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A vascular surgeon shares his expertise in office-based vascular labs, including imaging, access, and anesthesia preferences, as well as the financial and data challenges of this practice model.

When deciding on imaging systems for the outpatient setting, what do fixed systems enable that mobile units lack (ie, types of procedures possible)? What benefits can mobile systems bring, in addition to cost?

Fixed systems have a couple of advantages. First, you can use them for procedures on obese patients. Second, you can do more types of procedures. There was a pilot study in Florida on endovascular repair of aortic aneurysm in an outpatient setting; they did six cases with good results. If we start doing aortic aneurysm repairs in endovascular centers, the fixed system would definitely be better than the mobile system because it has better penetration, better resolution, and less radiation exposure.

One procedure we do not perform in the outpatient setting is carotid stenting. If the indications for stenting are broadened and stents can be placed in asymptomatic patients, then a fixed system will be advantageous.

The mobile system is better for dialysis procedures, because the fixed system is not that maneuverable. It is not easy to set up for the dialysis patients. Obviously, the cost, maintenance, and space requirements are less for a mobile system, and training the operator is much easier.

To what extent would you say that alternative access techniques have allowed office-based vascular labs to grow?

I think radial access is the most helpful technique. Not many people are using radial access, but we have used it quite extensively in our own office. The patient can go home very quickly, and the complication rate is low.

For example, in a patient with aortobifemoral bypass, traditionally, we would cannulate the graft in the groin, but there are more complications that way. For these patients, in the past, I would obtain CT angiograms and then intervene if indicated. With radial access, we are able to go down to almost the upper one-third of the superficial femoral artery and intervene, which we could not do in patients who already have an aortofemoral bypass. For diagnostic angiography, we are able to use radial access because the complication rate is lower. The one setback for radial access is the lack of long and low-profile catheters to reach distal superficial femoral, popliteal, or tibial arteries.

> The bottom line for all access techniques goes to the basic premise of an office-based endovascular lab: If you don't have good enough imaging to do everything you are planning to do, then you shouldn't do it.

In appropriately selected cases, pedal and retrograde access helps. These cases are limited, but it does increase the number of cases that you can do in the office-based setting. The selection criteria for everyone to follow are not well defined. We are in the early stages of retrograde and pedal access. Some of the patients may be better suited for a bypass.

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What are the challenges of anesthesia use specific to the outpatient setting? In which patients/cases are these most apparent, and how are they overcome?

We do not have an anesthesiologist in our office; we use conscious sedation. When conscious sedation is used in the office, every physician and nurse needs

(Continued on page 80)

(Continued from page 82)

to be certified in advanced cardiac life support. So far, we have performed more than 8,000 cases in the office and have not had any anesthesia-related complication. With proper patient selection and appropriate monitoring, procedures can be safely performed under conscious sedation and local anesthesia.

Some states regulate and require an anesthesiologist or certified registered nurse anesthetist in the office. In Michigan, there is no such requirement, but in some other states, this requirement exists. That does add to the cost of taking care of these patients in the office. If we are looking at cost containment, then we need to look at this cost element, but while keeping patient safety in mind.

Sometimes, surgeons are more comfortable having an anesthesiologist in the office, because it is what they are used to. When we are doing a procedure without one, we are hyperaware of our surroundings and the patient's clinical condition. Most interventional radiologists and cardiologists in the hospital setting are already using conscious sedation without an anesthesiologist. Use of anesthesia personnel depends on the operator's background, level of comfort, and state regulations.

What do you see as being the most promising areas of untapped growth for outpatient vascular centers?

Many centers are not offering the entire spectrum of possible procedures; if they did, centers would be even busier than they are now. For example, many centers are only doing peripheral cases. They are missing dialysis access-related and venous procedures (in addition to the venous ablation cases done in venous centers).

Many centers are owned by vascular surgeons, cardiologists, interventional cardiologists, and interventional nephrologists. Based on their training, they are not managing all of the conditions that can be managed in their centers.

Other areas of growth will occur as retrograde and pedal access become more acceptable. Endovascular aortic aneurysm repair and management of venous insufficiency also have potential for growth. In-office thrombolytic therapy is rarely performed, but there are data available suggesting that these procedures are feasible in the office. Part of the reason more venous procedures are not being done in the office is the lack of reimbursement for intravenous ultrasound.

