LCD - Transesophageal Echocardiography (TEE) (L35016)

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Contractor Information

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATES
Novitas Solutions, Inc.	A and B MAC	04111 - MAC A	J - H	Colorado
Novitas Solutions, Inc.	A and B MAC	04112 - MAC B	J - H	Colorado
Novitas Solutions, Inc.	A and B MAC	04211 - MAC A	J - H	New Mexico
Novitas Solutions, Inc.	A and B MAC	04212 - MAC B	J - H	New Mexico
Novitas Solutions, Inc.	A and B MAC	04311 - MAC A	J - H	Oklahoma
Novitas Solutions, Inc.	A and B MAC	04312 - MAC B	J - H	Oklahoma
Novitas Solutions, Inc.	A and B MAC	04411 - MAC A	J - H	Texas
Novitas Solutions, Inc.	A and B MAC	04412 - MAC B	J - H	Texas
Novitas Solutions, Inc.	A and B MAC	04911 - MAC A	J - H	Colorado New Mexico Oklahoma Texas
Novitas Solutions, Inc.	A and B MAC	07101 - MAC A	J - H	Arkansas
Novitas Solutions, Inc.	A and B MAC	07102 - MAC B	J - H	Arkansas
Novitas Solutions, Inc.	A and B MAC	07201 - MAC A	J - H	Louisiana
Novitas Solutions, Inc.	A and B MAC	07202 - MAC B	J - H	Louisiana
Novitas Solutions, Inc.	A and B MAC	07301 - MAC A	J - H	Mississippi
Novitas Solutions, Inc.	A and B MAC	07302 - MAC B	J - H	Mississippi
Novitas Solutions, Inc.	A and B MAC	12101 - MAC A	J - L	Delaware
Novitas Solutions, Inc.	A and B MAC	12102 - MAC B	J - L	Delaware
Novitas Solutions, Inc.	A and B MAC	12201 - MAC A	J - L	District of Columbia
Novitas Solutions, Inc.	A and B MAC	12202 - MAC B	J - L	District of Columbia
Novitas Solutions, Inc.	A and B MAC	12301 - MAC A	J - L	Maryland
Novitas Solutions, Inc.	A and B MAC	12302 - MAC B	J - L	Maryland
Novitas Solutions, Inc.	A and B MAC	12401 - MAC A	J - L	New Jersey
Novitas Solutions, Inc.	A and B MAC	12402 - MAC B	J - L	New Jersey
Novitas Solutions, Inc.	A and B MAC	12501 - MAC A	J - L	Pennsylvania
Novitas Solutions, Inc.	A and B MAC	12502 - MAC B	J - L	Pennsylvania
Novitas Solutions, Inc.	A and B MAC	12901 - MAC A	J - L	Delaware

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATES
				District of Columbia Maryland New Jersey Pennsylvania

LCD Information

Document Information

LCD ID
L35016

LCD Title
Transesophageal Echocardiography (TEE)

Proposed LCD in Comment Period
N/A

Source Proposed LCD
DL35016

Original Effective Date
For services performed on or after 10/01/2015

Revision Effective Date
For services performed on or after 10/17/2019

Revision Ending Date
N/A

Retirement Date
N/A

Notice Period Start Date
11/05/2015

Notice Period End Date
12/30/2015

CMS National Coverage Policy

This LCD supplements but does not replace, modify or supersede existing Medicare applicable National Coverage Determinations (NCDs) or payment policy rules and regulations for Transesophageal Echocardiography (TEE). Federal statute and subsequent Medicare regulations regarding provision and payment for medical services are lengthy. They are not repeated in this LCD. Neither Medicare payment policy rules nor this LCD replace, modify or supersede

applicable state statutes regarding medical practice or other health practice professions acts, definitions and/or scopes of practice. All providers who report services for Medicare payment must fully understand and follow all existing laws, regulations and rules for Medicare payment for Transesophageal Echocardiography (TEE) and must properly submit only valid claims for them. Please review and understand them and apply the medical necessity provisions in the policy within the context of the manual rules. Relevant CMS manual instructions and policies may be found in the following Internet-Only Manuals (IOMs) published on the CMS Web site:

