

Change and Challenge: Understanding the Finances of the Electrophysiology Lab

By Carol Wesley

The electrophysiology (EP) lab has become highly specialized over the past several years, leading to the subspecialty emerging as one of the fastest growing within the cardiovascular service line. Advanced technologies developed for diagnostic and interventional procedures, including catheter ablation, electrophysiology studies, cardiac device implantations, 3D mapping, device implantation for rhythm management, and transcatheter therapy of structural heart disease are all highly sought-after in the community hospital setting – by electrophysiologists, patients, AND administrators alike.

And while these fast-developing advances in technology often support high-quality cardiovascular care and have value for improving clinical outcomes or reducing procedural time, they come with high costs, both fixed and variable. So while advanced EP is often desired, the implementation of these services can be challenging.

The growth of electrophysiology has been rapid, and according to Global Market Insights,⁶ the discipline is expected to experience over 6.1% CAGR growth (compound annual growth rate) through 2024. Corazon attributes this expected surge to several factors, including

the continued growing incidence of cardiovascular disease in the geriatric population, a steadily increasing demand for invasive clinical EP procedures such as catheter ablation, and the technology-driven nature of the procedures.

In August 2018, the Centers for Medicare & Medicaid Services (CMS) released the FY 2019 Final Inpatient Prospective Payment System (IPPS) Rule, which reflects the following rate changes for outpatient EP payments (additional details on rate changes included in Table 1):

- Rates for rhythm management procedures *remained flat*;
- Intracardiac ablation procedures rates *slightly increased*;
- ICD implant and replacement rates *slightly decreased*;
- Pacemaker implant and replacement device rates *increased*;
- Rates for ablation procedures done in conjunction with a comprehensive EP study *increased*.

TABLE 1. Sample Comparison FY 2018-2019 Medicare Severity Diagnosis Related Group (MS-DRG) Changes.

Technology	MS-DRG	Description	FY' 18 Payment	FY' 19 Payment	% Change (\$)
Defibrillator	245	AICD generator procedures	\$32,870	\$30,620	-6.85%
Generator & Lead	265	AICD lead procedures	\$20,114	\$19,041	-5.33%
Defibrillator Systems; Cardiac Resynchronization Therapy for Defibrillators (CRT-D)	227	Cardiac defibrillator implant without cardiac catheterization	\$32,580	\$32,481	-0.3%
Defibrillator Systems	222	Defib w cath w AMI/HF/shock w MCC	\$51,155	\$49,712	-2.8%
Electrophysiology Procedure (Outpatient)		LEVEL 2 Electrophysiologic Proc (C-APC 5212)	\$5,314	\$5,097	-4.08%
Electrophysiology Procedure	273	Percutaneous intracardiac procedures w MCC	\$21,576	\$22,314	3.42%

CY2019 Medicare Final Rules for OPSS, ASC, and PFS (CMS, 2019)

As Medicare continues payment reforms, the ongoing financial impact on healthcare, meaning the way providers receive payment, must never be shown to impact patient care and overall hospital clinical performance. **Understanding payment changes and knowing how to**

manage costs/expenses for the EP lab is crucial to making smart capital investments in new capabilities and/or expanded services.

EP leaders must find ways to not only control costs as a whole, but also search for ways to drive down specific programmatic costs in order to increase margins for the service line. Corazon believes that understanding expenses, along with strategies to increase revenue, are vital first steps to ensuring continued viability and profitability for EP services, despite rising costs.

