

Balancing Act: Setting the Stage for Efficient Utilization of EP/Cardiac Cath Labs Now and Into the Future

By Lorraine Buck

According to the Centers for Medicare/Medicaid Services, U.S. healthcare expenditures increased 5.8% in 2015, reaching \$3.2 trillion or \$9,990 per person. Reasons for this include increased healthcare service prices, utilization of services, and cost of new technologies, as well as effects from the Affordable Care Act that began in 2014. Looking forward, it is estimated that between 2010 and 2030, the number of Medicare beneficiaries will rise from 46 to 78 million. Considering the rate of expenditures, coupled with the aging population, governmental officials are concerned that there will be insufficient funds to pay full benefits in 2019 concerning the Medicare Part A Hospital Insurance Fund.

Amid these happenings, there is also no doubt that hospitals will continue to experience decreasing reimbursements from third-party payors, particularly in the historically profitable cardiac DRGs.

The challenge? Find ways to protect the hospital bottom line.

To prepare for this daunting task, Corazon advocates initiating the following strategies for EP and cardiac cath labs: work to minimize supply and utilization costs via implementing an inventory management system and monitoring costs/procedure/operator, and cross-train staff in order to reduce staffing costs, all while focusing on increasing patient referrals into the system and maximizing patient throughput for optimal lab utilization.

Corazon has been able to assist many labs to capitalize on these efforts. However, labs are oftentimes focused on the same procedures they currently perform, thus missing out on many other opportunities to expand by offering “new” procedures. The question then becomes what types of new procedures? And subsequently, how should we begin the process to evaluate the ability to add “new” procedures?

Corazon’s proven steps outlined below can help progressive labs begin the process of considering service expansions as a means to optimize performance and sustain (or improve) the bottom line.

Understanding the Healthcare Landscape

Decreasing or slowed growth has been witnessed nationally for both electrophysiology (ICD/CRT-D) and percutaneous coronary interventional (PCI) procedures, mostly due to similar factors: a focus on preventive care,

an increasing number of general practitioners caring for complex patients, and the appropriateness scrutiny related to Medicare coverage. Because of this:

- PCI procedures decreased 38% from 2006 to 2011. Although PCI volumes are projected to increase from 2010 to 2020, it is minimal...just 1-3%.
- Electrophysiology procedures in the past grew at double digits; however, going forward, growth is estimated at just 5% related to ICD/CRT-D volumes.

Upward trends have been seen in other areas of electrophysiology, in addition to structural heart, peripheral vascular, and neurosurgical procedures. For instance:

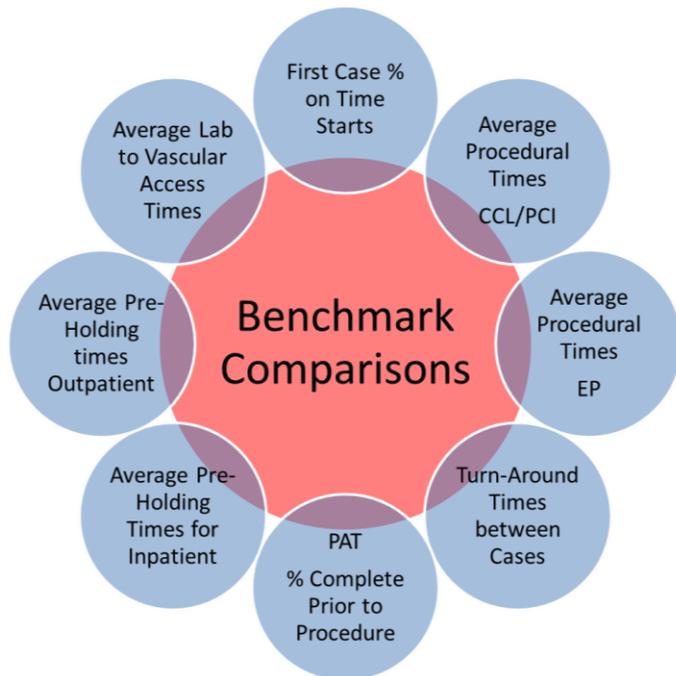
- The instance of atrial fibrillation in the U.S. is expected to reach approximately 3 million by 2020.
- Structural heart disease is on the rise, leading to increased transcatheter aortic valve replacement (TAVR), left atrial appendage occlusion (LAA), and transcatheter mitral valve replacement (TMVR) procedures, which are expected to increase 30% from 2010 to 2020.
- Peripheral artery disease affects roughly 10 million Americans; this number is expected to grow as the 65 and older population changes from 15% in 2015 to 21% by 2030.
- Strokes affect more than 795,000 people in the U.S., with 85% of them being ischemic. Given the aging population, this number is also expected to rise over the next 10+ years.

Determining Laboratory Utilization -- “Think Outside the Box”

The ability to maximize throughput is key to knowing current available capacity — a necessity amid considerations to increase overall utilization of existing labs. Figure 1 below illustrates metrics that should be considered in order to analyze current utilization. It is vitally important to compare individual program metrics to industry benchmark comparisons, which can help to identify areas of potential opportunity. For example, appropriately screening pre-procedure patients can reduce procedure cancellation and delay rates. Fewer delays and cancellations increase patient, physician, and staff satisfaction, reduce unnecessary testing and associated expenses, and provide better pre-procedure patient care and outcomes.

