EP LAB
BENCHMARKING WHITEPAPER

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In early 2014, Heart Rhythm Society Consulting Services (HRSCS) invited a select group of cardiac electrophysiology (EP) physicians and EP lab directors to a meeting in the Washington DC offices of HRS to discuss advanced practices in managing comprehensive arrhythmia services. Participants had completed a detailed profile benchmark survey and were convened to collaboratively share approaches to optimize clinical quality, efficiency and operating standards for EP labs today. Many spirited discussions ensued as the group addressed common challenges and learned from each other’s experiences.

The general profile of the participant EP labs, while skewed toward high volumes of procedures, reflected a heterogeneous mix of organizational types and structures, hospital/physician relationships, and operating relationships with anesthesia services. In some cases, EP physicians were employed by the hospital system; others were in private practice. Most labs, not all, were involved in teaching and had either EP or CV fellows, or both. All were involved in research, but the numbers of active studies each lab supported varied considerably.

On average, EP labs operated 10 regular hours per day, Monday through Friday. EP lab occupancy rates were over 80% during regular hours. Typically, three staff covered each case, though the staff mix varied (some all RN, others a mix of RN/technician). Most labs had formal outreach sites established for referrals. Payer mix for device patients was 63% Medicare, for ablation patients it was 44% Medicare. A very small percent of patients (<10%) were covered by risk-based contracts.

Key Themes of Electrophysiology Evolution

Three thematic areas provide background context as the EP lab expert panel discussed the evolution of the state of the art arrhythmia services management:

1. Dramatic changes in the clinical practice of electrophysiology have been driven by advancements in the science of arrhythmia medicine and technological advancements to screen, diagnose, treat and manage larger numbers of patients, often with more complex chronic conditions.

2. These advancements of arrhythmia clinical practice have justified the evolution of the EP lab operations from origins as an adjunct to the cardiac catheterization (cath) lab, to physically separate, standardized procedure suites dedicated exclusively to EP services.

3. Corresponding standardization of quality control and business practices support the transition to higher volume and margins in an increasingly challenging health care environment that demands data driven transparency, clinical rationalization of care, and consistent documentation and reporting of metrics that define both safety and efficacy.

Underlying this evolution of arrhythmia services are the foundational leadership skills required to navigate and drive clinical and administrative changes within and across complex organizational structures. While acknowledging the time required to address the complex demands of leadership, participants spoke of disciplined personal time management, the scarcity and benefits of ‘white space’ for creativity, and the need to appropriately value their professional worth and the worth of EP services.

Evolution of the Clinical Practice of Electrophysiology: Compliance and Certification

The science and technology of arrhythmia services are characterized by advances in device implant technologies including resynchronization therapy, 3D electroanatomic mapping systems, remote monitoring technologies, increasingly complex ablations and more standardized processes to screen, diagnose, treat and manage patients with complex medical conditions. As the sophistication of EP services has changed, so has the working relationship between the EP labs, anesthesia services, medical lab services, cath labs and specialized service lines like heart failure. Keeping up with clinical advances requires that physicians and administrators cooperatively enable changes to achieve high quality, efficient and data driven care delivery.

Quality Compliance:

A well-defined quality program that includes standardized protocols for patient care, daily quality control checks and documentation, tracking of complications and outcomes, and a process for adjudication, review and corrective action provides the foundation for dynamically managing evolving clinical practice. This includes the need to address cross-functional service integration with areas such as lab services, anesthesia services, emergency room, cath labs and heart failure services. All participants were committed to the need and opportunity to implement national and institutional standards of quality outcomes (e.g., NCDR) and guidelines within EP services.

Training Certification:

Changes in the clinical practice of electrophysiology have reinforced the need for staff training, competencies and development plans to keep pace with the medical and technological advances. All organizations
participating in the discussion had defined recruiting, education and development protocols. Participants expressed the need to establish training competencies, cross-training and certification standards.

**INDUSTRY IN THE LAB:**
There was considerable discussion about industry representation in the lab, and how that might impact procedure workflow, patient privacy, and the dynamics of decision-making. Though industry is required to teach safety related to products, the general sentiment of participants was to work toward independence from industry during procedures in the EP labs when possible. There was recognition, however, that industry participation remains substantial in many EP laboratory procedures around the country, and that industry expertise with complex proprietary equipment may add value and be challenging for many EP labs to fully replace.

**EVOLUTION OF THE EP LAB TO STANDARDIZED PROCEDURE SUITE: OPTIMIZATION OF RESOURCES**
As EP services have grown from a small subset of the cath lab to an independent procedure suite, with higher volumes of procedures and a stronger contribution to a comprehensive cardiovascular service offering, the need for workflow throughput and standardization has increased. From an operational perspective, EP lab professionals are challenged to provide expert advice in complex and often lengthy patient cases, streamlined efficiency for routine device implants and follow-up, and outreach leveraging remote technology and extended service delivery networks. Trying to efficiently integrate and excel at all three approaches within a small operating unit is a very complex challenge.

