt JumpStock for Nursing and OR units and build out additional reporting capabilities. "The ultimate goal is total control of inventory, from loading dock to patient."

RESULTS/TAKEAWAYS

JumpStock cut receiving time from **132 seconds to 24 seconds per package.**

Mount Sinai **can track delivery performance** by facility, package type and more.

Same-day delivery confirmation rate has approached **100 percent.**