Once existing and potential volume is determined, program leaders can work to review current staffing patterns. For instance, Corazon recommends that if staff work 8-hour shifts and the lab is functioning at 80% capacity, moving staff to 10- or 12-hour shifts can increase capacity and throughput without having to add additional capital expenditures of facility and equipment costs.

Figure 1: Metrics to be considered when analyzing current laboratory utilization.



Considerations for Laboratory Expansion

After understanding forecasted industry trends and determining available laboratory utilization and potential available space, determining what, if any, types of procedures make sense to add to lab offerings is a logical next consideration. Cardiology, radiology, electrophysiology, vascular medicine, and cardiac surgery will all play a part in influencing the industry as clinical processes and technology continue to shape how patients are cared for in the future. Corazon has found it helpful to have completed a formal business plan in order to understand catchment area for these services. Marketplace evaluation helps to determine the volume and type of procedures that may be available at other sites (or not), which can lead to better decisions about access and volume potential.

Another factor to consider is the need for additional types of physicians that can perform the necessary procedures. A facility can't exactly commit to becoming a primary stroke center without committed neurosurgeons. Expanding additional types of procedures within the laboratory means that subspecialty physician expertise AND their availability within the facility both need to be considered. Structural heart experts take extra time to recruit, so the sooner you know that your institutional plan

calls for moving into this area, the more likely you will be able to recruit and retain the right talent within a manageable timeframe.

Equipment needs are equally important. Advances in dual-purpose imaging equipment can allow for full run-off views while allowing for the high-level detail that is necessary for intracranial imaging. Biplane systems, preferred for more advanced EP ablation procedures, can meet requirements for full neuro-interventional capability. New hybrid EP labs have recording and mapping systems as well as advanced imaging modalities, anesthesia, and angiographic equipment, which will support crossover for interventional cardiology, vascular surgery, interventional radiology, cardiothoracic surgery, and neurosurgery. This crossover function allows maximum flexibility to deal with the unpredictable changes in reimbursement and the unforeseen development of new procedures.

Certainly, this process can seem overwhelming at first. Corazon has assisted many facilities in analyzing CCL /EP laboratory utilization through the completion of a business plan that incorporates market analysis, physician availability, and equipment needs. However, this comprises just the first few critical steps — completing these successfully will not necessarily allow for a turnkey operation, as appropriately trained staff, strong leadership, and an overall organizational readiness to move forward will likewise be vital in order to successfully build on existing services.

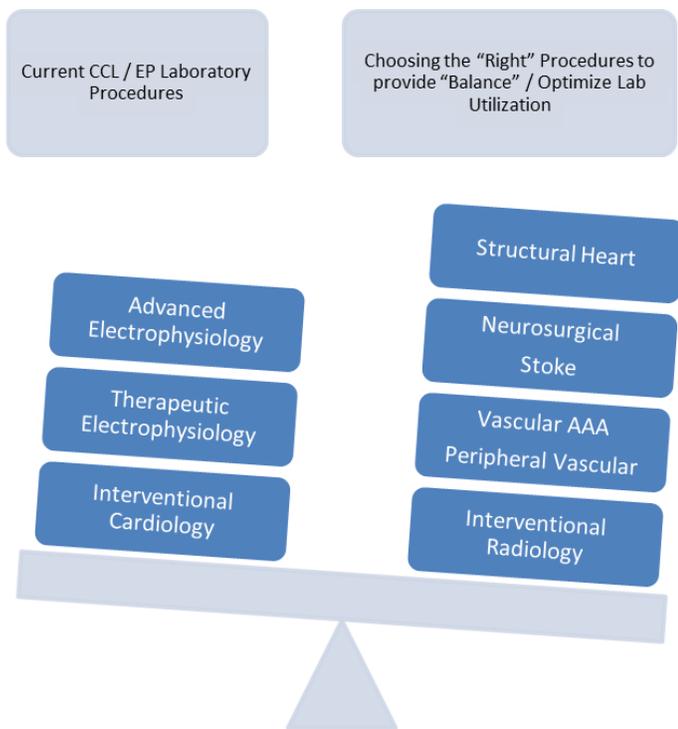
Ultimately, the key is determining the multiple users of the space that could expand lab capabilities, which will translate into increased volume of procedures and additional income to be used to offset other costs such as the staff needed to support registry involvement, or various technologies that will help remotely manage patients.

Balancing Act

The projected decrease in cardiac catheterization and electrophysiology volumes, along with a continued decrease in reimbursement, will definitely challenge facilities operationally, clinically, and financially. Coupled with anticipated regulatory changes in the overall healthcare industry with the new administration, the future is uncertain, now more than ever before.

Corazon believes simply keeping the "status quo" will not be an option going forward. Having a solid understanding of internal laboratory utilization in comparison to benchmarks will help to set the stage for future procedural growth. The "balancing act", as depicted in Figure 2, will be determining the right procedures at the right time in order to maximize utilization and as a consequence, revenue.

Figure 2: Balancing Act: Determining “New” Procedures for your EP/CCL



One thing to keep in mind is that the interventional laboratories of the future will not continue to function as they do today. Patients treated with open surgical procedures will instead be treated with minimally invasive approaches. Imaging tools including but not limited to CT, MRI, and PET will be increasingly used in the percutaneous minimally invasive environment. Ultimately, patients will benefit from having a team of physicians including radiologists, cardiologists, and surgeons collaborating in a truly integrated manner, making the best clinical decisions that result in increased patient satisfaction and positive outcomes.



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