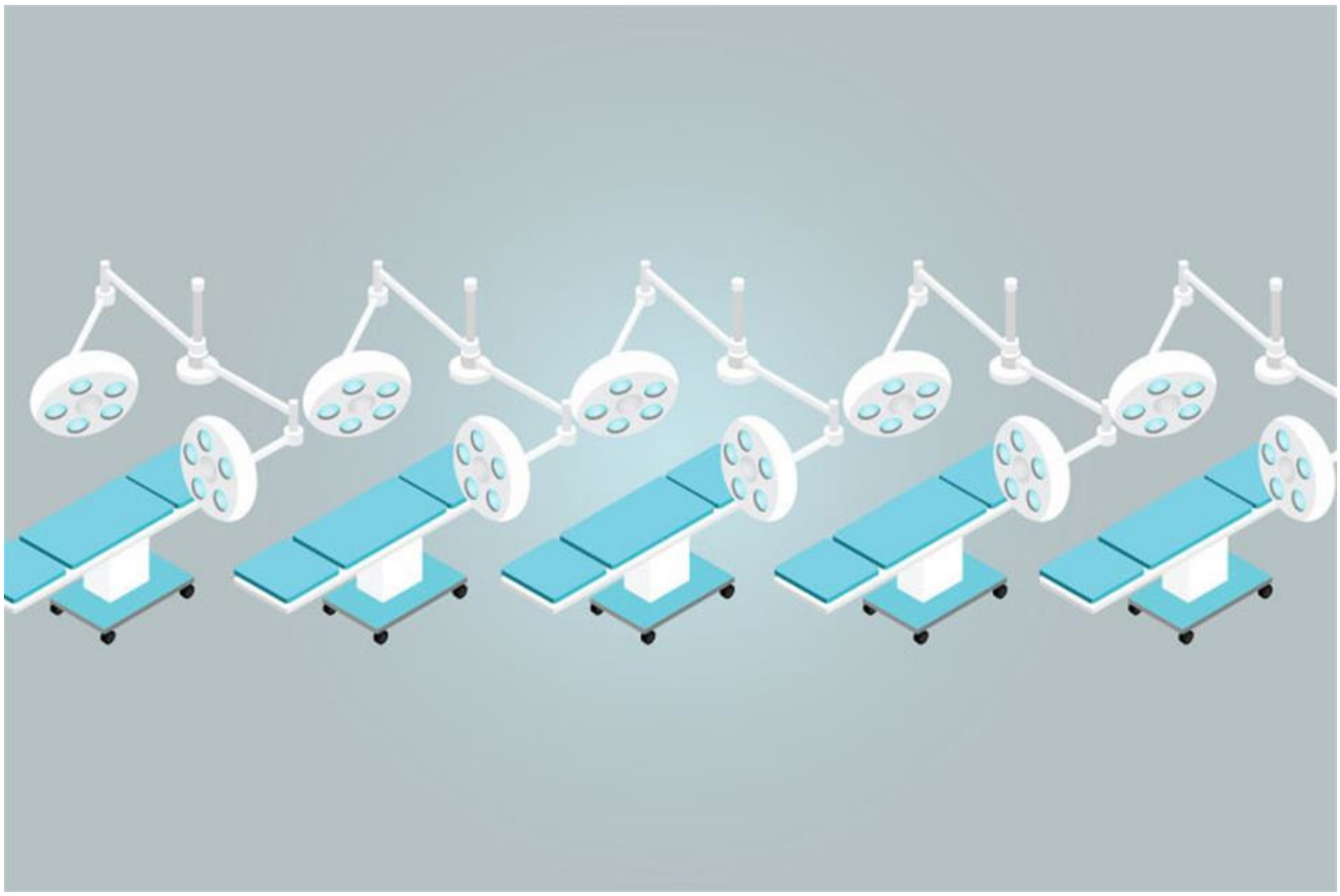
As Three Systems Install 'Volume Pledge,' Others Watching for Its Outcomes

By Michael Stone | Aug. 24, 2016



More than a year ago, three academic-based health systems announced that their surgeons would be allowed to perform certain procedures only if they did a sufficient number of such procedures annually.

Known as the "volume pledge" and adopted by the systems in May 2015, the policy is based on the simple principle of practice makes perfect: more experienced doctors, better muscle memory and technical skills, fewer complications, shorter hospital stays, lower chances of readmissions and less mortality.

The pledge can trace its roots as far back as perhaps the 1979 Stanford study that found death rates dropped by 25 to 41 percent for open-heart, vascular, transurethral resection of the prostate and coronary bypass surgeries at hospitals that performed them more regularly.

