Category (highlight in **yellow**): **Large Joints**

How Ochsner Slashed Its TKA Costs >> Following surgeons and nurses around with stopwatches, counting every tray, checking supply delivery dates and OR scheduling patterns – then using a new software tool called SIGHT—Ochsner slashed its TKA costs 29%. Without the efficiency expert lingo, here's how they did it.

Key Words: Total Knee Arthroplasty, TKA, Total Joint Arthroplasty, Ochsner, SIGHT Medical, Premier, The Advisory Board, Gundersen, TKA costs

Main Image

Caption: ; Source:
Dana: among the Andrew Huth images is one where a sales person is pointing to an instrument tray to direct a surgeon to a particular product during the surgery. The sales person, I think, was in purple scrubs. If you can find that image, I'd like to use it at our main image for this story. Thanks

How Ochsner Slashed Its TKA Costs
William Donovan

In 2016, the Advisory Board, an international consulting and membership organization focusing on management "best practices" for health care organizations, issued a paper which said, essentially, that hospitals and ambulatory surgery centers (ASCs) must bring surgeons, management, and time-and-materials stopwatch people together to cut their costs for total knee arthroplasty (TKA)—or lose calamitous amounts of money under the bundled payment system the federal government had imposed for Medicare-covered TKAs. (https://www.advisory.com/)

Flash forward to October 2018—Ochsner Health System (OHS) of Louisiana, which won national attention earlier this year by implementing artificial intelligence in its Epic Healthcare clinical information system, took heed.

In a white paper of its own, "Ochsner Health System Redesigns the Surgical Process and Transforms Orthopedic Surgery to Improve Efficiencies and Decrease Costs," an OHS efficiency expert said that it had cut the cost of TKA procedures an astonishing 29% by combining teamwork between physicians and efficiency experts, using new, surgical-suite-specific software. (https://sightmedical.com/whitepaper.html)

The software, called SIGHT, from a Louisiana company called SIGHT Medical, helps OHS to both anticipate surgical-suite needs at the individual patient level and control surgical-supply ordering. (https://sightmedical.com/)

Many of the key steps and results described in the OHS paper are similar to those described in a May 4, 2018 study by Premier, Inc., a consulting firm, titled, "How Variation in Total Joint Replacements Affects Quality and Costs," and also in an August 21, 2018 article in the *Wall Street Journal* titled, "What Does Knee Surgery Cost? Few Know, and That's a Problem" (see more on both reports below).
(http://offers.premierinc.com/WC_CM_TotalJoint_2018_05_04_Landing-Page.html)
(https://www.wsj.com/articles/what-does-knee-surgery-cost-few-know-and-thats-a-problem-1534865358)

OHS seems to be unique so far in its use of software designed specifically to control surgical costs.

Average Projected Savings From New Process, New Software	
National average direct cost per case	$12,700
Number of cases in studied group	270
Average savings per case	$3,696
Total savings	**$998,025**

Source: Ochsner White Paper

The OHS study was done with a group of orthopedic surgeons who were already achieving the hospital organization's lowest costs in TKA procedures.

Its efficiency people followed these surgeons and other medical personnel around, timing all their work activities. They also did "voice of the customer (VOC) with surgeons" and management (which apparently means, "listening to them"), as well as "current state and future state analysis, process maps." Also, they

spied on surgical supply orders, how surgical suites were scheduled, what everything cost, who decided what to buy, how surgical supplies were brought in and stored, and measures of surgical quality.

Getting Past the Efficiency-Expert-Lingo

While the OHS white paper describes the process in efficiency-expert-lingo, what is most marvelous is how well it seems to work, in language anyone can understand. For example, these lowest-cost surgeons were wasting 76% of the surgical trays they ordered. OHS was able to cut their orders of surgical trays down from seven per TKA to two, with no adverse impact on patients, the white paper says.

"On a typical day, where three surgeons perform four cases each, the new process will save central sterile 60 trays. Furthermore, the risk of loss and breakage is reduced. OHS avoids surgical case delays by owning and keeping instruments at the facility, whereas in the traditional model, instruments are often shipped overnight from all over the country to match schedules," the white paper says.

Overall savings for the surgeons in the test group came to 22%. The savings rose to 29% when factoring in post-process costs and applying that to the entire group of OHS surgeons doing TKAs.

The Cost of Chewing the Fat With Sales People

The OHS white paper implies, but doesn't precisely say, that a major cause of waste is letting device and supply salespeople chew the fat with physicians. It does say of these vendor sales people that "Preoperatively, intra-operatively, and postoperatively," they were found to be deeply involved in:

- Product training/education
- Scheduling coordination/communication
- Surgeon case review
- Instrument trays assembly
- Room/cart setup
- Guidance of OR staff
- Instrument cleanup coordination
- Reassembly of used/clean instruments
- Inventory management

OHS took the vendor sales people entirely out of the loop for the surgeons involved in the study and assigned some of the tasks above (after training) to surgical technicians, elevating their job titles to "surgical specialists." These specialists did some of their work using the SIGHT Medical software in the surgical suite.

"It should also be noted that while the new surgical specialist role produced new responsibilities, it was not necessary to add additional full-time equivalents (FTEs)," the white paper says.

"With the ability to remove the sales representative from the process, OHS could leverage and negotiate a hospital direct price point for knee implants, resulting in significant savings for each case," the white paper says. The software also allows OHS to see inventory on hand using the software.

