Optimize Your Pocket Book as Well as the Image:
TEE Billing Explained

Christopher A. Troianos, MD
Professor and Chair of Anesthesiology
Western Pennsylvania Hospital
West Penn Allegheny Health System
Western Campus of Temple University School of Medicine
Pittsburgh, Pennsylvania

Susie Martinelli, MD
Assistant Professor of Anesthesiology
University of North Carolina
Chapel Hill, North Carolina

OBJECTIVES:

At the conclusion of this PBLD, the participant will be able to:
1. recite the commonly used CPT codes for billing perioperative transesophageal echocardiography services;
2. report the appropriate ICD-9 codes that identifies the pathologic lesion for which the echocardiogram is performed;
3. discuss key documentation requirements for billing TEE services;
4. use modifier codes appropriately.

CASE PRESENTATION:

A 62 year old man with aortic stenosis and coronary artery disease is scheduled to undergo aortic valve replacement. The surgeon schedules the case as: “AVR/CABG with Intraoperative TEE”. The patient denies gastric or esophageal symptoms and denies any medical or surgical history involving his esophagus or stomach. Intraoperative TEE reveals a bicuspid aortic valve, left ventricular hypertrophy, mild to moderate mitral regurgitation, and mild atherosclerotic disease in the thoracic aorta. The surgical procedure proceeds as planned for an AVR/CABG. Post-CPB TEE reveals a functional bioprosthetic valve in the aortic valve position without intravalvular or paravalvular regurgitation, normal LV function, and no evidence of intraoperative aortic dissection. Mitral regurgitation after AVR/CABG was mild.

Questions:

1. What are the requirements for submitting a bill to a third party insurer for your intraoperative TEE services?
2. How would you document that the surgeon has requested intraoperative TEE services for a specific diagnostic reason?
3. What is the appropriate CPT code to use for billing the professional component of the TEE services in this 62 year old man undergoing AVR/CABG?
4. Can the anesthesiologist providing (and billing for) anesthesia services also bill for TEE services? What adjustments need to be made to the bill?

5. What is the most appropriate CPT code if an anesthesiologist places the probe and uses it for monitoring, while another physician provides the interpretation and report?

6. What CPT code should be used if anesthesiologist places the probe and uses it for monitoring without an interpretation and report?

7. What CPT code should be used if this same patient had a tricuspid stenotic aortic valve?

8. What if you found a tricuspid stenotic aortic valve, patent foramen ovale, but surgeon performed AVR/CABG and did not address the PFO surgically?

9. What is the appropriate ICD-9 code to be used for billing TEE services in this 62 year old man undergoing AVR/CABG?

10. Surgeon places epicardial probe on the ascending aorta to look for atheromatous disease at the cannulation and cross-clamp site. What CPT code should be used to bill for this service? If the surgeon places the probe on the aorta and you record and interpret the images, who submits the bill for this service? Can this same code be used when using TEE to place a femoral cannula or to guide IABP placement?

11. Can you use the same billing code used for epiaortic ultrasound scanning to bill for ultrasound use during central line placement?

12. Can you bill for anesthesia time as you place central line with anesthesia sedation in holding area? In operating room?

13. Can a cardiac anesthesiologist with PTE testamur status but not PTE board certification through NBE, bill for TEE services?

**CASE VARIATION:**

This same patient came emergently for non-cardiac surgery before AVR/CABG and the anesthesiologist wanted to use TEE for monitoring cardiac status.

14. Can the anesthesiologist providing anesthesiology services also be the physician requesting TEE services?

15. Is billing for TEE appropriate if the reason for its use was hemodynamic compromise during the non-cardiac case?

16. What is the appropriate CPT code if TEE is used solely for monitoring (especially during non-cardiac surgery)?

17. Can non-cardiac anesthesiologists without NBE-PTE certification bill for this service?
Billing for Intraoperative TEE

Reimbursement for intraoperative TEE is dependent on third party payer contracts, whether the echocardiographer is a cardiologist or anesthesiologist, and the geographical region. Many third party payers have adopted the Center of Medicare Services (CMS) policy that defines reimbursable indications for intraoperative TEE:

“The interpretation of TEE during surgery is covered only when the surgeon or other physician has requested echocardiography for a specific diagnostic reason (e.g., determination of proper valve placement, assessment of the adequacy of valvuloplasty or revascularization, placement of shunts or other devices, assessment of vascular integrity, or detection of intravascular air). To be a covered service, TEE must include a complete interpretation/report by the performing physician. Coverage for evaluation, however, is not allowed for monitoring, technical trouble shooting, or any other purpose that does not meet the medical necessity criteria for the diagnostic test.”

The key points for reimbursement of IOE services should include:

1) **Documentation that the surgeon or other physician is requesting echocardiography for a specific diagnostic reason.** The medical record should indicate this request either by an order in the medical record, the operative consent form, progress notes, or at the very least within the dictated echocardiography report. It is a good practice for the patient report to indicate the medical necessity for performing the TEE and the physician who requested the IOE service. It should also be clear whether the IOE was performed for diagnostic, monitoring, or research purposes.

