

2025 Magnetic Resonance Imaging (MRI) Heart

Diagnostic Imaging

MRI-Heart-HH
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Magnetic Resonance Imaging (MRI) Heart

MRI Heart Related National Coverage Determination (NCD)/ Local Coverage Determination (LCD)

Please refer to <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to the individual's health plan membership.

Type/ID Number	Title
LCD 35083	Cardiology Non-Emergent Outpatient Stress Testing
LCD 38396	Cardiology Non-Emergent Outpatient Stress Testing

Clinical Judgment

These medical policies are designed to provide clinical guidance and do not supplant a provider's independent professional judgment. Physicians retain full and independent authority to determine appropriate care based on each patient's individual clinical circumstances. Although services may be subject to documentation requirements, medical necessity review, or coverage limitations, nothing in this policy is intended to restrict or interfere with a physician's independent medical judgment.

MRI General Contraindications

MRI is contraindicated for **ANY** of the following:

- Safety, related to clinical status (body mass index exceeds MRI capability, intravascular stents within recent 6 weeks)
- Safety, related to implanted devices (aneurysm clips, cochlear implant, implantable cardio-defibrillators, insulin pump, permanent pace maker, spinal cord stimulator)¹

References: [22] [8] [11]

Preamble: Pediatric Diagnostic Imaging

HealthHelp's clinical guidelines for the Diagnostic Imaging program, are intended to apply to both adults and pediatrics (21 years of age or younger), unless otherwise specified within the criteria.

¹Some implanted devices that were once absolute contraindications to a MRI may now be accepted, including if the specific MRI is able to accommodate the device or the device itself is deemed safe for MRI.

MRI Heart Guideline

Magnetic resonance imaging (MRI) of the heart (or cardiac magnetic resonance [CMR]) is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. Aortic pathology is suspected or known and **ANY** of the following: (***NOTE:** *Computed tomography (CT), MR or echocardiogram [ECHO] can be used for screening and follow-up, with CT and MR preferred for imaging beyond the proximal ascending aorta.*)
 - a. Aortic root growth rate is 0.5 cm or more per year, for biannual surveillance.
 - b. Aortic root is enlarged, for biannual surveillance.
 - c. Bicuspid aortic valve **AND** ascending aorta are known, larger than 4 cm in diameter, for re-evaluation of aortic sinuses and ascending aorta, and **ANY** of the following:
 - i. Aortic diameter has a rapid rate of change.
 - ii. Aortic diameter is larger than 4.5 cm.
 - iii. Familial first-degree relative (child, parent, sibling) with a history of aortic dissection.
 - d. Connective tissue disease (eg, Ehler's Danlos, Loeys-Dietz, Marfan syndrome) is suspected or known, imaging at time of diagnosis, 6 months after, followed by annually. (***NOTE:** *More frequent imaging is required if aorta is greater than 4.5 cm or growth rate is greater than 0.5 cm/year; up to twice/year.*)
 - e. Familial first-degree relative (child, parent, sibling) for screening when there is a history of bicuspid aortic valve, thoracic aortic aneurysm or thoracic aortic dissection.
 - f. Thoracic aortic aneurysm is known and **ANY** of the following:
 - i. **AFTER** initial diagnosis for assessment of growth rate, for follow-up every 6 months.
 - ii. Aneurysm is larger than 4.4 cm, for follow-up annually.
 - g. Turner's syndrome is known **AND** known abnormality exists, for follow-up annually **OR** if initial study is normal, follow-up every 5 to 10 years.

References: [1] [27] [15] [21] [4] [31]

2. Cardiomyopathy or heart failure is suspected or known and **ANY** of the following:
 - a. Arrhythmogenic right ventricular cardiomyopathy is suspected (eg, electrocardiogram [EKG] abnormalities, non-sustained ventricular tachycardia [VT], unexplained syncope).