IOM Citations:

- CMS IOM Publication 100-02, *Medicare Benefit Policy Manual,* Chapter 15, Section 80 Requirements for Diagnostic X-Ray, Diagnostic Laboratory, and Other Diagnostic Tests
- CMS IOM Publication 100-03, *Medicare National Coverage Determinations (NCD) Manual*, Chapter 1, Part 4, Section 220.5 Ultrasound Diagnostic Procedures
- CMS IOM 100-08, *Medicare Program Integrity Manual*, Chapter 13, Section 13.5.4 Reasonable and Necessary Provision in an LCD

Social Security Act (Title XVIII) Standard References:

- Title XVIII of the Social Security Act, Section 1833(e) states that no payment shall be made to any provider for any claim that lacks the necessary information to process the claim.
- Title XVIII of the Social Security Act, Section 1862(a)(1)(A) states that no Medicare payment shall be made for items or services which are not reasonable and necessary for the diagnosis of treatment of illness or injury.
- Title XVIII of the Social Security Act, Section 1862(a)(7). This section excludes routine physical examinations.

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

Notice: It is not appropriate to bill Medicare for services that are not covered (as described by this entire LCD) as if they are covered. When billing for non-covered services, use the appropriate modifier.

Compliance with the provisions in this policy may be monitored and addressed through post payment data analysis and subsequent medical review audits.

History/Background and/or General Information

Echocardiography is a non-invasive technique in which pulsed high-frequency sound waves are used to visualize the contours, movements and dimensions of cardiac structures. Ultrahigh frequency sound waves are directed toward and reflected by cardiovascular structures. Reflected echoes are translated into electrical impulses for display on a monitor and for recording and storage on either videotape or digital recording.

Echocardiography (or cardiac ultrasound) provides structural, functional and hemodynamic information. It can also provide anatomic information pertaining to the proximal great vessels. An ultrasound generator is a non-invasive diagnostic tool, which can be applied to the anterior thorax to examine the heart. This exam is known as Transthoracic Echocardiography (TTE). The ultrasound generator can also be positioned in the esophagus to obtain additional cardiovascular information. This exam is known as Transesophageal Echocardiography (TEE). Because of the esophageal instrumentation, TEE is relatively invasive with potential for morbidity.

TEE is not **USUALLY** medically necessary when a technically adequate normal TTE has been performed. If TTE is technically inadequate or demonstrates pathology but does not provide adequate data for definitive therapeutic decision, TEE is appropriately considered. The information TEE is expected to provide should significantly augment that obtained by TTE and contribute to clinically relevant management decisions (alter therapy).

Coverage for TEE is considered medically reasonable and necessary in the following situations:

- When TTE has not established the diagnosis, or
- In a patient where TTE is felt not to give adequate information (e.g., as in extreme obesity, severe chronic obstructive pulmonary disease [COPD], chest deformity, inadequate or incomplete visualization of the left atrium and left atrial appendage in patients with prosthetic material, and inadequate visualization of the atrial septum for making the diagnosis of patient foramen ovale).

A TEE may be performed as an initial test in the following scenarios:

- There is suspected acute aortic pathology including dissection or transection;
- For guidance of percutaneous non-coronary cardiac interventions (e.g., radiofrequency ablation of atrial arrhythmias, alcohol septal ablation, percutaneous mitral or aortic valvuloplasty, atrial occluder device deployment, or management of VAD prior to heart transplantation);
- To determine the mechanism of valve regurgitation and/or suitability for valve repair;
- To diagnose or subsequently manage suspected endocarditis with moderate or high pre-test probability of the disease;
- Persistent fever with an intracardiac device; or
- For clinical decision making, including possible cardioversion or radiofrequency ablation of atrial flutter/fibrillation when anticoagulation alone is not already planned.