2) **A complete interpretation and report is generated by the echocardiographer.** Best practices include submission of a copy of the completed, signed TEE report with the billing sheet.

3) **When TEE is used for monitoring by the physician who places the TEE probe and another physician provides a diagnostic exam and report, the monitoring physician only receives compensation for placement of the probe.** There is no reimbursement for diagnosis when intraoperative TEE is used solely for monitoring.

**Billing Codes for Intraoperative TEE**

93312 Echocardiography, transesophageal, real time with image documentation (2D) (with or without M-mode recording); including probe placement, image acquisition, interpretation, and report

This service involves placement of the transesophageal probe, obtaining the appropriate images and views, and critical analysis of the data. Patients with increased risks of hemodynamic disturbances may require probe insertion and interpretation of the echocardiogram. This includes, but is not limited to, histories of congestive heart failure, severe ischemic heart disease, valvular disease, aortic aneurysm, major trauma and burns. It may also be indicated in certain procedures that involve great shifts in the patient's volume status. Such procedures may include vascular surgery, cardiac surgery, liver resection/transplantation, extensive tumor resections and radical orthopedic surgery. The use of TEE may also be indicated when central venous access is
contraindicated or difficult and it is not possible to adequately assess blood loss and replacement, impairment of venous return, and right and left heart function without the TEE.

93313 Echocardiography, transesophageal, real time with image documentation (2D) (with or without M-mode recording); placement of transesophageal probe only
Although the procedure is generally safe, the proper insertion of the probe requires skill and judgment. There are a few inherent risks to placement of the probe, including pharyngeal and/or laryngeal trauma, dental injuries, esophageal trauma, bleeding, arrhythmias, respiratory distress and hemodynamic effects. There have even been case reports of perioperative death attributed to TEE probe placement.

93314 Echocardiography, transesophageal, real time with image documentation (2D) (with or without M-mode recording); image acquisition, interpretation and report only
This code is used when one physician inserts the probe and another physician interprets the images. Physicians who obtain and interpret cardiac images and provide a report but who did not place the TEE probe should use this code to report their service.

93315 - Transesophageal echocardiography for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report
This service involves placement of the transesophageal probe, obtaining the appropriate images and views, and critical analysis of the data in patients with congenital cardiac anomalies. This includes, but is not limited to, congenital valve problems, such as bicuspid aortic valve, septal defects, including patent foramen ovale, and more complicated congenital heart defects. This includes, but is not limited to, all the indications listed for code 93312, but in patients with congenital cardiac anomalies.

93316 - placement of transesophageal probe only (for congenital cardiac anomalies)
This is the equivalent of code 93313, but in patients with congenital cardiac anomalies.

93317 - image acquisition, interpretation and report only (for congenital cardiac anomalies)
This is the equivalent of code 93314, but in patients with congenital cardiac anomalies.

93318 - Echocardiography, transesophageal (TEE) for monitoring purposes, including probe placement, real time 2-dimensional image acquisition and interpretation leading to ongoing (continuous) assessment of (dynamically changing) cardiac pumping function and to therapeutic measures on an immediate time basis
This code is used when the patient's condition, as described under 93312, requires repetitive evaluation of cardiac function in order to guide ongoing management.

93320 - Doppler echocardiography, pulsed wave and/or continuous wave with spectral display
This add-on code is used to evaluate blood velocity and flow patterns through various cardiac and vascular structures. Stenotic lesions generally lead to increased blood velocity proportional to the degree of stenosis, thereby providing a method to assess the severity of stenosis. Velocity
measurements are also used to calculate the area of stenotic valves and regurgitant orifices. This code may be submitted along with code 93312 or 93315.

93325 - Doppler color flow velocity mapping
This add-on code is used to evaluate the direction and character of blood flow through various cardiac and vascular structures. This code may be submitted along with code 93312 or 93315.

76937 – Ultrasound guidance for vascular access requiring ultrasound evaluation of potential access sites, documentation of selected vessel patency, concurrent realtime ultrasound visualization of vascular needle entry, with permanent recording and reporting (this is an add-on code listed in addition to code for primary procedure).

76998 – Ultrasound guidance, intraoperative

76999 – Unlisted ultrasound procedure (eg. diagnostic interventional)

Use of Modifiers
If the TEE is performed for diagnostic purposes by the same anesthesiologist who is providing the anesthesia service, modifier 59 should be appended to the TEE code to note that it is distinct and independent from the anesthesia service. If the anesthesiologist does not own the TEE equipment, s/he reports only the professional component of the TEE service and should append modifier 26 (Professional Component) to the TEE code.

Diagnosis Codes
Equally important for billing is to indicate the appropriate ICD-9 code that identifies the pathologic lesion for which the echocardiogram is performed. Common ICD-9 codes that qualify for reimbursement on are listed in the CMS Report Policy of each particular Local Carrier Determination. Any diagnosis not listed is not covered for reimbursement. Claims submitted without a covered ICD-9 code are denied for reasons of failing to justify medical necessity. A typical billing sheet that includes both commonly used CPT and ICD-9 codes is provided in the table at the end of this handout.

