EP Billing Issues

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The Heart is Designed Like a House

• The heart has a plumbing system and an electrical system.
  – Plumbing: The portion of the plumbing system most familiar to coders is the coronary artery system. These vessels supply the heart muscle with oxygenated blood. There is also a venous system.
  – Electrical: The heart muscle contracts and relaxes in response to electrical stimulus. A complex electrical system is involved.

• Problems with either the plumbing or electrical system will cause the heart to function at sub-optimal levels.

How the Electrical System Works

A highly specialized group of cells located in the upper right chamber of the heart generates an impulse about 60-100 times/minute (healthy pt.)
  – The impulse immediately travels throughout the upper chambers of the heart and causes them to contract (pushing blood into the ventricles.) (impulse speed = 1,000mm/sec.)
  – The impulse then travels to another special group of cells where it is slowed to 200mm/sec before being distributed throughout the lower chambers of the heart at a rate of 4,000mm/sec. to stimulate their contraction (which pushes blood out of the heart.)
    • The “stall” (called the AV delay) is necessary because the electrical impulse travels quicker than the blood that is being circulated.
    • The ventricle shouldn’t contract until it is full with blood.
Electrical System Terminology

- **Sinus Node:** The group of cells that initiate the electrical impulse. The sinus node is the natural pacemaker of the heart.
- **Atrioventricular Node:** The relay station between the Atrium and Ventricles. This node slows the electrical impulse.
- **Bundle of His:** Connects the AV Node to two pathways that reach into each of the ventricles.
- **Right & Left Bundle Branches:** Connect the Bundle of His to contracting fibers in the ventricles (Purkinje.)

Electrophysiology Crash Course
(Overview of The Conduction System)
What is an EP Study?

- A minimally invasive test that involves the insertion of multiple electrode catheters into various regions of the heart...
  - These electrodes can sense and/or deliver electrical impulses (i.e. they can detect the impulses like an EKG, pace the heart like a pacemaker, or defibrillate.)
  - The electrode catheters are placed at specific areas inside the heart (usually on the right) to detect how the electrical system is working.
  - Data illustrates the speed, strength, path, rhythm, and other aspects of the electrical impulses. It also illustrates how this complex system functions.

Components of an EP Study (93619)

- Placing an electrode in a certain location and assessing the electrical activity is known as "recording"
  - 93600 : Bundle of His
  - 93602 : Intra-Atrial
  - 93603 : Rt. Ventricle
- Recording allows the physician to see how the various areas are working
- Think of the data obtained as similar to an EKG on steroids
- Administering electrical impulses to specific areas is known as "pacing"
  - 93610 : Intra-Atrial
  - 93612 : Intraventricular
- Pacing allows the physician to test how the various portions of the heart react to impulses...
  - Do the pathways in the heart carry the impulse to the appropriate location?
  - At what speed does the various portions of the pathway conduct the impulse?
  - Much more…
93620 = 93619 + 93618

• Attempted arrhythmia induction is separately reportable as either a component or as part of a “package”
  – Billable even if attempt is not successful
  – As a stand-alone procedure, this is reported with code 93618 – induction of arrhythmia by electrical pacing.
  – If this is performed at the same time as ALL of the components that make up code 93619, we report the entire procedure (all 6 sub-components) with 93620.

Illogical Payment Rates
(Payment rates listed are for Indiana, others are comparable)

• Code 93620 pays $587.14. Its components pay:
  – 93600 – His recording $105.96
  – 93602 – Atrial recording $105.77
  – 93603 – Ventricular recording $105.59
  – 93610 – Atrial pacing $150.00
  – 93612 – Ventricular Recording $149.82
  – 93618 – Arrhythmia induction $212.96
  – GRAND TOTAL: $830.10 ($242.96 variance)
Documentation Standard

- There is no universally accepted standard for electrophysiology reports.
  - Payers have issued guidance
    - Lack specificity
  - Specialty societies have issued guidance
    - Good guideline to follow (download PDF from web)
  - Billing Rule of Thumb – only bill what is documented

EP Coding & Audit Tool
(Only Bill What is Documented)

Components of EP Study w/induction (93620)

- Bundle of His recording (93600)
- Intra-atral recording (93602)
- Right ventricle recording (93603)
- Intra-atrial pacing (93610)
- Intraventricular pacing (93612)
- Arrhythmia induction (93615)

93619 (use when all of the above except 93618 is documented)
If less than full package is documented, bill individual components.
Stimulate & Pace After Drug Infusion

- The physician may opt to stimulate and pace the heart after infusion of a drug…
  - Drugs can be tested for efficacy or used to help induce an arrhythmia (ex. Isuprel)
- 93623 – Programmed stimulation and pacing after IV drug infusion should be added on to 93619 or 93620 when this is performed.*
- Don’t report if only done to confirm success of ablation (semantics.)