Significant esophageal pathology (tumor, stenosis, varices, diverticula) is considered as relatively contraindicating TEE. The anticipated incremental information obtained clearly should exceed any potential risk.

This policy defines clinical pathophysiologic states for which the contractor will provide coverage for TEE examinations. Covered conditions reflect those for which there is authoritative literature support as to clinical utility.

Covered Indications

1. Native and Prosthetic Valvular Heart Disease:

Native valvular heart disease is appropriately assessed by TTE. It is seldom medically necessary to complement TTE with TEE. TTE provides non-invasive assessment of native valve functional anatomy and ventricular adaptation and function. When TTE is technically inadequate, TEE may provide comparable data. Serial assessment by relatively invasive TEE is not as ideal as serial assessment by non-invasive TTE.

Prior to possible valve surgical repair, TEE is useful to further assess the mechanism and severity of disease and the extent of surgery required. Prior to elective percutaneous balloon aortic or mitral valvuloplasty a TEE is needed to exclude the presence of left atrial thrombus and it may be useful as a guide to the procedure. In most patients with valvular prostheses, TTE provides diagnostic functional information and non-invasive serial follow-up.

However, in some patients, the prosthetic valve may cause acoustical shadowing that may diminish the value of the TTE. When prosthetic dysfunction is suspect and therapeutic decisions are pivotal and data inconclusive, TEE is

appropriately considered. TEE is not routinely indicated in all patients with prosthetic valves.

2. Endocarditis:

When TTE provides diagnostic information pertaining to valvular pathology, the infective process and ventricular function, TEE is not generally necessary. TTE affords non-invasive serial assessment and is generally better able to define the consequences of the infective valvular process on ventricular function. When TTE has provided diagnostic information, the supplemental information provided by TEE should generally have therapeutic relevance. 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).

3. Suspected Cardiac Thrombi and Emboli:

Historical estimates place the incidence of a cardiac source of emboli at between 15 and 30 percent. Selective study of these patient cohorts by TTE detects a potential cardiac source in 10 percent. In general, TTE can reliably diagnose or exclude a ventricular locus of potentially embolic material. In patients with cardiac pathology associated with a high incidence of thromboembolic (valvular heart disease, arrhythmias - especially atrial fibrillation, cardiomyopathies, other causes of ventricular dysfunction) the incremental information provided by TEE should be of therapeutic relevance before the patient is subjected to TEE. Routine TEE to search for a cardiac source of embolization is not considered necessary. In younger stroke patients with a normal TTE and neurologic workup, TEE is appropriately considered. A key decisional factor should be whether TEE findings may substantively alter therapy and clinical outcome. It merits emphasis that a negative examination (TTE or TEE) does not exclude a cardiac embolus, and the finding of thrombus or vegetation does not establish a cardiac embolic source.

4. Cardiac and Pericardiac Masses:

TTE and TEE have comparable sensitivity in the assessment of right heart masses. TEE provides more detail in left atrial masses and may provide therapeutic direction (cystic vs. solid, attachment, infiltration). When cardiac masses are suspect, TEE can be an integral part of the diagnostic workup and management strategy.

5. Aortic Pathological Conditions:

TEE has become an established rapid and reliable tool for the diagnosis and definition of aortic dissection and aneurysm. In suspected aortic dissection, the application of bedside biplane or multiplane TEE is frequently considered the diagnostic study of choice.

Aortic ulceration, atherosclerotic plaque and mural thrombotic material are identified by TEE with increasing frequency particularly in older patients. A causative relationship between these findings and embolic events is postulated. At present, TEE investigation for this pathology cannot be considered routine. If embolic episodes are repetitive and focused aortic surgical intervention is contemplated, TEE to search for and characterize remediable aortic lesions may be appropriate.