Questions Answered

The author of the OHS white paper, Mark Growcott, Ph.D., MBA, LSSBB, wasn't available as of this writing. A SIGHT Medical manager, Doug Burnette, answered some of our questions:

- ✓ **How and why seven trays when two were needed?**

  Burnette: The use of seven trays by 'even the low-cost surgeons ... is typically vendor driven,' When using the [software], the low-cost surgeons were able to identify and have greater control, allowing the number of trays to be reduced.

- ✓ **What's in the seven trays which were not needed?**

  Burnette: Most vendors sent a universal set of instruments to manage every surgical technique possibility ... Because the technology captures the exact instruments from the actual vendor being used, we can help hospitals understand what actually needs to be used and maintained on site.

- ✓ **An OHS press release said that the ability to move TKAs from inpatient to outpatient was one of the key savings. How is that decision made?**

  Burnette: The technology allows the IDN (integrated delivery network) to scale surgical best practices at a clinically relevant level. This allows greater control of clinical parameters like LOS (length of stay) because the influence can occur at a very granular level at the point of care ... SIGHT levels the playing field between [inpatient and outpatient], allowing the patient to be serviced in the setting that is best for them based on clinical factors rather than regulatory requirements, and allowing significant cost savings to payors.

- ✓ **How does SIGHT improve upon typical hospital materials management or supply chain software?**

  Burnette: Logistics support in a surgical suite requires clinically relevant data to be available in managing pre-operative logistics (i.e., having the right thing in the right place at the right time, while minimizing waste and inventory carrying costs), which current software and hospital processes do not accommodate. They are traditionally able to handle commodities but not clinically-related parameters. Additionally, current systems do not provide any intra-operative support. SIGHT automation technology does.

- ✓ **Can this approach and your software be used for other surgeries?**

  Burnette: Correct. Any device-related surgical procedure, from total joints to spine, to certain cardiovascular procedures, can be accommodated by the technology. SIGHT is already being used in total hip procedures and it expects to roll out ortho trauma by the end of 2018. Other procedures will be added in the coming months as well."

Other Studies: Wide Variations in Device and Internal Costs Can Be Reduced

More bluntly than the OHS white paper, the Premier, Inc. study said that one cause of higher costs was that in many health care organizations, the purchasing process works this way: the individual surgeon, after being schmoozed by sales reps, makes a decision about which implant device to buy—and then and only then does the hospital purchasing department get to negotiate prices, from an obviously weakened position because the vendor sales rep knows the purchasing decision has already been made in that vendor's favor.

"[H]ospitals that negotiated prices after surgeons had already made their selections of preferred vendors paid an average of 17 percent more for knee implants and 23 percent more for hip implants after controlling for other factors, compared to hospitals who collaborated with surgeons on their purchasing decisions," the Premier paper said.

In that purchasing environment, list prices for the knee implant device "skyrocketed in a little over a decade (1998-2011)—on average, the list price grew nearly 300 percent," Premier said. Researchers in another study cited by Premier found that "more than 90 percent of variance was related to both hospital characteristics (purchasing process, etc.) and variance within the hospitals (surgeon preference and practices, etc.) for knee and hip implants," not patient needs. As a result, prices paid by health care organizations for knee implant devices varied as much in the period 2015 to May 2017 as $1,500 from lowest to highest, and for shoulder implants, $1,700—just for the device itself.

Premier said (as did the OHS white paper and the 2016 Advisory Board study) that the solution is not for hospital management to simply snatch away purchasing decisions from surgeons, but for management, the purchasing department, and a committee of surgeons to band together and stare down the vendor as a group. Premier said it has a database of actual prices paid by 1,100+ member health care organizations to advise its members on what to pay.

What Is the 'Real' Cost of a Total Knee Arthroplasty?

The August 21 *Wall Street Journal* article says that after raising its price for a TKA an average of 3% per year for nearly a decade, the Gundersen Health System hospital in La Crosse, Wisconsin, had a list price for a TKA of more than $50,000 by 2016 (including the surgeon and anesthesiologist's fees)—but the organization had no idea what a TKA actually cost. It charged that amount because it could, the article said.

Then, feeling pressure from Medicare and elsewhere, Gundersen decided to find out what a TKA really cost.

"During an 18-month review, an efficiency expert trailed doctors and nurses to record every minute of activity and note instruments, resources and medicines used. The hospital tallied the time nurses spent wheeling

around VCR carts, a mismatch of available postsurgery beds, unnecessarily costly bone cement and delays dispatching physical therapists to get patients moving," wrote the *Journal* reporter, Melanie Evans.

The average cost turned out to be $10,550 "at most, including the physicians," Ms. Evans wrote.

Just as Gundersen was winding up its report, an organization called The Alliance, representing employers who pay for employee health care, showed up with an ultimatum: reduce the price of TKAs, or its member companies would take their TKA business elsewhere. They negotiated a price cut. Gundersen declined to disclose the size of the price reduction, but a representative of The Alliance said told Ms. Evans that it expected to save more than 30% off the list price for TKAs.

An excerpt from The Advisory Board's 2016 paper, titled, "Key Considerations for Succeeding under Joint Replacement Bundled Payment" is available to anyone online. The full paper is available only to members of the Advisory Board's Service Line Strategy Advisor. (http://ns.advisory.com/Service-Line-Strategy-Advisor-Prepare-for-CJR-Briefing?WT.ac=Related_SLSA_CG+-+Research_x_x_JointReplace)