*HRS Coding Guide for Heart Rhythm Procedures and Services

Pacing & Recording on the Left

- Pacing & recording on the left side of the heart is possible with special approaches…
  - Approach may be through the coronary sinus (for LA), transseptal puncture or via retrograde left heart cath.
- Add on codes exist for these services…
  - 93621 – LA pacing & recording
  - 93622 – LV pacing & recording
- According to CPT, these add on codes are only reportable with the comprehensive EP study code (93620.)
- If done with a less than comprehensive EP study (rare..)
  - You could bill the service with 93799 – unlisted code
  - You could bill it in addition to the applicable EP study codes and explain the situation to your payer (electronic vs. paper filing)

*HRS Coding Guide for Heart Rhythm Procedures and Services
Mapping

• If an arrhythmia is inducible the physical origin of the abnormality is identified (aka “localized”) by a process of mapping.
  – As the verbiage suggests, this process “maps” the electrical characteristics of the inside of the heart.
  – Identifying the source and course of the abnormality will help define corrective measures.
  – Two types of mapping may be done…
    • 2D – 93609
    • 3D – 93613
    • Only one of these may be billed at each session*

*A HRS Coding Guide for Heart Rhythm Procedures and Services

Ablation

• If medical management is not a viable option, the physician may opt for ablation.
• This involves delivering energy (radiofrequency, freezing, etc..) to the source of the arrhythmia or to abnormal pathways to selectively destroy the tissue.
  – Destroying the source of arrhythmia will frequently keep it from happening again.
  – Destroying portions of an abnormal pathway will keep the abnormal impulse from running its full route (i.e. it will act like a road block.)
Billing for Ablation

• 3 codes are available for reporting ablations.
• These are differentiated by the type of arrhythmia being treated, not the anatomic location of the ablation.
• Each should only be reported once regardless of the number of ablations actually performed.
  – 93650 – AV Node
  – 93651 - Supraventricular (above the ventricle)
    • This includes pulmonary vein ablation (isolation)*
      – Discussed momentarily
    • Also includes ablations of AV pathways/connections
  – 93652 – Ventricular

Atrial Fibrillation Ablation

• Advancement in trans-septal treatment of atrial fibrillation has outpaced the evolution of the reimbursement structure.
  – No CPT code includes the verbiage used to describe these procedures.
    • Pulmonary vein isolation, Pulmonary vein ablation, Left atrial ablation, Mini-maze
  – Code 93651 (supraventricular tachycardia by ablation) appears to be the most appropriate of the available three ablation codes.
    • A-Fib ablation may take several hours longer than a typical 93651
    • Code 93651 does not reflect the additional work/risk of trans-septal puncture
• There have been mutations in billing methodology that attempt to level the playing field and capture additional reimbursement. Some mutations are appropriate and defensible…
  – Modifier 22 may be appropriate (pros and cons.)
  – Some prefer unlisted code 93799 (pros and cons.)
Atrial Fibrillation - Continued

- Other coding methodology mutations should be avoided.
  - Billing 33250 – 33266 for the maze procedures
    - Operative incisions/ablation and reconstruction of atria for treatment of atrial fibrillation/flutter
    - No bypass, no endoscopy, no incisions, no reconstruction
    - New codes are rarely applicable even for surgical approaches (must be “stand-alone” procedures. Also, many concerns with wording (“eg, maze procedure); without cardiopulmonary bypass”)
  - Billing 93527 for transseptal puncture
    - Combined right heart catheterization and transseptal left heart catheterization through intact septum
    - Not a full diagnostic study, medical necessity for cath may/may not be there, frequency restrictions may prevent medically necessary catheterizations, logic could cause damage (financial variance between regular R/L Hc and Trans-septal).

