

CASE STUDY

Michael DeLuca
Corey Smith



healthcare financial management association www.hfma.org

building a world-class A/P function how UPMC went paperless

After automating accounts payable and making process improvements, UPMC now receives all invoices electronically.

AT A GLANCE

- > UPMC engaged people, processes, and technology to move its A/P function from a highly manual, paper-based operation to a completely automated process.
- > UPMC's CFO hired a chief supply chain officer to develop a strategic plan, and UPMC named a value analysis team to gain clinician buy-in.
- > UPMC automated A/P by enabling receipt of electronic invoices.
- > UPMC streamlined its processes for invoices.

Hospital financial executives face a variety of difficult, and often competing, demands in today's challenging economic and political environment. On the one hand, the pressure to do more with less is forcing them to make tough decisions about where and how to cut costs. On the other hand, they recognize that financial objectives cannot take precedence over their mission of providing world-class patient care.

One of the most promising opportunities to reduce expenses and reallocate resources to more strategic and patient-facing activities lies in the accounts payable (A/P) function. Previously often overlooked as a source of bottom-line savings, A/P automation and process improvements are finding growing acceptance among healthcare providers as a way to deal with operating expense pressure, including reducing staff, cutting the cost of invoice processing, managing cash flow, and gaining greater visibility into their A/P processes.

UPMC, an integrated global healthcare enterprise, tackled the issue of A/P optimization head-on as part of a larger strategy to transform its supply chain to keep pace with rapid growth. At the same time, the enterprise wanted to improve efficiencies and cut costs.

The Case for Change

In 2006, UPMC was continuing to add hospitals to its system, and also expanding its for-profit health plan, cancer centers, international and commercial services division, and physician services division. The centralized supply chain organization was challenged to service multiple divisions and locations without increasing its supply chain operations head count exponentially.

But the healthcare system's supply chain operations, including the A/P operation, were holding it back. A/P staff performed primarily tactical work. Five A/P data-entry clerks were dedicated to keying in paper invoices, and each of them had 11 days worth of invoices on his or her desk that were not entered into the system yet. Resources were focused on the "fire of the day." Few of UPMC's suppliers used electronic invoicing, and a large volume of A/P exceptions led to rework and waste.

UPMC recognized the value of reengineering its A/P process to control costs, but knew it had to focus first on the front end of its supply chain by automating requisitioning. It reasoned that ensuring electronic requisitions are contract-compliant and contain correct item attributes would be the first step to a totally automated supply chain—one in which a purchase order would be automatically generated and sent out electronically to the vendor, and an electronic invoice that matches the purchase order (PO) would be received. Automating the back end first would have caused exceptions to proliferate in UPMC's materials management information system/enterprise resource planning (MMIS/ERP) system.

UPMC addressed the supply chain challenges it faced by implementing a “culture of automation” to improve data quality, streamline processes, and control costs across its entire system. A/P automation played an important role in the supply chain transformation.

How They Did It

Using a classic business approach, the healthcare system engaged people, processes, and technology to move its A/P function from a highly manual, paper-based operation to an efficient, automated operation that reduced costs and saved time.

People. UPMC had a big advantage as it began the journey toward world-class supply chain status. Its CFO, who had previously worked for General Electric, understood the value that an efficient, streamlined supply chain can bring to an organization. He hired a chief supply chain officer (CSCO) from Alcoa who also had deep supply chain knowledge from the manufacturing industry. The supply chain reporting structure supported the initiative, with the CSCO reporting to the CFO.

One of the CSCO's first tasks was to evaluate the health system's challenges and develop a strategic plan. In addition, a supply chain process improvement team was created to increase the supply chain acumen of UPMC's employees. The result: UPMC today has a well-defined organizational structure

UPMC addressed the supply chain challenges it faced by implementing a “culture of automation” to improve data quality, streamline processes, and control costs across its entire system.

with a staff that is rich in supply chain experience. UPMC has clearly defined objectives and metrics to measure progress and a strategic plan that includes a mission and values statement linked to the enterprise mission and values.