Credentialing and Certification
Many third party carrier policies include a statement similar to the CMS policy which states, “Physicians who perform, supervise, and/or interpret the studies must be capable of demonstrating training and experience specific to the study performed or interpreted and maintain documentation for post payment audit”. At the very least, the institution in which the TEE is performed should credential the physician echocardiographer. Demonstration of qualifications may be accomplished by the successful completion of either of two examinations administered by the National Board of Echocardiography (NBE): the “Perioperative Transesophageal Echocardiography Certification Examination” or “An Examination of Special Competence in Echocardiography”. Board certification is available through NBE after requisite training in perioperative echocardiography. CMS does not specifically state that the physician echocardiographer should pass one of these examinations, or be board certified. However, physicians may use the successful completions of these exams combined with clinical experience to demonstrate training and expertise or for credentialing within their own hospital.
TEE BILLING FORM

Date of Service: 
Physician requesting service: 
Physician Echocardiographer: 

PROCEDURE CODES (check all procedures performed)
[ ] 93312-26: Echocardiography, transesophageal, real time with image documentation (2D) (with or without M-mode recording) including probe placement, image acquisition, interpretation & report
[ ] 93313-26: TEE probe placement only
[ ] 93314: Interpretation/report only
[ ] 93315-26: Echocardiography, transesophageal, real time with image documentation (2D) including probe placement, image acquisition, interpretation & report for congenital anomalies
[ ] 93316-26: TEE probe placement only
[ ] 93317: Interpretation/report only for congenital anomalies
[ ] 93318-26: TEE used for monitoring purposes only
[ ] 93320-26: Doppler echocardiography, pulsed wave and/or continuous wave with spectral display
[ ] 93325-26: Doppler color flow velocity mapping

ICD-9 CODES (Check all that identify the diagnostic indication for TEE)

LEFT VENTRICLE
[ ] Cardiomegaly 429.3
[ ] Functional disturbance following cardiac surgery 429.4
[ ] Fluid overload 276.6
[ ] Hypertrophic obstructive cardiomyopathy 425.1
[ ] Alcoholic cardiomyopathy 425.5
[ ] Other cardiomyopathy 425.4
[ ] Ventricular septal defect 745.4
[ ] Left ventricular aneurysm 414.10
[ ] Acquired cardiac septal defect 429.71

MITRAL VALVE
[ ] Rheumatic mitral stenosis 394.0
[ ] Rheumatic mitral regurgitation 394.1
[ ] Rheumatic mitral stenosis with regurgitation 394.2
[ ] Mitral regurgitation – non rheumatic 424.0
[ ] Ruptured chordae tendinae 429.5
[ ] Ruptured papillary muscle 429.6
[ ] Other papillary muscle disorders 429.81

AORTIC VALVE
[ ] Rheumatic aortic stenosis 395.0
[ ] Rheumatic aortic insufficiency 395.1
[ ] Rheumatic aortic stenosis with insufficiency 395.2
[ ] Other aortic valve disease with AS or AI 424.1
[ ] Congenital stenosis of aortic valve 746.3
[ ] Congenital insufficiency of aortic valve 746.4

COMBINED AORTIC/MITRAL VALVE DISEASE
[ ] Mitral stenosis with aortic stenosis 396.0
[ ] Mitral stenosis with aortic insufficiency 396.1
[ ] Mitral insufficiency with aortic stenosis 396.2
[ ] Mitral insufficiency with aortic insufficiency 396.3
[ ] MS and/or MI with AS and/or AI 396.8

TRICUSPID VALVE
[ ] Rheumatic disease, stenosis or regurgitation 397.0
[ ] Other, stenosis or regurgitation 424.2

PULMONIC VALVE
[ ] Rheumatic diseases of the pulmonic valve 397.1
[ ] Pulmonary valve disorder, non-rheumatic 424.3

ENDOCARDITIS (any valve)
[ ] Bacterial 421.0
[ ] Endocarditis, not specified as bacterial 424.90

AORTA
[ ] Atherosclerosis 440.0
[ ] Dissection of thoracic aorta 441.01
[ ] Thoracic aneurysm: ruptured 441.1, unruptured 441.2

HYPOTENSION
[ ] Septicemia 038.9
[ ] Volume depletion 276.5
[ ] Cardiogenic shock 785.51
[ ] Traumatic shock 958.4
[ ] Postoperative shock 998.0
[ ] Shock, unspecified 785.50

Hypotension: specified 458.8, unspecified 458.9

TUMORS
[ ] Benign neoplasm of the heart 212.7
[ ] Neoplasms of unspecified nature 239.8

CONGENITAL
[ ] Ostium secundum ASD or patent foramen ovale 745.5
[ ] Ostium primum 745.61
[ ] Partial anomalous pulmonary venous connection 747.42
[ ] Patent ductus arteriosus 747.0

MISCELLANEOUS
[ ] Air embolism 999.1
[ ] Iatrogenic pulmonary embolism 415.11
[ ] Other pulmonary embolism 415.19
[ ] Atrial fibrillation 427.31
[ ] Atrial flutter 427.32