

Implanting efficiency

By using innovative process improvement software,
Dartmouth-Hitchcock Health took back control of implant surgeries

Dartmouth-Hitchcock Health

Dartmouth-Hitchcock Health is New Hampshire's only academic health system and the state's largest private employer. Its flagship hospital, Dartmouth-Hitchcock Medical Center in Lebanon, New Hampshire, was named the state's #1 hospital in 2020 by *U.S. News & World Report*. The system also includes the Norris Cotton Cancer Center, one of only 51 NCI-designated Comprehensive Cancer Centers in the nation; the Children's Hospital at Dartmouth-Hitchcock, the state's only children's hospital; and affiliated member hospitals and clinics.

Challenge

Implant surgery can be highly complex, even beyond the procedure itself. Because of the multiple products and instrumentation involved, hospitals must keep a large inventory on hand that's often owned by the manufacturer and managed by sales representatives. As a result, millions of dollars of product are stored at the hospital with little oversight or transparency.

In addition, purchase orders are usually entered manually into the financial ERP system after surgery, and the hospital pays for the products once the procedure is complete (known as "bill-only" implant surgery). This can create unwanted surprises, including the use of costly, unproven devices outside hospital-approved contracts.

In his previous role as vice president of supply chain for Dartmouth-Hitchcock Health, Curtis Lancaster knew this situation was creating inefficiencies and cost overruns at his organization and wanted to do something about it.

"We saw a real need for greater visibility into the products that we were using in the surgical arena," said Lancaster, who has since taken a job at a different health system. "I thought that we needed to get ahead of it as opposed to being behind it."

Solution

Searching for solutions, Lancaster became aware of a Vizient® partner called Surgery Exchange. "After a few presentations, we saw that their tools would allow us to do exactly what we wanted to do," he said.

Lancaster understood that the new system's benefits would go far beyond inventory management. The Surgery Exchange software allowed the hospital to take control of implant surgery in multiple areas—before, during and after the surgery.

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Amin Rahme

President of Surgery Exchange

Result

Through the Surgery Exchange Platform, Dartmouth-Hitchcock was able to automate many manual processes and dramatically improve case planning. Tied into the scheduling and financial systems and interacting with the electronic medical record, the software brings all stakeholders together to work collaboratively. It automates the generation of purchase orders and enforces contracts while creating real-time, case-level data as procedures are performed.

“With this system, you know exactly what you need for each surgery and when,” said Amin Rahme, president of Surgery Exchange, who worked closely with the hospital on the initiative. “All the stakeholders, from the manufacturer to the sales rep, from the physician to the supply chain department, know what is coming and can plan accordingly.”

If a physician wants to use a product outside the formulary to support the case, everyone knows in advance and understands the reason for the request, as long as it is pre-approved by the hospital. The system helps prevent other unwanted situations, too, such as the need to ship devices overnight and bottlenecks in central sterile services.

To gain more visibility into the implant product inventory, Dartmouth-Hitchcock uses Surgery Exchange Logistics, which is integrated with the Surgery Exchange Platform in the same solution suite. Under the old system, the hospital had tremendous liability for the consigned and loaned products at their hospitals, but little control over them. Through Surgery Exchange, the supply chain department can immediately see what is available.

“One manufacturer had millions of dollars in product at a single Dartmouth-Hitchcock hospital, but the organization only required a fraction of that,” Rahme said. “With sales reps in charge of the inventory, the supply chain department had little control over what was being brought into the hospital or the resulting pricing. Now, with the ability to forecast demand, they can stock the appropriate levels of inventory at all times and better manage the entire process.”

Another innovative aspect of the solution is the Surgery Exchange Network, which allows Dartmouth-Hitchcock to share real-time information about upcoming cases with manufacturers.

“Before, the manufacturers didn’t know how much product to send to us, because they lacked the case data to understand it. So to make up for that, they over-deployed assets,” Lancaster said. “With Surgery Exchange, manufacturers get a better handle on what the true demand is and we put that information in the hands of supply chain people, both at their company and at the hospital.”

Lancaster believes that improved demand planning for implants could result in significant cost savings to the hospital.

“Many health care organizations say they do demand planning, but they’re really doing inventory replenishment,” Lancaster said. “My dream scenario is to be able to perfect this process to the point where, instead of having millions and millions of dollars of product deployed, the manufacturers build only what is needed and they can lower their product costs, leading to lower health care costs overall.”



Dartmouth-Hitchcock first deployed the Surgery Exchange solution in 2017 for hip and knee implants at a single hospital. Today, the system has expanded to include five hospitals and the majority of implant surgery lines.

“The Surgery Exchange system really changed our mind-set,” Lancaster said. “It showed us that we can be strategic and upfront. It gives us the opportunity to take a look at the cases that are coming well in advance and plan from both an instrumentation and product perspective.”

Implementing Surgery Exchange at Dartmouth-Hitchcock wasn’t without its challenges, because it can sometimes be difficult to change entrenched systems. However, once stakeholders understood the process, the advantages became obvious.

“Surgical schedulers immediately became advocates of the system,” Lancaster said. “Our vice president of perioperative care saw the benefit of managing the product instead of the product managing us. And our surgeons came on board once they saw the inefficiencies, because they’re all about getting the right products to provide the best patient care.”

Going forward, Dartmouth-Hitchcock will create a central implant depot that serves all of the hospitals in the system. The supply chain team will pull product from the hospitals and centralize it like traditional inventory to gain economies of scale and realize cost savings. In turn, the health system will know exactly what to buy based on historical and forecasted demand.

With this kind of visionary leadership, it’s easy to see why *Healthcare Purchasing News* named the Dartmouth-Hitchcock supply chain division as its 2020 Supply Chain Department of the Year.

“I would absolutely recommend Surgery Exchange,” Lancaster said. “In my mind, I don’t think they have a peer. Organizations that want to truly shift the dynamic would do well to engage and partner with them.”

The proven, successful execution and implementation of this program is why Vizient is partnering with Surgery Exchange through the integrated clinical preference solution to facilitate the delivery of their insights and resources to additional members.

“As a services-led, technology-enabled organization, Vizient is committed to helping members work towards outcome excellence while reducing the total cost of care. That includes connecting health care organizations with the industry’s most innovative service providers, like Surgery Exchange,” said Michael Meals, associate principal for Vizient.

Note: Curtis Lancaster has recently taken on a new role as chief supply chain officer for Westchester Medical Center Health Network

About Vizient's integrated clinical preference solution

Improving clinical alignment while reducing costs for clinical preference items requires collaborative discussions between supply chain leaders, clinicians and strategic supply partners. The Vizient integrated clinical preference solution combines category expertise, data insights and technology to foster more productive conversations and improve clinical supply chain performance for long-term stability.

As the nation’s largest member driven health care performance improvement company, Vizient provides solutions and services that empower health care providers to deliver high-value care by aligning cost, quality and market performance. With analytics, advisory services and a robust sourcing portfolio, we help members improve patient outcomes and lower costs.



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