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TRACKING PACKAGES
ON YOUR INTRANET

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Baltimore

When
seconds
count

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INTRANET SYSTEM IMPROVES ON-TIME DELIVERY PERFORMANCE

When seconds count

When it comes to keeping track of incoming packages, most hospital receiving departments have a tough act to follow.

Customers who order packages through United Parcel Service, Federal Express or DHL can log on to an Internet site and track the progress of their delivery each step of the way, until it reaches a hospital's loading dock. Then, because most hospitals don't possess this capability, the package enters a "dead zone" for as long as a few days, while items are received, sorted and delivered across the institution.

frustrating. A typical complaint at 848-bed Johns Hopkins Hospital & Health System, Baltimore, was, "UPS can move my package 3,000 miles overnight but once it gets to the hospital, the last 500 feet take forever," says Richard Andrew, an acting director of materials management at Johns Hopkins.

Andrew says end-receivers became dissatisfied when delivery paperwork was missing or packages were misdelivered or couldn't be located.

In most cases, the packages were found, but the damage was already done, Andrew says.

Trust was eroding. "It is very difficult," Andrew says, "to re-establish trust once your customer decides that they can't count on your department to provide the level of service they require."

Then, two years ago, Johns Hopkins installed an electronic tracking system much like the ones commercial shipping services use.

The Trackpad Parcel Tracking System, developed by Atlanta-based UPS, helped rescue the receiving department's reputation, but it also achieved new efficiencies, Andrew says.

Andrew believes Trackpad's new efficiencies have more than covered its \$60,000 price tag. Now, rather than filling out paperwork and storing it, depart-

QUICK TAKE>>>

Ensuring that individual departments receive their packages is a critical component to customer satisfaction. Frustrations culminate when users can track packages outside of the hospital via the Internet, but are unable to do the same when packages are inside the hospital. Days can lapse before a package is delivered, and sometimes it's not delivered at all. Many organizations have addressed this issue by implementing package tracking systems that both improve efficiency and allow end-users to locate their package within hospital walls.

When using the outside tracking systems, doctors, nurses and other end-receivers can allay fears of missing a looming clinical deadline or losing a part worth thousands of dollars. After the package arrives, they usually have to deal with the hospital's paper-based system, which is when the situation can get

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ment personnel use portable, handheld scanners to read a bar code on a package. The purchase order, recipient's name and other information are electronically stored on the hospital's intranet system.

When recipients want to know where their package is, receiving personnel no longer have to "be Dick Tracy all the time" while they hunt for the paperwork, Andrew says. Recipients can determine delivery status on their own computer terminals, or they can ask receiving to call it up for them.

When the package is delivered, the person who accepts it signs the screen of a handheld device to verify receiving it. Though many hospitals use paper signatures, paper slips have to be collected and filed, and they can get lost.

More than lost goods

Andrew says the new system has reduced the number of lost packages to almost zero, and again, his department saves money.

At Johns Hopkins and many other hospitals, if a package is lost and receiving cannot prove it was delivered, receiving has to absorb the loss from its own budget. Before a tracking system was installed, Andrew says these losses amounted to \$5,000 to \$10,000 a year.

Lost packages also were a key reason why North Carolina Baptist Hospital, an 821-bed teaching facility in Winston-Salem, N.C., installed the UPS Trackpad in January 2005, says Ron Noel, manager of receiving.

Noel, who assumed his position in June

2001, says the receiving department could not verify the delivery of several packages. "That's when we started to really look at the system," Noel says. "Was there anything we could do to prevent this from happening?"

After spending \$80,000 to buy and customize the new system, Noel says the hospital has achieved net savings of four hours of staff time a day in receiving. With package volume rising, that means he will not have to hire a new employee.

Electronic tracking, Noel says, "has allowed us to come out of the paper age and into the computer age."

Systematic approach

There are a variety of tracking systems from which to choose. In addition to UPS, stand-alone systems are offered by Pitney Bowes, Stamford, Conn., and Barcoding Inc., Baltimore. In addition, Lawson Software, St. Paul, Minn., and Oracle Corp., Redwood City, Calif., offer systems as part of a software package.

Companies usually allow customers to buy the system outright or lease it for a few thousand dollars a year. Those who lease say the arrangement takes a smaller bite out of a department's yearly budget, making it easier to get approval, and when handheld scanners are damaged they can get free replacements.

