Spotlight: Vascular Surgery Associates

Embracing Technology to Improve Outcomes

By Keith Chartier

Albert Sam, MD, FACS, described the practice he is a surgeon at as more than just a vascular access center. "In fact, we are a contemporary vascular surgery practice," he said. Baton Rouge, La.-based Vascular Surgery Associates has four board-certified vascular surgeons who only do peripheral vascular surgery. In addition to that, the clinic also stresses the importance of access surgery for renal patients.

"We've done it for about 30 years in the Baton Rouge area and have grown as the number of people with renal failure has grown. What differentiates us is that in a lot of markets vascular surgeons typically only do peripheral, or you may have a surgeon here or a surgeon there begrudgingly doing some access work (normally at a local hospital). We've done just the opposite. We've embraced the access work," Sam said.

He added that the Baton Rouge catchment area is about 750,000 people. And Sam said that the clinic draws patients as far west as Lake Charles and as far east as Mississippi. In all, the access center's total patient catchment area of somewhere around 1.2 million to 1.5 million people. "By necessity, we really had to streamline and make it efficient, and also to improve our outcomes, we've been able to track our data fastidiously on how well we do," Sam said. "In addition to this, we have a full-fledged vascular practice where we do aneurysm work, carotid work and leg work as well. If you embrace it, not only will it improve the quality of the care give to people who are the toughest people to care for—the renal patients—but it can also add to the bottom line of your practice."

Getting to Patients Earlier

Access procedures, in general, are vascular procedures, Sam said. "It's clearly been shown in the aneurysm arena that vascular surgeons who train to do vascular surgery have better outcomes. It goes to show that it's not a big stretch that if you have vascular surgeons, as opposed to, say, general surgeons, who embrace access work, the outcomes will be better."

The vascular access center partners with the two major renal groups in town. One is a 12-person group, private practice. The other is an academic group. Sam said his practice does probably 97 percent of all the access work for them. They will send them to the clinic if patients are not quite on dialysis, or they will call us from the hospital once they are admitted and in need of access," he said.

In addition, it's much more beneficial to catch patients at an early stage of kidney disease, because then it is not a crisis mode. It's not a situation which they are in need of dialysis. "You can have a good intelligent conversation with them, discuss the pros and cons, the risks and benefits, and you can have something in place that's optimal for them to eventually use for dialysis when it's needed," Sam added.

The advantage of early access intervention is that patients can avoid a catheter. For the most part, when it's time for dialysis, patients get a catheter. "Catheters get infected at a higher rate, they get occluded, they need to be exchanged, they're much more expensive, much more traumatic to deal with for the patients," Sam said. "Whereas if we can get them a working fistula prior to them needed dialysis, the outcomes and expenditures required to treat that patient are much better."

It takes about six to eight weeks for the fistula process. However, 20 percent of people will never mature a fistula, so Sam said it's good to get them early before they need dialysis because that person may eventually need something artificial. "It's not difficult to get patients in early when you have a good partnership with nephrologists. Typically, the way the patient flow goes, is the medicine doctor will identify renal problems, send them to a nephrologist, who almost instantaneously will send them to us for their consultation, at which point we'll plug them in and get a fistula in place, working, so it will be there for dialysis."

Cost Savings

The cost savings could be considerable. For instance, Sam stressed that it's more efficient if a patient has a fistula that's working prior to needing dialysis. The process is an outpatient procedure, a 30- to 40- minute operation, all in the same day. Sutures come out in a week, and the fistula generally matures in about six to eight weeks. If a patient comes in when he or she needs dialysis, usually they are in a hospital because a medical condition put them there. At that point they would receive a catheter. Sam said some of the extra costs come in due to of the protracted inpatient stay because of the initial presenting symptoms. In addition, the catheter might get occluded, or it might get infected in the six weeks waiting for the access to mature. At that point, the patient might need a repeat catheter, a change in catheter, or might need pharmacological treatment to unclog a catheter.

"So it really hinges on avoiding catheters at all costs," Sam said. "Really, that's where vascular guys come into play because, number one, we educate physicians so that we can get these referrals and, most importantly, because we're vascular surgeons we're very comfortable handling veins and arteries. So, we're more likely to give someone a fistula instead of an artificial graft, which has been shown to need many more procedures, can have many more complication associated with it and, thus, cost the healthcare system a lot more money."

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Using Software to Better Outcomes

"Many years ago, our surgeons tried to buy software packages to be able to make these decisions, but none of these software packages were flexible enough," Sam said. "So the surgeons actually hired an independent programmer to start the process of building a Web-based program. The evolution of that became Surgisys, and now it's a very flexible Web-based program where any surgeon that's enrolled can look at any area of data point or perform any type of data evaluation that they would like."

Every patient who undergoes any type of access procedure in Baton Rouge gets tracked according to what procedure they had done and all of the components that go into that; for instance, how long the procedure took, what surgeon did it, any complications, antibiotics that were given and outcomes data.

"The reason we do that is because many years ago, the principals in our practice felt that in order to make clinically based, evidence-based decisions we needed to start tracking outcomes," Sam said. "Really, that was the initial desire that essentially became Surgisys, which is a company that has become instrumental in tracking the data, not only for us, but also Baton Rouge-wide."

All of the nephrologists who do procedures in the outpatient access center track their data through Surgisys. They enter all of their data into the Surgisys database, which is a Web-based portal that allows any surgeon at any time to assess outcomes to make clinically based decisions about what works and what doesn't work.

Using the data to analyze outcomes, Sam said that his center was able to change procedures to become more efficient. "The government, and everybody else, has been pushing surgeons to do more fistulas in almost everybody. We've been fortunate in that we are always on of the leaders in our Network (13), as far as the percentage of patients that initially get a fistula. What we've shown, based on our Surgisys registry, is that people with age in the 80 and above range do horribly with fistulas. Their fistulas become mature at only a 10 percent rate. So in that patient population, at this point, we don't even do fistulas anymore. We go straight to graft because those patients have a short lifespan, the chances are less that they will have a mature fistula, so we can avoid unnecessary expenditures in them by going straight to an access graft. That squarely comes from our Surgisys data. They've also been able to determine which grafts have a higher rate of infection."

Although there may be reluctance on the part of some physicians to start using software to track outcomes, Sam said it's essential because it's difficult to know how well a practice is going until it can look back at its cases and see what's working and what is not working. "One thing that has disappointed me greatly is that few surgeons, especially ones in private practice, don't take the time to do that." Sam added. "I don't think it's a lack of a willingness to do it, but I think there are a lot of practitioners who are so busy running their practice and where this is something they might not understand fully. Ultimately, with what's coming down, no one's going to have a choice in this matter. Pay-for-performance is here and it would behoove all of us to do this now, on our own, as opposed to government mandates. Right now, it's a voluntary situation, but it's on the horizon. We would much prefer for physicians to take the forefront in being the leader in this, rather than the government." RBT