The literature stack for volume-outcome associations has grown since then, with correlations also found in cataract surgeries, esophagectomies, thoracic aortic surgeries and thyroidectomies, to name just a few.

The findings are sometimes quite evenly staggered: In the thyroidectomy study, for example, odds of complications increased by 87 percent when the surgeon performed one annually, 68 percent for two to five annually, 42 percent for six to 10, 22 percent for 11 to 15, 10 percent for 16 to 20, and 3 percent for 21 to 25.

The study established 26 thyroidectomies annually as the threshold for best patient outcomes.

"It's sort of intuitive," said the thyroid study's lead author, Dr. Mohamed Adam, of the Duke University School of Medicine. "For example, you have a plane, and there's a pilot who flew 40,000 hours and there's a pilot who flew 1,000 hours. Who are you going to pick? It's similar when you are picking your surgeon."

The three systems that joined to launch the pledge are the Dartmouth-Hitchcock Medical Center, Johns Hopkins Hospital and Health System, and the University of Michigan Health System.

The pledge's thresholds are as low as five per physician and 10 per hospital (for carotid artery stenting surgery) and as high as 25 per physician and 50 per hospital (for hip- and knee-replacement surgeries), according to the *New England Journal of Medicine*.

The areas of surgery it covers are bariatric, cancer resection, cardiovascular and orthopedic.

"Why isn't this just common sense, and why are we even talking about this?" posed Dr. John Birkmeyer, one of the pledge's architects. "And if I were a non-physician and were looking at this from outside the health care industry, I'd be asking the same question."

Birkmeyer, Hitchcock's executive vice president of integrated delivery system and its chief academic officer, said he's received a dozen or more inquiries from other systems, but none beyond the original three has adopted the pledge formally. Maybe, he said, others are waiting to see how the program pans out — especially with adoption not happening overnight.

Indeed, Hitchcock had the pledge in place based on volunteer participation among its surgeons within two months of the announcement. Only maybe 10 or 12 surgeons at the main campus in Lebanon, New Hampshire, and five to eight at affiliates in the state and neighboring Vermont lost surgical privileges, Birkmeyer said.

They "were not heavily engaged in those types of procedures anyway," he said, emphasizing that the pledge affected only more veteran surgeons and not more recent arrivals.

"Young surgeons coming right out of fellowship or residency usually have incredibly high numbers of those types of procedures because they just came out of a teaching hospital system," Birkmeyer said.

But moving the pledge from off the books to formally set in stone has taken much longer.

For the first two or three months after adoption, surgeons across the system helped with the finer details, Birkmeyer said. This included discussions on legitimate exceptions to meeting thresholds — namely maternity or sick leave — and how to count volume: the previous 12 months or an average of the last two years.

Next, for oversight, the system developed a governance hierarchy, going up to the board of trustees.

Thirdly, Hitchcock's attorneys drafted the full policy for ultimate incorporation into the bylaws of the main campus, finishing this process in March. The language goes into the specific details, including a biannual review process for each surgeon and how "we approach surgeons that ran afoul with the policy or had to have remediation," Birkmeyer said.

Now, for the fourth and final step, Hitchcock is writing the same standards into the bylaws of its affiliate hospitals. "It'll take us no doubt the better part of the next year to rewrite the bylaws of [all] our hospitals," Birkmeyer said.

Moving forward, Adam expects more systems to embrace the pledge as value-based care gains a stronger foothold.

"The more you do, the more you're going to get reimbursed — no matter how you did it, right?" he said of the traditional volume-payment model.

With the pledge, though, value-based care is enhanced through the narrowed field of surgeons who, through regular practice, provide increased quality, he added.

Though future research and policy will continue to look into volume-outcome associations, it should also give a closer look to the perhaps harder-to-quantify areas of patient selection and appropriateness of surgeries, Adam said. "There's judgment attached with that, as well."

As for quantitatively tracking the pledge where already implemented, it's too early, Birkmeyer said. "Just for sample-size reasons, it'll likely take us a couple of years to be able to assess empirically whether it achieved its end result, which is reducing complication rates and mortality for some of the higher-risk procedures."

He said he'll be "quite surprised" if volume regulations come from outside the industry and suspects they'll instead remain as internal best practices. And as they grow, the honest but misplaced confidence of some surgeons will be overridden by policy as the final determination of whether they should proceed with particular surgeries, he said.

But that doesn’t mean qualified physicians should be barred forever, Birkmeyer said, giving the example of surgeons partnering with others to perform procedures and bring themselves back above particular thresholds.

“It just needs to be in a transparent and controlled way,” he said of surgeons returning to certain surgeries. “And my suspicion is that, for the large majority of surgeons, once they walk away from those procedures, they’re probably done.”