**WORK FLOW OPTIMIZATION:**
Participants expressed the need for workflow optimization directed at on time starts, turn-around between cases and managing delays in procedure room performance. Key areas that impacted performance included the cultural aspect of the lab, the variability in types and times of procedures, and workflow integration with anesthesia services, to the degree they were involved in cases.

**SCHEDULING SYSTEMS:**
Each of these areas engendered spirited discussion of practices and approaches that participants found useful. All agreed that case scheduling was critical, and that currently available electronic systems needed to be supplemented with the expert interpretation of a scheduling coordinator familiar with the unique preferences of the EPs. Labs attempted to group similar types of cases together, to perform pre-procedural testing prior to the day of surgery where possible, and to ensure an on-time start to the first case of the day to prevent an on-going backlog.

**ANESTHESIA SERVICES:**
The interdependent operating relationship with the anesthesia department was recognized as a key variable impacting operating efficiency, clinical training requirements (whether EP lab staff performed moderate sedation), and overall procedural charges. Within the expert panel, models ranged from using the anesthesia department for all cases, to a mixture of anesthesia and EP staff coverage depending on the type of case and characteristics of the patient. All participants reinforced the need for active, ongoing communication in this working partnership with anesthesia services.

**PROPRIETARY SYSTEMS:**
Participants strongly agreed that the multiple, proprietary systems found within the EP lab added layers of complexity in training and in optimizing operations. In some cases, new technology required the addition of a staff to manage the system. While the desire for simplicity and rationalization of electronic systems was strong, participants did not have high expectations and resigned themselves to working through the chaotic electronic maze of proprietary and duplicative systems.

**EVOLUTION OF BUSINESS PRACTICES TO SUPPORT TRANSITION TO HIGHER VOLUMES/MARGINS: REVENUE REALIZATION**
The current US health care economic environment demands data driven transparency, clinical rationalization of care, and consistent documentation and reporting safety and quality metrics.

All participants in the EP lab expert panel placed strong emphasis on the need to have processes of documentation and review, along with well-developed relationships with functions responsible for coding and financial decision-making. Leadership in this arena requires physicians and EP lab directors assume personal responsibility for coding accuracy, clinical documentation expertise and education in revenue cycle dynamics.

**CORRECT CODING:**
Participants routinely engaged in practices to realize legitimate revenue in a very complex payment system, which changes rapidly from year to year. Key areas included: understanding coding processes and practices in the context of rapidly evolving clinical technology, driving compliance in response to audits and accountability tracking, and documentation of medical necessity along with the process to review that documentation. (continued)
SUPPLY MANAGEMENT:
A number of approaches are employed by participants to manage supply costs. Key practices included developing product standardization guidelines and transparency so that products were selected within a fully informed clinical and economic context. Emphasis was placed on basics, like checking accuracy of the charge master and having processes established for warranty credit collection.

PAYER NEGOTIATIONS:
There was recognition that, while fee-for-service dominates current payments, impending risk contracting payment models could rapidly change that dynamic. Preparedness for pay for performance was top of mind, with the overall objective of identifying the right patients for the right procedures to obtain the best outcomes at the lowest cost.

CONCLUSION
As EP services’ clinical capabilities, operating practices and economic impact on CV services continue to evolve, opportunities exist for HRS and its consulting subsidiary, HRSCS, to establish and facilitate practices that support advances that benefit the patient, physicians and care professionals, health system and industry partners.

Led by President Rod Williams, HRS Consulting Services was established in 2012 as a wholly-owned, for-profit subsidiary of HRS designed to provide HRS members, affiliates, payers, and hospitals with EP-related advisory services for managing the dynamic changes and demands of today’s healthcare environment. This unique endeavor is a strategic decision by HRS in response to member feedback. It supports the Society’s ongoing mission to improve the care of patients suffering from heart rhythm disorders by promoting research, education, and optimal healthcare policies and standards. HRS Consulting Services will focus on providing expert advisory knowledge relevant for EP labs and clinics seeking to achieve maximum financial performance and operational efficiencies for delivery of cost-effective, high-quality patient care.

HRS Consulting Services offers reimbursement assessments, coding analyses, compliance reviews, operational efficiencies and revenue cycle improvements for enhanced financial performance. Clients are provided access to incomparable domain knowledge from a trusted leader focused on EP specific policies, trends, and operational expertise and credentialing.

Benchmark Key Performance Indicators
Get ahead of the future! Assess your performance against national reported means

- Gain insights into performance quality indicators from practices experienced in successfully managing comprehensive arrhythmia services
- Identify innovative methods that foster improvements and address process deficiencies, resulting in efficiency gains
- Collaboratively share approaches to optimize clinical quality, efficiency, and operating standards for today’s EP Labs
- Acquire the necessary data to strengthen financial performance and enable process improvements within your current operating environment

HRS Consulting Services delivers a suite of solutions with the aim to improve the efficiency of your lab through comprehensive benchmarking of care performance metrics.

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