

Dartmouth-Hitchcock: Increasing the Efficiency of Health Care Delivery


Dartmouth-Hitchcock

Dartmouth-Hitchcock is a national leader in evidence-based and patient-centered health care. The system includes hundreds of physicians, specialists, and other providers who work together at different locations to meet the health care needs of patients in northern New England. In addition to primary care services at local community practices, Dartmouth-Hitchcock patients have access to specialists in almost every area of medicine, as well as world-class research at Dartmouth Medical School and centers such as The Dartmouth Institute for Health Policy & Clinical Practice (TDI).

www.Dartmouth-Hitchcock.org

Health Care Industry

Configuration

- EpicCare EMR
 - Hyland OnBase ECM
 - Edict Systems EDI service
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Dartmouth-Hitchcock first implemented a server-based fax solution from Esker partner Merkur Group in 1999 to deliver purchase orders out of its PeopleSoft supply chain management system. In 2002 Dartmouth-Hitchcock upgraded to DeliveryWare to automate faxing of documents out of its clinical information system, and has been finding new ways to leverage DeliveryWare ever since.

Challenges

As part of its implementation of an EpicCare electronic medical records (EMR) system integrated with an OnBase document management system, Dartmouth-Hitchcock needed to enable faxing to and from those applications. "Fax is still our primary means of communicating with outside entities about patient information, and probably will be for some time to come," said Peter Magoon, Senior Programmer/Analyst at Dartmouth-Hitchcock. Patient notes and referrals make up the majority of Dartmouth-Hitchcock's monthly fax volume, followed by purchasing, billing and accounts payable documents.

Dartmouth-Hitchcock also recognized the need to support Health Insurance Portability and Accountability Act (HIPAA) compliance. "It's critical to understand how HIPAA relates to fax communication, to know who is allowed to use native faxing capabilities from different systems and to get the proper audit trail to satisfy the requirements — not just for us, but for all healthcare institutions because everybody's struggling with it," said Magoon. "We know if we can address these issues with DeliveryWare, we can increase the efficiency of healthcare delivery."

Along with DeliveryWare, Dartmouth-Hitchcock had fax machines throughout the enterprise — each communicating directly with the telephone system through a dedicated analog POTS line costing \$50 to \$60 per month. "We have hundreds of phone lines for fax and we know it's very expensive, so I would like to see all of our stand-alone fax machines go in the trash heap."

Getting fax communication and document management straightened out can vastly improve health care delivery, and the potential savings are huge. We see DeliveryWare as a one of the key tools to help us address those issues and achieve our goals.

Peter Magoon ▪ Senior Programmer/Analyst ▪ Dartmouth-Hitchcock

Solution

For outgoing clinical documents, Merkur Group created a DeliveryWare rule to monitor a network share associated with the EMR system's print queue and fax out whatever appears there, based on a fax number string in the document. DeliveryWare logic also delivers incoming faxes sent to a given direct inward dial (DID) number to a specified UNC path to be automatically swept into OnBase. "This system is totally secure and has a per-user audit trail of anyone who views the document," said Magoon. "It is working very well and we plan to roll it out to all of our clinical departments."

Purchasing and AP

PeopleSoft dispatches approximately 150 purchase orders per day to vendors via fax through DeliveryWare. Buyers receive acknowledgements via fax and can choose to receive as email or view as PDFs in their inboxes.

In AP, some vendors fax invoices to an email mailbox associated with Dartmouth-Hitchcock's document imaging system. "We've set up a DID number for AP and created a function that sweeps any attachments coming to email in that folder into the document imaging system, so our people don't have to actually open envelopes and scan documents," said Magoon. "Basically they just bring up the image and enter the voucher information into PeopleSoft right from there."

Dartmouth-Hitchcock's Edict Systems EDI service also uses DeliveryWare as a conduit for incoming vendor invoices, which are merged into the voucher processing stream along with invoices that come through GHX. "I'm able to merge the two types of documents and they just come sweeping right through into PeopleSoft," said Magoon. "Unless there's an exception, the checks get created automatically."

Desktop faxing

Today, nearly 400 individual users as well as clinical and financial departments use the DeliveryWare Document Manager web interface for both outbound and inbound faxing. Dartmouth-Hitchcock recently topped 5,000 faxes per day through DeliveryWare, and volume is steadily rising as desktop faxing becomes more widely adopted and familiarity with the EMR system increases.

Dartmouth-Hitchcock has also implemented SMTP fax so staff can easily fax any non-clinical document through DeliveryWare from their email accounts, based on a delimited recipient string. DeliveryWare has also laid the foundation for fax sending and receiving from Outlook as well as direct faxing of documents stored in OnBase using a contact list, with electronic signature capabilities to eliminate any need to print and fax.

"Our people really enjoy the desktop fax with DeliveryWare because they don't have to keep buying more fax machines and dealing with the headaches of coming in on Monday morning to find incoming fax trays overflowing onto the floor or dozens of missed faxes because the machine ran out of paper," said Magoon.

Benefits and Future Plans

With DeliveryWare, Dartmouth-Hitchcock has the potential to:

- Reduce telco costs by as much as \$20,000–\$40,000 per month by eliminating POTS lines for fax machines
- Save multiple millions of dollars per year in both direct costs and freed-up employee time

- Save hundreds of hours per day formerly spent tracking down faxes
- Gain visibility and control for process efficiency and regulatory compliance support

Fax initiatives

Dartmouth-Hitchcock is discussing the potential to eliminate all stand-alone fax machines as part of a "Secure Fax Initiative," and to spread OnBase enterprise-wide as part of a "Less Paper Initiative." "These initiatives could pay huge dividends by ensuring that all fax related to patient health information is going in or out through the fax server in such a way as to have a proper audit trail of who viewed the document, and by reducing the costs of paper," said Magoon. "It takes far more time to retrieve a page from a fax machine or printer, read it, and file it than it does to get it from desktop fax or email. Most documents we use are originally electronic in some form, yet we routinely print them to scan them into other systems or to fax them. The cost of printers, scanners, fax machines, fax phone lines, toner, paper and maintenance is enormous. There's also all the walking around, which affects productivity, and the security concerns with documents sitting on printers and fax machines. And then thousands of documents have to be filed in filing cabinets or sent to off-site storage. DeliveryWare and OnBase are the key tools to address these issues and make our initiatives happen."

Widespread use of DeliveryWare figures prominently into Magoon's long-term vision for control of sensitive documents and elimination of paper handling. "Looking forward I see us using the OnBase sweeps for all incoming clinical documents, all outgoing patient information going directly from the EMR system or from OnBase and all other documents going through Document Manager, SMTP fax or the Outlook plugin," he said. "At that point we can unplug the fax machines."

Support

About his working relationship with Merkur Group and Esker, Magoon said, "It has been superb. I'm pushing 40 years in IT and it has been the best third-party relationship that I've ever had. They are very responsive and highly inventive. We now have a very clean, efficient system for delivering and receiving patient information, purchase orders and invoices. I've been extremely happy."

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This interview includes the individual comments and opinions of Peter Magoon, Senior Programmer/Analyst at Dartmouth-Hitchcock in Lebanon, NH. None of Magoon's comments should be considered to be an endorsement of any product or service by Dartmouth-Hitchcock.



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