Understanding Expenses

Expenses are either fixed (direct or indirect) or variable, and are attributed to many factors, such as labor, equipment, disposables, implants, drugs, and capital equipment. Fixed expenses are either indirect or direct:

- **Indirect costs** are associated with shared resources across the facility and used by the entire organization (these may be listed as “shared services” on the monthly EP lab finance report). An example is:
 - Environmental or food services shared by all hospital departments
- **Direct costs** do not change depending on volume, and are directly the result of the EP lab. Examples of direct costs are:
 - EP lab manager / clinical leader salary
 - Maintenance contracts for equipment
 - Specific capital equipment used in the EP lab, such as mapping or recording systems

Variable expenses fluctuate depending on procedure volume, for example:

- Disposable products (such as catheters and sheaths)
- Drugs used in the EP lab
- Implants/devices

Understanding Revenue

Revenue in the EP lab is difficult to quantify, as inpatient procedures, reimbursed by Medicare Severity-Diagnosis Related Groups (MS-DRGs), account for the entire length of stay (LOS). Outpatient procedures, reimbursed by Ambulatory Payment Classifications (APCs), may be used to make some general assumptions, but Corazon generally recommends that EP leaders determine the profitability of a new procedure or product by developing a formal business plan, or at least a proforma. This effort will realistically estimate costs and determine the operating margin.

In general, cardiac catheterization labs continue to be challenged with reimbursement as CMS adjusts rates, and the EP lab is no different (Table 1). Reimbursement rate increases in general are often below inflation rates, and do not keep pace with the rising costs of EP’s advanced technology and devices. However, with the continuing upsurge in staffing and technology expenses that hospitals are forced to invest in, increasing volume is not always the answer to increasing revenue.

Corazon firmly believes that improving bottom line revenue can be accomplished in ways other than increasing the volume. Operational strategies to consider include 1) identifying and addressing inefficiencies; 2) validating and improving clinical documentation and coding (as needed); and 3) minimizing expenses.

Identifying and Addressing Inefficiencies

Not addressing operational inefficiencies, such as delays in first case starts, long lab turnaround times, and lab under-utilization can negatively affect revenue-generating abilities of the lab. Because of the complexity of the EP service overall, inefficiencies can be common, and perhaps quite challenging to identify and subsequently overcome.

Clinical operations of the EP lab, particularly as reimbursement models move toward quality-based bundled payments per episode of care, should be focused on efficient delivery of high-quality services in a cost-effective manner. Multiple factors contribute to clinical inefficiencies; therefore, a systematic multidisciplinary approach is needed to reduce inefficiencies and increase overall productivity. An assessment of the care delivery practices in the lab is the first step needed to determine priorities. Then, mapping the steps in each type of case will help to streamline workflow processes and ensure each component of the care continuum is optimally delivered. Figure 1 reveals varied causes of clinical and operational inefficiencies, with each requiring specific strategies to identify the cause with execution of changes needed for improvements to be realized.

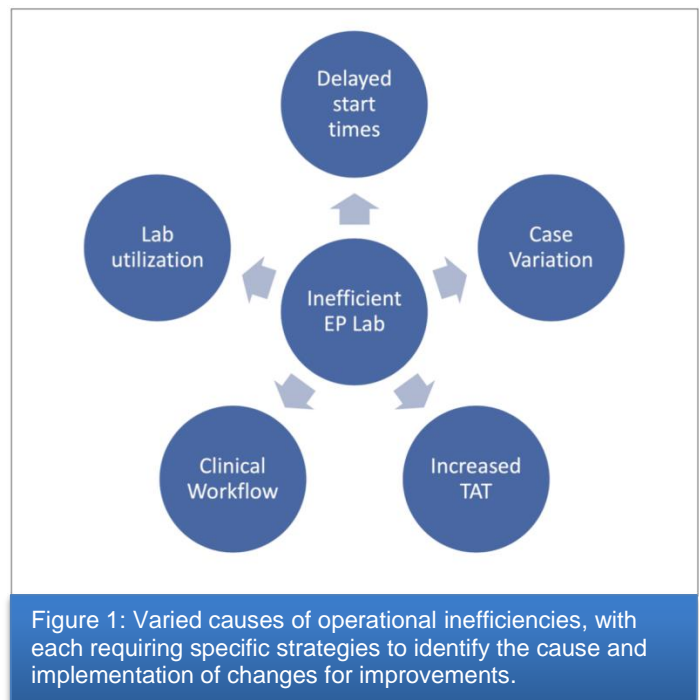


Figure 1: Varied causes of operational inefficiencies, with each requiring specific strategies to identify the cause and implementation of changes for improvements.