6. Critically Ill Patient:

There is a role of echocardiography in the management of the critically ill patient. When TTE fails to provide adequate visualization or TTE is contraindicated (e.g., chest trauma), TEE may provide diagnostic information and help guide therapy. Examples where TEE may be useful include: assessment of complication of myocardial infarction, hypotension, persistent hypoxemia in patients suspected of having a right-to-left shunt, patients in shock and brain-dead patients being considered as cardiac donors.

For services on or after May 22, 2007, CMS national policy determined that monitoring cardiac output by

transesophageal Doppler for ventilated patients in the intensive care unit (ICU) and operative patients with a need for intraoperative fluid optimization will be considered reasonable and necesssary.

Monitoring of patients in the ICU with TEE has been suggested in some instances. Once the probe has been placed and initial data reviewed and reported (similarly to devices looking at cardiac output in an ongoing or intermittent approach), the information would be considered part of all other information handled at the bedside and bundled into the E/M service daily. **The daily billing of the TEE for monitoring would not be appropriate.**

7. Congenital Heart Disease:

In children and smaller adults TTE provides accurate anatomic definition of congenital heart diseases. In larger and postoperative patients with fibrosis, echo opaque patches and prostheses, inadequate penetration and acoustical shadowing can result in incomplete TTE data. The more precise definition of atrial, outflow tract and proximal pulmonary vascular anomalies by TEE can be critical to management strategies. When TTE is technically inadequate or anatomic definition incomplete, TEE is appropriately considered.

8. Interventional and Surgical TEE:

TEE can be of utility during percutaneous and surgical cardiac interventions. In selected instances, TEE can provide guidance during the creation of shunts, placement of septation devices, performance of valvular plastic procedures and replacement when the surgical result cannot be adequately assessed by other means. In lung or heart-lung transplant, the integrity and morphology of pulmonary vascular anastomoses is critical. Intraoperative TEE can assist in surgical management decisions.

Intraoperative TEE monitoring of ventricular function in selected high-risk patients can complement hemodynamic monitoring data. Assessment for changes in volume and of global and regional myocardial contractility can be therapeutically useful. Routine application, even in patients undergoing cardiopulmonary bypass and valvular surgeries, cannot be supported. Prior to elective percutaneous mitral valvuloplasty, TEE is used to assess for left atrial thrombi.

Medicare payment for the professional component of intraoperative TEE is justified for instances in which intraoperative echocardiography is an adjunct to optimal performance of a surgical procedure or for a specific diagnostic reason (e.g., proper valve placement, guiding of the placement of a device to close an atrial septal defect, evaluation of mitral balloon valvuloplasty, etc.). Intraoperative echocardiographic services must include a complete interpretation and written report by the performing physician, and images obtained must be stored in the same manner as other echocardiographic services to warrant separate payment.

9. Cardioversion:

Prior to cardioversion of atrial fibrillation when anticoagulants are contraindicated or of unusually high risk, information obtained by TEE may facilitate therapeutic decisions. When anticoagulants are considered integral to the cardioversion and there is no contraindication to their use, incremental therapeutic information provided by TEE has not been demonstrated.

Contrast Agents will be reimbursed for echocardiography enhancement when a conventional study echocardiogram has failed to opacify the left ventricle. A contrast agent is considered medically necessary when it is used to improve the delineation of the left ventricular endocardial borders. This is especially applicable during the performance of exercise echocardiographic stress testing.

Limitations

1. Pericardial Disease: TEE has not been demonstrated to provide incremental information to that provided by TTE in the assessment and management of pericardial pathology other than masses as noted above.
2. Left Ventricular Function: In general, TTE provides accurate and serial non-invasive assessment of global and regional left ventricular function. When TTE is technically inadequate and clinical data insufficient for management decision, TEE can provide comparable information. TTE assessment of left ventricular function is considered preferable to TEE in all other circumstances. Documentation showing the need for TEE when TTE has not been done should be available if requested.