Growth of office-based centers is limited by a lack of education of primary care physicians. We need to do a better job of educating our referring physicians about the advantages offered by in-office procedures.

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What educational opportunities do you recommend for physicians who have opened outpatient centers or seek to work in them soon?

Education is an area that is really lacking. I was talking to a cardiologist recently who is opening a center and knows nothing about dialysis access procedures. How does he get trained? In the past 7 years, we have had several groups of doctors come through our office for training. There is a need for an educational course, webinar, hands-on onsite training, and some didactic training, because physicians in many specialties are opening office-based centers.

What are the most significant challenges facing outpatient centers in the next several years?

The two biggest challenges are quality and data. There is a lack of quality monitoring, data analysis, and outcomes research, and until outpatient centers start creating data to support their use, we will have difficulty justifying doing procedures on an outpatient basis. I think chronic limb ischemia is one area to prioritize because that seems to be the area of major growth in outpatient centers, but there is no data monitoring. There needs to be a registry for office-based procedures.

Another problem is obviously the challenges of payment. For example, this year, atherectomy was going to be cut drastically. There was a move by Medicare to cut various procedure reimbursement by 30% to 50% in fiscal year 2014. Those kinds of cuts, if they come, will make the outpatient model unsustainable, which would be a shame because these centers are saving a lot of money for the health care system, and the patients are greatly satisfied. Outpatient centers, when run appropriately, are very cost efficient.

With the Affordable Care Act continuing to unfold, what are some of its challenges specific to the outpatient setting? Are there any signs of particular benefits contained in the new legislation?

The pilot projects going on right now may help centers. For example, for dialysis patients, we have shown with data from our outpatient center that if these patients are managed in a timely manner, there is a decrease in the intervention rate to maintain access and a decrease in the number of missed dialyses. This results in better patient care.

In a bundled reimbursement model, an efficient center will improve care and do well financially. As accountable care organizations grow, they will demand the procedures to be done in the office since it is cost effective and patients prefer the office setting.

The bill to fix the Sustainable Growth Rate that was put forward this year, but did not pass, focused on performance-based reimbursement. If we use data to show that we can improve quality with outpatient centers, then there will be higher reimbursement.

At the same time, Medicare is cutting costs and sometimes doing it without careful analysis. That is horrifying because physicians make investments in the labs based on certain guidelines for the betterment of patient care, and suddenly they could be left with a huge debt.

To do well in office-based labs and deal with the accompanying challenges, we need information technology solutions to collect, manage, and analyze data. Physicians, hospitals, industry, and society all have a stake in this, so everyone needs to work together. My prediction is that hospitals will ultimately realize that they can provide better care through outpatient centers and become partners with physicians. Some of the hospital reimbursement is going to be based on community rating. Hospitals will have a greater responsibility to provide care in a timely, efficient, and cost-effective manner. Office-based labs will help accomplish that goal.

Although the decision to work for a private practice or hospital system is deeply personal, and one becoming further complicated by the changing nature of health care reimbursement models, what key points should be considered by those looking to either change employers or are just finishing their residency or fellowship?

More than personal, it is a financial decision physicians are making. There are very few people who want to work for a hospital, other than those who want to be academicians and work for universities. Physicians are now selling their practices to hospitals not because they want to, but because the reimbursement system has become so skewed. Medicare has decreased the reimbursement in a draconian way, and the cost of doing business has gone up significantly because of the government mandates.

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Some of the younger people are working for hospitals because they have huge school debts, and the hospital is able to pay them more than what a private practice is able to, as the hospital gets a differential from Medicare for physician services. If the differential goes away, it will save close to $2.2 billion for Medicare alone, and as a result, the hospitals will not be able to reimburse the physician the way they are able to now. That's a real issue, and over the last 4 or 5 years, I've seen many physicians who took hospital employment and then tried to go back into private practice have a hard time doing so.

For residents who are looking at practices, one red flag for me is if the hospital offers a lot more money than the standard compensation model. Usually, to me, that means either something is wrong with the system, or they have a lot of turnover of physicians who can't work in that system.

People who do not have office-based endovascular suites are generally not able to recruit because they don't make enough money to support new partners. The other reason people sell their practices is because when the senior partner retires, younger partners do not know how to run a practice. That's when they are looking for a savior, and they think it's the hospital. ■

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