MASSACHUSETTS

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Medical Policy

Transesophageal Echocardiography (TEE)

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Policy Number: 114

BCBSA Reference Number: N/A

Related Policies

Transthoracic Echocardiography (TTE), #115

Policy[1]

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

This policy addresses the medically necessary and appropriate application of TEE. Transthoracic echocardiography (TTE) is addressed in policy #115.

Transesophageal Echocardiography may be considered **MEDICALLY NECESSARY** for the following conditions:

Mitral valve disease

TEE is considered **MEDICALLY NECESSARY** for the following:

1. When needed to assess the etiology of mitral regurgitation.
2. When needed to assist in the surgical decision making: mitral valve repair vs. replacement.

Endocarditis

TEE is considered **MEDICALLY NECESSARY** for the following:

1. When the suspicion of endocarditis is high (persistent febrile state, negative cultures, preexistent valvular pathology) and TTE does not document endocarditis. TEE may define small vegetative masses and more completely delineate local complications (e.g., ring abscesses, aneurysm, fistulae).
2. Re-evaluation in complex endocarditis.
3. Evaluation of bacteremia without known source.
4. Evaluation of suspected or actual prosthetic valve endocarditis otherwise obscured because of reverberations and other image artifacts related to mechanical or other non-native valves during TTE.

Valvular Prostheses (Mechanical and Bio-prostheses)

TEE is considered **MEDICALLY NECESSARY** for the following:

1. In the evaluation of suspected prosthetic valve dysfunction when therapeutic decisions are critical and TTE is inconclusive and/or when the left atrium must be well-visualized.

(TEE is not routinely indicated in all patients with prosthetic valves.)

Suspected Cardiac Thrombi and Emboli
TEE is considered **MEDICALLY NECESSARY** for the following:
1. Evaluation of the left atrium and atrial appendage for clot, when clot is not visualized on TTE OR in patients with atrial fibrillation or flutter.
2. Evaluation for an atrial septal defect (ASD), patent foramen ovale or atrial septal aneurysm with clot; and
3. Evaluation of the mitral valve in patients with a history of emboli.

Cardiac/Pericardial Masses and Other Pericardial Disease
TTE and TEE have comparable sensitivity in the assessment of right heart masses. Therefore, TEE is considered **MEDICALLY NECESSARY** for the following:
1. Visualization of left atrial masses, when needed to guide therapeutic approach (cystic vs. solid, attachment, infiltration).
2. When cardiac mass lesions (including tumors on cardiac valves) are suspect and cannot be visualized on TTE, OR if TEE is needed for development of a management strategy.
3. To assess pericardial effusion when surface studies do not provide adequate information.
   Per the American College of Cardiology (ACC), the American Heart Association (AHA) and the American Society of Echocardiography (ASE) 2003 Guideline Update for the Clinical Application of Echocardiography: the risk of pericardiocentesis may be reduced by the use of echocardiographic guidance and monitoring of needle aspiration, particularly for loculated or small effusions.

Aortic Pathological Conditions and Diseases of the Great Vessels
TEE is considered **MEDICALLY NECESSARY** for the following:
1. When adequate visualization of the aortic root is not sufficient with TTE.
2. For identification of aortic dissection, aortic ulceration, atherosclerotic plaque, and mural thrombotic material.
3. Examination of the entire aorta, especially in emergency situations. TEE has a particularly high degree of sensitivity and specificity for aortic dissection.
4. To visualize descending thoracic aortic aneurysms.
5. Visualization of the superior vena cava and diagnosing various congenital and acquired abnormalities, such as vena cava thrombosis.
6. Visualization of the proximal inferior vena cava, vena caval dilation and detection of thrombosis or extension of tumors from the inferior vena cava to the right-heart chambers.
7. Visualization of all four pulmonary veins.
8. Evaluation of the heart and great vessels following blunt trauma to the chest (e.g., rupture or transsection of the aorta, acute dissection, hematoma, etc.)
9. When needed to assist in the surgical planning prior to aortic valve operative intervention.

Congenital Heart Disease
TEE is considered **MEDICALLY NECESSARY** for the following:
1. Patients in whom TTE is technically inadequate or anatomic definition is incomplete.
2. Patients in whom a more precise definition of atrial, outflow tract and proximal pulmonary vascular anomalies by TEE can be critical to management strategies.
3. For postoperative evaluation of patients with congenital heart disease where fibrosis, echo opaque patches and prostheses, inadequate penetration, and acoustical shadowing can interfere with imaging by TTE.
4. To assess:
   a. complications of congenital heart surgery
   b. visualization of shunt flow across atrial septal defects
   c. guidance of clamshell device to close atrial septal defects
   d. diagnosis of cor triatriatum
   e. pulmonary valve for abnormalities.