Provider Qualifications

The accuracy of cardiac ultrasound depends on the knowledge, skill and experience of the sonographer and physician. Sonographers who perform or supervise the studies must be capable of demonstrating training and experience specific to the study performed and maintain documentation for post payment audit. 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. A physician or a sonographer may personally perform cardiac ultrasound procedures. When a physician employs auxiliary personnel to assist him /her in providing ultrasound procedures, the services of such personnel are considered 'incident to' to the physicians' services. All guidelines set forth by CMS regarding 'incident to' must be met.

Cardiovascular Disease/Cardiology, Cardiovascular Surgery, Anesthesia, Critical Care Medicine, and Pediatric Cardiologists are thought to have the formal training or clinical training to do these tests. Other specialties may see denials for these services. For all specialties, certification by the National Board of Echocardiography will be essential in allowing coverage for services and can be submitted in the appeals process should a denial occur.

This LCD imposes frequency limitations. For frequency limitations, please refer to the Utilization Guidelines section below.

Notice: Services performed for any given diagnosis must meet all of the indications and limitations stated in this policy, the general requirements for medical necessity as stated in CMS payment policy manuals, any and all existing CMS national coverage determinations, and all Medicare payment rules

The redetermination process may be utilized for consideration of services performed outside of the reasonable and necessary requirements in this LCD.

Summary of Evidence

N/A

Analysis of Evidence (Rationale for Determination)

N/A

General Information

Associated Information

Refer to the Local Coverage Article: Billing and Coding: Transesophageal Echocardiography (TEE) (A56505) for all

coding information.

Documentation Requirements

1. All documentation must be maintained in the patient's medical record and made available to the contractor upon request.
2. Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, dates of service[s]). The documentation must include the legible signature of the physician or non-physician practitioner responsible for and providing the care to the patient.
3. The medical record documentation must support the medical necessity of the services as stated in this policy.
4. At a minimum, the report should include comments based on 2D and Doppler imaging concerning chamber size and function, valve morphology and function, assessment of the great vessels and of the pericardium, and any other structural or functional information required to answer the clinical question that is posed.
5. The rationale for performing the study(s) must be clearly documented and/or understood from the medical record.
6. Medical records, including the permanent image, need not be submitted with the claim. However, these records must be furnished to Medicare upon request.
7. The ordering physician must furnish to the performing provider the appropriate diagnostic material needed for billing the TEE.

Appendices

N/A

Utilization Guidelines

In accordance with CMS Ruling 95-1 (V), utilization of these services should be consistent with locally acceptable standards of practice.

Medical necessity of repeated echocardiographic studies varies widely. Certain patients require only one study to establish a diagnosis and/or establish a baseline function. The frequency of serial examination should be dictated by the individual patient’s clinical course.

Notice: This LCD imposes utilization guideline limitations. Despite Medicare's allowing up to these maximums, each patient’s condition and response to treatment must medically warrant the number of services reported for payment. Medicare requires the medical necessity for each service reported to be clearly demonstrated in the patient’s medical record. Medicare expects that patients will not routinely require the maximum allowable number of services.

Sources of Information

Contractor is not responsible for the continued viability of websites listed.

Other Contractor Polices

Contractor Medical Directors

Original JH ICD-9 LCD L32674, Transesophageal Echocardiography (TEE)

Original JH ICD-10 Source LCD L35016, Transesophageal Echocardiography (TEE)

Other Contractor Local Coverage Determinations

"Echocardiography" TrailBlazer LCD, (00400) L16396, (00900) L16328.

"Transesophageal Echocardiography (TEE)," Noridian Administrative Services, LLC LCD, (CO) L14930.

"Transesophageal Echocardiography," Arkansas BlueCross BlueShield (Pinnacle) LCD, (NM, OK) L11679, L11845.

Bibliography

Ryan T, Berlacher K, Lindner J. COCATS 4 Task Force 5: Training in Echocardiography. *Journal of the American College of Cardiology.* 2015: 65(17): 1786-99.