Validating and Improving Clinical Documentation and Coding

Documentation and coding improvements can lead to reimbursement enhancement and subsequent increases in revenue. Reimbursements for both physicians and hospitals are tied to each other and based upon complete, accurate, and timely documentation by the physician.

Clinical documentation must include information that establishes medical necessity and fully supports the procedure performed and the equipment used. Without all components included, the procedure code may be inaccurate, and/or reimbursement may be decreased as a result.

Capturing all relevant patient co-morbidities is also vital for purposes of reimbursement so that the care delivered matches the payment received. CMS value-based reimbursement models make coding accuracy a critical necessity. However, EP studies and arrhythmia ablation can be complicated because of the number of bundled and add-on codes. For instance, complex devices (i.e., implantable defibrillators and resynchronizing pacemakers) that are not properly documented can lead to inaccurate coding as a simple (lower paid) device. A multidisciplinary approach to clinical documentation and coding improvement should not only address add-on rules, but also understanding procedure bundling, which can improve accuracy and ensure correct reimbursement.

Facility billing for EP services can be by charge capture at the point of care or by Health Information Management (HIM) review. There are advantages and disadvantages to each method, and leaders should determine which method and workflow works best for their lab and facility.

Minimizing Expenses

Minimizing expenses can also maximize revenue for the EP lab, and can be accomplished by addressing any or all of the following:

- **Labor:** Labor costs make up the bulk of the EP lab budget. Minimizing “downtime” and overtime can be accomplished by addressing operational efficiencies and optimizing lab utilization. By implementing “best practices” in case scheduling, staffing needs become more predictable and can lead to both reduced down time (an empty lab) and overtime (when inefficiencies or over-scheduling result in longer case times and turnaround times).
- **Expenses:** EP labs handle many high-value procedures that use costly devices and disposable products. By ensuring infrastructure and processes are in place, such as value analysis committees, collaboration with supply chain for membership buying groups, competitive bidding processes, and a robust inventory management system/process, costs can be reduced or at least optimally managed to lessen or eliminate waste.

- **Quality:** Complications come at a high price; not only do they increase the cost of the hospital stay, they also can increase LOS, decrease hospital payment, and lead to re-admissions. According to a retrospective study by Cantillon et al, complications are known to easily double the cost of an initially uncomplicated procedure.⁴ CMS currently caps payment reduction at 3% for re-admissions. In addition, the CMS value-based reimbursement model provides motivation to EP lab leaders to elevate quality as a means to ensure appropriate payment.

Corazon strongly believes that management, staff, and physicians should be strongly focused on improving or maximizing program quality. We often recommend improvement to existing processes or implementation of new processes to improve safety and decrease some risk, such as a pre-procedural team huddle, implementation of a pre-procedural checklist, and consistent post-procedure hand-offs. Any strategies to offset high costs should also be focused on improving quality. Certainly, an efficient program most likely delivers high-quality care at lower cost; however, a lower cost program doesn't necessarily deliver high-quality care!

Conclusion

Profitability and cost management are equally essential for an EP lab to remain competitive and viable as a part of a successful cardiovascular service line overall. In today's healthcare landscape, balancing community need, lab utilization, and cost, all while working to increase efficiency and improve patient care and quality outcomes, are necessary considerations for any savvy EP lab leader.

While optimization can improve quality of care, patient outcomes, and drive cost savings, rehospitalizations can always push the cost of care higher, offsetting any profitability. One of the largest changes and challenges in healthcare today is the shifting reimbursement models. Our clients are continually looking for ways to solve the high-quality/low-cost equation without sacrificing patient access. Understanding the economic impacts on the EP lab can lead to more informed decision-making and better strategies for the future of this dynamic subspecialty.

Despite increasing demands on infrastructure, and increased expenses and procedural costs, it is possible to balance the reimbursement landscape and thrive, even as new devices and technology emerge. Successful EP programs will be those that remain ahead of the financial curve and find ways to make the most of the changes and challenges that will no doubt continue for years to come.

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