Critically Ill Patients
TEE is considered **MEDICALLY NECESSARY** for the following:
1. Management of the critically ill patient when TTE is otherwise contraindicated (e.g., chest or other major trauma) or inadequate (e.g., patient on a ventilator or with COPD, or in postoperative patients who are unable to be positioned for TTE).
2. Patients with persistent hypoxemia having suspected due to right-to-left shunt.
3. Patients with complications of myocardial infarction (ruptured septum, papillary muscle, or free wall);
4. Hemodynamically unstable patients in whom TTE images are suboptimal.
5. Evaluation of brain-dead patients being considered as cardiac donors.
6. Persistent unexplained fever when endocarditis or myocardial abscess is suspected and TTE is non-diagnostic.

Interventional and Surgical TEE
TEE is considered **MEDICALLY NECESSARY** for the following:
1. Guidance during percutaneous cardiac interventions such as during the creation of shunts, placement of septation devices, valvuloplasty procedures, endomyocardial biopsy, electrophysiologic studies/procedures, placement of septal or atrial appendage occluders or during percutaneous valve replacement.
2. Intraoperative evaluation to assess prosthetic or repaired/reconstructed valve function, or the integrity/function of complex congenital heart repairs.
3. Intraoperative evaluation to assess the integrity of the cardiopulmonary circulation in patients during lung or heart-lung transplants; and
4. Intraoperative assessment for presence and/or severity of outflow tract obstruction or presence/repair of an intracardiac shunt.
5. Intraoperative assessment of wall motion abnormalities in the case of acute deterioration in the patient's status once the chest has been closed.

Doppler Color Flow Velocity Mapping
1. Spectral Doppler echocardiography and Doppler color flow-velocity mapping **may be necessary** as part of an echocardiogram when those techniques could contribute significant information about the patient's diagnosis, prognosis, or treatment plan. Typically, Doppler is indicated in the evaluation of some heart murmurs, valvular problems, shunts, suspected congenital heart disease, complications of myocardial infarction, or cardiomyopathy. Doppler should be **MEDICALLY NECESSARY** for the evaluation and management of the patient.
2. The use of the Doppler is inherent in the ultrasonic cardiac evaluation. However, if the test reports fail to document the use of this technique to assess these structures and function (e.g., measurement of valvular insufficiency or stenosis, myocardial diastolic function, etc. as described by the American Society of Echocardiography (ASE)), or if the medical records fail to document that the examination was "clinically necessary" (e.g., follow-up of pericardial effusion size) then the Doppler portion of the test may be considered **NOT MEDICALLY NECESSARY**.

3-Dimensional Echocardiography
When used with TEE, it is considered **MEDICALLY NECESSARY** for:
1. The pre-operative planning of valve repair for multiple etiologies of mitral regurgitation.
2. Assessment of mitral stenosis and in the accurate calculation of mitral valve area.
3. Pre-operative planning for treatment of atrial septal defects.
4. Pre-operative and intraoperative planning for interventional cardiac procedures (e.g., transcatheter placement of occluders for atrial septal defects or patent foramen ovales, or repair of paravalvular dehiscence or leaks.
5. Intraoperative mapping for atrial ablation procedures.
6. The evaluation of tricuspid valve disease.

While three-dimensional echocardiography performed alone may provide improved calculation of volume when compared to 2D echocardiography, its value in affecting clinical outcomes is not yet proven and it is therefore **NOT MEDICALLY NECESSARY**.

TEE is considered **MEDICALLY NECESSARY** for cardioversion in patients:
1. Requiring urgent (not emergent) cardioversion for whom extended pre-cardioversion anticoagulation is not desirable.
2. Who have had prior cardioembolic events thought to be related to intra-atrial thrombus.
3. For whom anticoagulation is contraindicated and for whom a decision about cardioversion will be influenced by TEE results.
4. For whom intra-atrial thrombus has been demonstrated in previous TEE.

Transesophageal Echocardiography (TEE) is considered **INVESTIGATIONAL** for the following:
1. To identify structural cardiac abnormalities in the absence of established diagnoses, signs, or symptoms.
2. In the serial assessment and management of pericardial pathology, unless there are loculated posterior effusions or adequate visualization of the pericardium is not possible by TTE.
3. In aortic root dilation in Marfan Syndrome or other connective tissue syndromes, unless TTE does not yield the clinically needed information.

TEE services will be **covered twice per year** when the **MEDICALLY NECESSARY** criteria are met (**except endocarditis** (ICD-10 code I39), for which four (4) services per year will be covered).

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	Prior authorization is **not required**.
Commercial PPO and Indemnity	Prior authorization is **not required**.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

CPT Codes

CPT codes:	**Code Description**
93312	Echocardiography, transesophageal, real-time with image documentation (2d) (with or without m-mode recording); including probe placement, image acquisition, interpretation and report
93313	Echocardiography, transesophageal, real-time with image documentation (2d) (with or without m-mode recording); placement of transesophageal probe only
93314	Echocardiography, transesophageal, real-time with image documentation (2d) (with or without m-mode recording); image acquisition, interpretation and report only

C8925	Transesophageal echocardiography (tee) with contrast, or without contrast followed by with contrast, real time with image documentation (2d) (with or without m-mode recording); including probe placement, image acquisition, interpretation and report

Link to A52868 Billing and Coding: Transesophageal Echocardiography (TEE) covered ICD diagnosis codes.