93527 – CPT References

- 93527 - Combined right heart catheterization and transseptal left heart catheterization through intact septum (with or without retrograde left heart catheterization)
  - Note: this is a full/diagnostic right heart catheterization AND a full/diagnostic left heart catheterization, not just transseptal puncture – a surprise to many who have been billing this service.
  - “Intracardiac electrophysiologic studies (EPS) are an invasive diagnostic medical procedure which include the insertion and repositioning of electrode catheters..." and "catheter insertion and temporary pacemaker codes are not additionally reported."
  - EP introductory section of CPT
ACC Standard on Heart Caths


procedural section. Any pertinent hemodynamic data obtained should also be reported. The minimum hemodynamic data that should be reported from a left-heart catheterization and coronary angiography study with left ventriculography should be the initial and ending aortic pressures and the left ventricular systolic and end-diastolic pressure. If right-heart catheterization is performed, the right atrial, pulmonary artery, and pulmonary artery wedge pressure values should be reported, as well as mean pressures. The right ventricular pressure should include the systolic and end-diastolic pressures. Transvalvular mean and peak pressure gradients and valve area determinations should be reported when appropriate, along with the cardiac output determination and any shunt data if indicated.

93527 – LCD References

• Noridian: There is no additional reimbursement for a left heart catheterization done for reasons other than hemodynamic evaluation or angiography. Therefore, left heart catheterization is not separately reimbursed with studies such as electrophysiologic or pacing studies, or endomyocardial biopsies (unless there is medical necessity).

• GroupHealth, Inc.: There is no additional reimbursement for a right heart catheterization done for reasons other than hemodynamic evaluation. Studies done in conjunction with electrophysiologic tests, HIS bundle studies, pacing studies...

• Cigna: Medicare expects the specific indications for the individual right and left heart catheterizations to be met prior to performing the combined heart catheterization.

• WPS: "The patients medical records should be legible, contain the relevant history, physical findings conforming to the criteria stated in the “Indications and Limitations of Coverage and/or Medical Necessity” section of this policy"
93527 – Logical References

- Most EPs do not perform diagnostic heart catheterizations.
  - Credentialing, privileges, billing history.
- How many left/right heart catheterizations have you billed without coronary angiography?
- Those who advocate billing for 93527 with left sided EP procedures don’t also recommend billing for 93501 (traditional right heart catheterization) with traditional, right sided EP procedures (such as 93620). The same clinical logic applies and the same modifier (59) would allow them to bypass the only CCI edit involved.
  - To be clear; this would be inappropriate too.

Defibrillation Threshold Testing (DFT)

- DFT test at time of implant/replacement
  - Includes induction of arrhythmia, evaluation of sensing and pacing.
    - Leads only – 93640 (Obsolete Code)
    - Leads & generator – 93641 (Appropriate Code)
  - If test is done via the ICD on subsequent day – 93642*
    - This also includes assessment of defibrillation thresholds and any necessary reprogramming
  - Simple testing of the device/leads is not separately billable… must include arrhythmia induction

*ACC Guide to CPT
Billing for CRT

- Three New Codes Introduced in 2003...
  - **33224** – Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or pacing cardioverter-defibrillator pulse generator...
  - **+33225** – Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing cardioverter-defibrillator or pacemaker pulse generator...
  - **33226** – Repositioning of previously implanted cardiac venous system (left ventricle) electrode...

PM/ICD Interrogation

- **“Telephonic” Interrogation (pacemaker)**
  - Patient performed interrogation from home with a device that connects to telephone.
  - Information transferred to clinic for evaluation.

- **Clinic/Facility Interrogation (pacemaker and ICD)**
  - The patient comes to the clinic for their device to be interrogated and reprogrammed if needed.
  - An interrogation wand is positioned at the incision site and wirelessly communicates with the implanted device:
    - Settings, battery life, stored rhythm strips, etc.

- **“Remote” Interrogation (ICD)**
  - Coding and payment is the same as office based services.
    - Frequency limitations may apply (medical necessity exceptions apply)
  - Interrogations may occur at regularly scheduled follow-up intervals, as triggered by event notification, and when initiated by the patient (i.e. in response to symptoms).
Coding & Payment is the Same for Remote Follow-up as it is for Office-Based Follow-up

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<td>Pub 100-04 Medicare Claims Processing</td>
<td>Centers for Medicare &amp; Medicaid Services (CMS)</td>
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<td>Transmittal 979</td>
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**SUMMARY OF CHANGES:** Physicians should report electronic analysis of an implanted cardiac device using remotely obtained data using CPT codes 93731, 93734, 93741, or 93743, depending on the type of cardiac device implanted in the patient.


### Device Interrogation Code Summary

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