To gain buy-in for supply-chain changes from its clinical staff, the CSCO and senior director of clinical sourcing also set up a value analysis team led by a nurse who held a master's degree in business administration. The team regularly meets with different clinical groups to talk about supply-chain strategy and explain why the organization is moving in a certain direction. Besides demonstrating the benefits of supply chain changes to the system as a whole, the team provides information to the supply chain organization about what is going on in the field with physicians and vendor representatives.

Technology. UPMC began to automate its A/P process in the fourth quarter of 2006 by ramping up its connectivity with medical-surgical suppliers through the electronic trading exchange of which it is a member. The exchange enables healthcare providers and suppliers to conduct business with multiple trading partners through a single Internet connection. Although UPMC already was a member of the exchange, it had never actually leveraged its connectivity by taking the necessary steps to do business with all the suppliers that were available through the exchange (which required an on-boarding process to connect each supplier to UPMC).

CASE STUDY

To make better use of the exchange, UPMC aggressively sought to ensure that every one of its contracted suppliers that were members of the exchange were connected.

The next step was to bring in suppliers that were not receiving orders via electronic data interchange (EDI). Another tool allowed UPMC to send POs via EDI to the exchange, where they are converted into faxes or e-mails and routed to suppliers. A PO acknowledgement (POA) portal enables those suppliers to create electronic POAs that display to buyers via the exchange. Before long, the health system was receiving electronic invoices from 60 percent of its vendors and was receiving 55 percent of its total invoice lines electronically. However, UPMC estimated it would have taken years to convert the remaining 45 percent of its invoice lines, which came from 5,000 vendors. UPMC recognized that on-boarding even 38 vendors per quarter would be an aggressive goal and knew that many vendors it would approach could not send electronic invoices. The only option was to take the paper invoices submitted by the 5,000+ vendors and convert them to electronic invoices.

UPMC felt that converting the remaining 45 percent of the invoice lines it received on paper to an electronic format in a four-month period would bring significant value to the organization, including:

> The ability to eliminate the time spent by tacti-

cal resources whose entire workday was devoted to entering invoices into UPMC's ERP system

- > Increased visibility of invoices to the UPMC customer service group, buyers, and A/P analysts
- > Greater efficiency in general, because all invoices would be coming through a single pipeline electronically

At that point, UPMC had a choice to make: It could use its own scanning equipment and resources to scan the paper invoices it still received, or it could outsource the task. UPMC chose the latter option, and was able to convert the remaining paper invoices by employing a software-as-a-service (SaaS) solution to automate the healthcare supply chain. Using the SaaS, UPMC's suppliers can send paper invoices to a lockbox for optical character resolution processing. A/P staff can view the process workflow to monitor invoices received and, because invoice processing is eliminated, only discrepant invoices must be resolved.

Processes. The right technology solution provides a powerful lever to do things differently in the A/P process. For a hospital that has done little to automate its A/P function, there may be as many as 15 main steps in processing an invoice. Paper invoices are received, opened, and sorted, and then the invoice header and line items are keyed into the MMIS. For PO invoices, A/P staff must reconcile or match each invoice to the PO. If no errors are found, they send the invoice on for



ABOUT UPMC

UPMC is an \$8 billion integrated global health enterprise headquartered in Pittsburgh and is one of the leading health systems in the United States. UPMC operates 20 academic, community, and specialty hospitals, with more than 4,200 licensed beds, and 400 outpatient sites. The health system has almost 5,000 affiliated physicians, including 2,700 employed by UPMC. It operates more than 40 cancer centers, 16 retirement and long-term care facilities, and more than 50 hospital and outpatient rehabilitation facilities.

UPMC is western Pennsylvania's largest employer with more than 50,000 employees.

UPMC had total operating revenue of \$7.7 billion and total assets of \$7.5 billion in FY09. The health system provided \$169 million in uncompensated care in FY08. UPMC annually has more than 187,000 inpatient admissions, 4.5 million outpatient visits, 480,000 emergency department visits, 165,000 surgeries, and 800,000 home care visits.

CASE STUDY

payment. If errors are found, A/P staff must research and resolve them or send them to the purchasing department for resolution.

Staff must log non-PO invoices and determine the approver for each invoice, copy the invoice for interoffice mail, and route to the approver. Then a department outside of A/P must review, research, and approve or reject the invoice.