Most electronic tracking systems function basically the same, using bar code scanners, software and electronic signature pads. If there is no bar code on the package, the scanner creates a unique identification number and prints a bar code for it.

The software organizes the information, sets up electronic files for each package and, in some cases, automatically e-mails the recipient.

Items can be scanned and tracked at three points: when they are received, when they are loaded into carts for internal delivery and when they are delivered. Delivery information can immediately enter the system through the hospital's

Measurable results

Hospitals and vendors report specific improvements with electronic tracking:

Saved six to eight hours a day in paperwork alone, allowing one FTE reduction on a 37-member receiving staff.

—UNIVERSITY HOSPITAL OF ARKANSAS
Little Rock

Scanning documents saved 3.2 labor hours a day on daily volume of 170 POs.

—NORTH CAROLINA BAPTIST HOSPITAL
Winston-Salem

Number of permanently misdelivered items has fallen by more than 90 percent.

—ST. JUDE CHILDREN'S RESEARCH HOSPITAL
Memphis, Tenn.

A company receiving more than 100 packages a day will save \$34,250 a year.

—A2B TRACKING SOLUTIONS, Portsmouth, R.I.

Yields 16 percent to 25 percent savings compared with paper-based tracking.

—BARCODING INC., Baltimore

Source: Interviews with hospital and company officials, 2006



Photos by Nicholas McIntosh

wireless network, or it can be entered when the device is put back in its cradle at receiving.

Delayed response

Since electronic tracking systems were introduced some 15 years ago, many offices with such large volumes as several hundred pieces of mail a day, have joined the trend, but health care has held back.

Jeff Marshall, vice president for customer marketing at Pitney Bowes, says law enforcement agencies routinely use these systems to keep track of criminal evidence and trade shows use them to distribute exhibitors' items.

With relatively high package volume, frequent rush orders for devices and growing concerns about errors, large hospitals are ideal candidates, but "a lot of hospitals haven't taken advantage of this yet," he says.

Jay Steinmetz, president of Barcoding Inc., thinks he knows why. "Much of the health care industry is remarkably backward," he says. "They trust paper and pencil, and want it to always be there. They don't trust the new technology."

In fact, Steinmetz reports that bar code systems are exponentially more accurate than paper.

When information is written down, he says, a mistake is made once every 300 characters, compared with once every five million characters with bar coding.

A study conducted by Data Capture Institute, Duxbury, Mass., a bar code research firm, found that companies without electronic tracking misplace or delay delivery of 2.5 percent of incoming items.

Another reason cited for hospitals' lukewarm response is difficulty determining an exact return on investment. Of a half dozen officials at hospitals with electronic tracking who were contacted for this story, none were willing to quote an ROI.

While all cited some concrete efficiencies, such as hours of reduced work time in receiving, they say they could not mea-

sure other factors such as work saved by end-receivers or their improved peace-of-mind.

Manufacturers, however, do not shy away from pinpointing the ROI. A Portsmouth, R.I.-based company, A2B Tracking Solutions, which installs and trains users for UPS Trackpad, calculates that a firm receiving more than 100 packages a day will save \$34,250 a year by using Trackpad.

That figure breaks down into \$10,400 in savings from scanning parcels, \$3,850 from improvements in locating misplaced

parcels and \$20,000 from no longer keeping paper files. David Collins, the CEO of A2B, says quite a few hospitals have already gotten the message about savings. "The hospital market has been a strong user of UPS Trackpad," he says.

For good measure

But for many hospitals, a key attraction of electronic tracking is being able to show through hard data, that they really are doing a good job.

In Memphis, Tenn., 56-bed St. Jude Children's Research Hospital has 3,000



Tracking companies

The same package tracking systems can be used in a variety of industries, including health care.

BARCODING INC., Baltimore

Product: Package Track Solution

Special feature: Recipient receives automatic e-mail when package is delivered to hospital.

Web site: www.barcoding.com

LAWSON SOFTWARE INC., St. Paul, Minn.

Product: Receiving and Delivery

Special feature: Integrated component of Supply Chain Management suite.

Web site: www.lawson.com/index.shtml

ORACLE CORP., Redwood City, Calif.

Products: Unnamed component of E-Business Suite or PeopleSoft Enterprise

Special feature: Not a stand-alone product.

Web site: www.oracle.com/index.html

PITNEY BOWES, Stamford, Conn.

Product: Arrival Package Tracking and Delivery Management system

Special features: Customizes manifest lists; automatic alert when item does not arrive.