In addition to the covered diagnosis codes in Billing and Coding Article A52868, the following ICD diagnosis codes are considered medically necessary for commercial products when submitted with the CPT codes above if medical necessity criteria are met:

ICD-10 Diagnosis Codes

ICD-10-CM diagnosis codes:	Code Description
I01.0	Acute rheumatic pericarditis
I01.8	Other acute rheumatic heart disease
I01.9	Acute rheumatic heart disease, unspecified
I28.8	Other diseases of pulmonary vessels
I28.9	Disease of pulmonary vessels, unspecified
I33.9	Acute and subacute endocarditis, unspecified
I51.9	Heart disease, unspecified
I67.9	Cerebrovascular disease, unspecified

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

CPT Codes

CPT codes:	Code Description
93315	Transesophageal echocardiography for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report
93316	Transesophageal echocardiography for congenital cardiac anomalies; placement of transesophageal probe only
93317	Transesophageal echocardiography for congenital cardiac anomalies; image acquisition, interpretation and report only
C8926	Transesophageal echocardiography (TEE) with contrast, or without contrast followed by with contrast, for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report

Link to A52868 Billing and Coding: Transesophageal Echocardiography (TEE) covered ICD diagnosis codes.

In addition to the covered diagnosis codes in Billing and Coding Article A52868, the following ICD diagnosis codes are considered medically necessary for commercial products when submitted with the CPT codes above if medical necessity criteria are met:

ICD-10 Diagnosis Codes

ICD-10-CM diagnosis codes:	Code Description
Q20.9	Congenital malformation of cardiac chambers and connections, unspecified

Q21.4	Aortopulmonary septal defect
Q21.8	Other congenital malformations of cardiac septa
Q21.9	Congenital malformation of cardiac septum, unspecified
Q23.8	Other congenital malformations of aortic and mitral valves
Q23.9	Congenital malformation of aortic and mitral valves, unspecified
Q24.9	Congenital malformation of heart, unspecified

The above medical necessity criteria MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

Note: In addition to the covered diagnosis codes in Billing and Coding Article A52868, any procedure code from column 1 must be accompanied by any procedure code from column 2 to be considered medically necessary.

Link to A52868 Billing and Coding: Transesophageal Echocardiography (TEE) covered ICD diagnosis codes.

Column 1 CPT/HCPCS code	Column 1 Description	Column 2 CPT/HCPCS code	Column 2 Description
76376	3D rendering with interpretation and reporting of computed tomography, magnetic resonance imaging, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; not requiring image postprocessing on an independent workstation	93312	Echocardiography, transesophageal, real-time with image documentation (2D) (with or without M-mode recording); including probe placement, image acquisition, interpretation and report
76377	3D rendering with interpretation and reporting of computed tomography, magnetic resonance imaging, ultrasound, or other tomographic modality with image postprocessing under concurrent supervision; requiring image postprocessing on an independent workstation	93314	Echocardiography, transesophageal, real-time with image documentation (2D) (with or without M-mode recording); image acquisition, interpretation and report only
		93315	Transesophageal echocardiography for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report
		93317	Transesophageal echocardiography for congenital cardiac anomalies; image acquisition, interpretation and report only

	C8925	Transesophageal echocardiography (TEE) with contrast, or without contrast followed by with contrast, real time with image documentation (2D) (with or without M-mode recording); including probe placement, image acquisition, interpretation and report
	C8926	Transesophageal echocardiography (TEE) with contrast, or without contrast followed by with contrast, for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report

Description

Transesophageal echocardiography (TEE) is ultrasonic examination of the heart performed by placing the transducer in the esophagus which allows different views of the heart than transthoracic echocardiography (TTE). TEE is particularly useful for posterior structures, such as the pulmonary veins, left atrium, and mitral valve and provides better visualization of the aortic root, valve and the ascending and descending aorta and arch.

TEE is frequently performed because TTE was not technically adequate. In addition, there are several medical conditions for which TEE is preferred over transthoracic echocardiography. TEE is considered medically necessary when there is a reasonable expectation that it will both provide information not available with TTE or other less invasive forms of imaging and significantly contribute to management decisions regarding treatment of the patient.

To qualify as a valid echocardiographic service, the study must be done for an accepted clinical indication by a properly trained examiner and must include a permanent record of the findings, data sufficient to support the conclusions and an appropriate interpretation and written report.

Policy History

Date	Action
11/2024	Updated links for L33579 and A52868.
10/2024	New medical policy describing medically necessary and investigational indications. Effective 10/1/2024.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:
Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines

References

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Endnotes

[1] Local Coverage Determination (LCD) Transesophageal Echocardiography (TEE) L33579
Billing and Coding: Transesophageal Echocardiography (TEE) A52868

Last revision date: 10/1/2019

2 ACC/AHA/ASE 2003 Guideline Update for the Clinical Application of Echocardiography: Summary Article