Both PO and non-PO invoices eventually must be coded to the correct expense account and moved on for payment. This task involves reconciling vendor statements and possibly calling the vendor if an invoice is lost. In some cases, a vendor may call requesting payment; responding to the call adds another step to the process. Finally, invoices are stored in a file cabinet or on microfiche.

With invoice automation, the process is greatly simplified. A/P staff members have visibility to the process workflow to monitor invoices received, but because invoice processing is eliminated, they need only to address discrepant invoices. Accurate invoices automatically move into the review queue for payment.

By removing steps from the process, A/P automation allows UPMC staff to focus on research and resolution of invoice discrepancies. Staff can monitor non-PO invoice traffic from invoices sent electronically to other departments for approval and escalate invoices for higher approval if necessary. They have the ability to check invoices at receipt, resolution, and when they are sent for payment, and payment dates are visible to invoices that can be targeted for payment.

Change Management

As with any large organizational business transformation, the journey to full A/P automation and process improvements brought many changes at UPMC. The first change was the necessity to employ the right mix of people to implement the transformation. UPMC was not rich in supply chain experience from either a job history or academic standpoint. Some personnel had a lot of experience and embraced the change, inherently

knowing that the initiative required having the right people in place. But others lacked the right kind of experience or were not open to the change and left the organization. UPMC also invested in staff training and development to ensure success.

A second change involved the way internal audit performed its job. Supply chain personnel had to educate internal auditors on the fact that moving from a predominantly paper-based process to one that was automated still ensured a sufficient paper trail for audits. UPMC worked with the internal auditors to help them understand why supply chain automation made sense for the health system as a whole and that back-end reports could still be run for auditing purposes. In some cases, UPMC was able to demonstrate that automation actually increased the level of compliance and made performing audits more efficient.

Finally, UPMC worked hard to convince all parties that automating processes within the supply chain was good for everybody, especially for the end user—the clinician. UPMC reasoned that automating processes would enable clinicians to perform their jobs more efficiently because they would get orders more quickly. The key was to show clinicians that the goal was to add value for them by answering the question, “What’s in it for me?” UPMC put together the value analysis team mentioned earlier to assist in this task and used a group of “change agents” from within the organization to facilitate the transformation. The change agents measured success using a variety of metrics related to order cycle time.

The Results

Before the transformation, UPMC’s supply chain was sub-par. Because of the state of the supply chain at that time, there were no statistics that would allow benchmarking. Two years after it began its supply chain transformation, UPMC has improved its procurement cost as a percentage of spend to 0.452 percent, which is well below the World-Class Benchmark (WCB) of 0.63 percent. POs per buyer currently stands at 11,933, compared with the WCB of 7,564. Cost per purchase order is \$3.35, compared with the WCB of \$8.69.

CASE STUDY

Spend managed by supply chain management resources is greater than \$4 million, compared with the average of similar facilities, which is almost one-half of that. UPMC uses an analysis firm that benchmarks across the industry and specific to Fortune 500 companies.

Although A/P automation, by necessity, was one of the last pieces of the supply chain transformation, UPMC—which processes more than 70,000 invoices per month—now receives 100 percent of those invoices electronically, even from suppliers that do not currently support electronic invoicing. PO-based paper invoices have been eliminated. In fact, the health system moved from receiving 60 percent of its PO-based invoices electronically to 100 percent in a mere 90 days by using an advanced A/P automation solution. As a result, UPMC was able to redirect resources for five data-entry positions in A/P to two senior sourcing positions, each of whom is charged with saving UPMC \$1 million per year. ●

About the authors



Michael DeLuca
is director, supply chain solutions & consulting services, UPMC Supply Chain Management, Pittsburgh
(delucams@upmc.edu).



Corey Smith
is an executive director, GHX, Louisville, Colo. (csmith@ghx.com).

Reprinted from the March 2010 issue of *hfm*.

Copyright 2010 by Healthcare Financial Management Association, Two Westbrook Corporate Center, Suite 700, Westchester, IL 60154.

For more information, call 1-800-252-HFMA or visit www.hfma.org.