Revision History Information

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
10/17/2019	R7	LCD revised and published on 10/17/2019. Consistent with CMS Change Request 10901, the entire coding section has been removed from the LCD and placed into the related Billing and Coding Article, A56505. All CPT codes and coding information within the text of the LCD has been placed in the Billing and Coding Article.	• Other (CMS Change Request 10901)
04/25/2019	R6	LCD revised and published on 04/25/2019. The IOM Citations section was revised to add applicable manual references and to remove the reference to NCCI since coding and billing information has been moved to the companion article. All manual language has been removed from the LCD with references to the applicable manuals added consistent with CMS Change Request (CR) 10901. All billing and coding related information has been moved to the Local Coverage Article: Billing and Coding: Transesophageal Echocardiography (TEE) (A56505) consistent with CMS Change Request (CR) 10901. There has been no change in coverage content with this revision.	• Other (Change in LCD process per CR 10901)
10/01/2018	R5	LCD revised and published on 10/25/2018 effective for dates of service on and after 10/01/2018 to reflect the ICD-10-CM Annual Code Updates and annual review. The following ICD-10-CM code(s) have been deleted and therefore removed from Group 1 Codes of the LCD: I63.8, T81.4XXA. The following ICD-10-CM code(s) have	• Revisions Due To ICD-10-CM Code Changes • Other (Annual Review)

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
		been added to Group 1 Codes: I63.89, T81.44XA. The following ICD-10-CM code(s) have undergone a descriptor change: I63.333, I63.343, T81.11XA. Per annual review, the CMS National Coverage Policy citations and Documentation Requirement #2 and #4 updated with standard LCD verbiage. At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.	
10/01/2017	R4	LCD revised and published on 10/05/2017 effective for dates of service on and after 10/01/2017 to reflect the ICD-10 Annual Code Updates. The following ICD-10 code(s) have undergone a descriptor change: I63.211, I63.212, I63.22, I63.323, I63.333. At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.	• Revisions Due To ICD-10-CM Code Changes
10/01/2016	R3	LCD revised and published on 09/29/2016 effective for dates of service on and after 10/01/2016 to reflect the ICD-10 Annual Code Updates. The following ICD-10 code(s) have been deleted and therefore removed from Group 1 of the LCD: H34.811, H34.812, H34.813, H34.831, H34.832, H34.833, K55.0, Q25.2, Q25.4 and Z98.89. The following ICD-10 code(s) have been added to Group 1 diagnosis code list: H34.8111, H34.8121, H34.8131, H34.8311, H34.8321, H34.8331, I63.013, I63.033, I63.113, I63.133, I63.213, I63.233, I63.313, I63.323, I63.333, I63.343, I63.413, I63.423, I63.433, I63.443, K55.011, K55.012, K55.021, K55.022, K55.031, K55.032, K55.041, K55.042, Q25.29, Q25.41, Q25.42, Q25.43, Q25.44, Q25.45, Q25.46, Q25.47, Q25.48, Q25.49, T82.855A and Z98.890. The following ICD-10 code(s) have undergone a descriptor change: T82.817A, T82.818A, T82.827A, T82.837A, T82.847A, T82.857A, and T82.867A.	• Revisions Due To ICD-10-CM Code Changes
12/31/2015	R2	LCD revised to include reference to the original ICD-10 source.	• Other (Clarification)

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
12/31/2015	R1	LCD posted for notice on 11/05/2015 to become effective 12/31/2015. 05/14/2015 Draft LCD posted for notice.	• Creation of Uniform LCDs With Other MAC Jurisdiction

Associated Documents

Attachments

N/A

Related Local Coverage Documents

Articles

A56505 - Billing and Coding: Transesophageal Echocardiography (TEE)

Related National Coverage Documents

N/A

Public Versions

UPDATED ON	EFFECTIVE DATES	STATUS
10/11/2019	10/17/2019 - N/A	Currently in Effect (This Version)
Some older versions have been archived. Please visit the MCD Archive Site to retrieve them.		

Keywords

N/A