Web site: www.pb.com

UNITED PARCEL SERVICE, Atlanta

Product: Trackpad Parcel Tracking System

Special features: In-house training provided; transfers UPS package data.

Web site: www.ups.com

Source: Company officials and Web sites, 2006

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employees and is spread out over 19 major buildings. It has an average of 700 deliveries a day, many of which involve sensitive correspondence and samples for research, says Thomas M. Harkenrider, director of materials management at St. Jude.

"When I came here," Harkenrider says, "the reputation of materials management was that we took forever to complete deliveries, but what I saw in the department did not fit that reputation."

Because it was difficult to verify performance with paper-based records used at that time, "customers came to their own conclusions, usually based solely on the delayed delivery," he says.

Harkenrider adds, "Our customers were demanding a service that we couldn't give them. They were on the FedEx Web site,



How electronic tracking can speed deliveries

Digital package tracking can help a hospital in the following ways:

GREATER EFFICIENCY. Faster processing with bar codes, handhelds.

LESS PAPERWORK. Paper records are hard to locate, require storage.

FEWER LOST ITEMS. Package is tracked at each step.

MEASURES PERFORMANCE. Data can show receiving is doing its job.

BETTER OVERSIGHT. System can track staff on deliveries.

HELPS RECIPIENTS. They can track packages with their PCs.

FASTER RESPONSES. Queries can be addressed immediately.

CONTINUAL DATA FEED. Wireless network allows constant updates.

Source: Interviews with hospital and company officials, 2006

then the package arrived and they wanted to know where it was. We were really at a loss to tell them."

To obtain hospital leadership's approval for an electronic system, Harkenrider promised that virtually all packages would be delivered within 24 hours.

St. Jude installed Pitney Bowes' Arrival Package Tracking and Delivery Management system in 2001, and the department quickly showed that it could deliver 99.95 percent of all packages within the deadline and virtually all priority packages—those coming in as overnight shipments—within two-and-a-half hours.

The data can be analyzed in other ways, too, such as determining delivery loads to account for surges in volume on certain routes, says Ricky Anderson, manager of receiving and delivery at St. Jude. "Instead of assuming the delivery person is slow," he says, "we can quantitatively monitor the workload and rearrange the route as necessary."

The new system also can monitor each delivery person. "It can tell us that it took him 35 minutes to go from stops five to six due to some distraction," such as chatting with a friend, Anderson says. Once staffers know they are being monitored, "the problem takes care of itself," he adds.

Introducing the system

Users say it's easy to set up the basic tracking system, though it may cost extra for special arrangements such as linking it to an enterprise resource system (ERS), which allows end-receivers to track packages at their computers.

University of Arkansas for Medical Sciences, which operates University Hospital in Little Rock, uses the Pitney Bowes system without linking it to the hospital's ERS. Carl J. Iannacone, director of campus materiel [sic] management, estimates that such a link would cost \$20,000.

Also, tracking systems are usually not integrated with the hospital's accounts payable system, which needs to be alerted when new purchase orders arrive,

meaning that receiving staff have to enter information twice. But Andrew says a new ERS to be installed soon will integrate the two systems.

Tracking companies usually help hospitals train their staff, but new users worry that adjusting to a new system will be a shock for employees. Lana Hamby, senior inventory manager at Baptist Health Medical Center—Little Rock, Ark., the flagship of 787-bed Baptist Health, is seriously considering installing a tracking system, but she wonders how her staff would respond.

"It is a totally different system from what they are used to," she says.

But those with systems in place report that receiving staff are grateful for the time saved. However, they report resistance from end-receivers who are not technically inclined. They say that even when these people can track packages on their own computers, many of them still call receiving.

Roy Kirkland, a systems analyst at 900-bed University of Alabama Hospital, Birmingham, which plans to install Lawson's Receiving and Delivery application, predicts some end-receivers won't change. "Some of them would rather call receiving and tie up our people than take a few seconds to look up the information," he says.

Still, electronic tracking makes it much easier to field these calls. And while low-tech people may be grumpy, high-tech people who use outside tracking will be pleased and may help teach the rest, experienced officials report.

Hamby, who has visited hospitals that use the new systems, says an electronic tracking system would greatly improve relations with the rest of the hospital. "When people call us," Hamby says, "we want to be able to call up the order and say, 'Yes, we did deliver it to you.'" **MMHC**

LEIGH PAGE IS A FREE LANCE WRITER BASED IN OAK PARK, ILL.