- b. Cardiomyopathy is suspected or known and **ANY** of the following:
 - i. Acquired or inherited cardiomyopathy is suspected.
 - ii. Newly diagnosed, to assess diastolic and systolic function.
 - iii. Non-compaction cardiomyopathy is suspected and transesophageal echocardiogram (TEE) is non-diagnostic or indeterminate.
- c. Heart failure is new and **EITHER** of the following:
 - i. Ejection fraction (EF) differentiation between reduced and preserved EF.
 - ii. EF is reduced, with unknown etiology (eg, ischemic versus non-ischemic).
- d. Hypertrophic cardiomyopathy (HCM) is suspected or known and **ANY** of the following:
 - i. HCM, obstructive, is known, ECHO detection of anatomic mechanism of obstruction is non-diagnostic or indeterminate **AND** CMR is needed for septal reduction therapy.
 - ii. Implantable cardioverter-defibrillator (ICD) placement is uncertain based on ECHO, positive for personal/family history, **AND** imaging is needed to evaluate **ANY** of the following:
 - A. EF
 - B. Extent of myocardial fibrosis with LGE
 - C. LV apical aneurysm
 - D. LV wall thickness
 - iii. Left ventricular hypertrophy (LVH) is known and an alternate diagnosis (eg, athlete's heart, infiltrative or storage disease) is suspected.
 - iv. Sudden cardiac death (SCD) event with known HCM to follow-up to evaluate changes in development: follow-up every 3 to 5 years for **ANY** of the following:
 - A. Apical aneurysm
 - B. Ejection fraction (EF)
 - C. Late gadolinium enhancement (LGE)
 - D. Left ventricular (LV) wall thickness
 - v. TTE is non-diagnostic or indeterminate, for diagnosis, management or operative planning.
 - vi. TTE is non-diagnostic or indeterminate and imaging is necessary for tissue characterization (degree of fibrosis) prior to ICD placement.

- e. Infiltrative disease (eg, amyloidosis, endomyocardial fibrosis, hemochromatosis, sarcoidosis) is suspected **AND** positron emission tomography (PET) has **NOT** been performed.
- f. Ischemic cardiomyopathy is **EXCLUDED**.
- g. Myocarditis, acute, is suspected, based on new, unexplained findings (eg, EKG changes, troponin elevation **NOT** related to acute myocardial infarction [MI]).
- h. Pulmonary hypertension is known and there is **NO** severe valvular disease.

References: [1] [27] [13] [5] [9] [20] [35] [23] [3] [33] [28] [16] [18] [30] [14]

- 3. Congenital heart disease (CHD) (eg, aortic coarctation, pulmonary stenosis, transposition of the great arteries) is suspected or known and TTE is non-diagnostic or indeterminate. (***NOTE:** *CT or CMR is appropriate.*)

References: [1] [27] [17] [29] [32]

- 4. Coronary artery disease is suspected with **ANY** of the following:

- a. Chronic chest pain **AND** with **ANY** of the following:
 - i. Ischemic heart disease is known and **NO** prior treatment.
 - ii. **NO** known ischemic heart disease.
- b. Stress echocardiogram (SE) or myocardial perfusion imaging (MPI) is **contraindicated or unavailable**. (***NOTE:** *Alternative to myocardial perfusion imaging [MPI]*)

References: [1] [27] [19] [6]

- 5. Dyspnea is known, **NO** ischemia **AND** cardiac arrhythmia or pericardial disease is suspected.

References: [1] [27] [7]

- 6. Extra-cardiac and intra-cardiac structure evaluation for **ANY** of the following:

- a. Cardiac mass, cardiac source of emboli, thrombus or tumor are suspected.
- b. Coronary aneurysms or anomalous coronary arteries, for identification and characterization.
- c. Intracardiac mass re-evaluation, when findings may change therapy and **NO** cardiac imaging in the last 3 months.
- d. Left ventricular pseudoaneurysm is known and TTE is non-diagnostic or indeterminate. [10]
- e. Peri-cardial disease evaluation for structural and functional assessment **AND** to differentiate constrictive versus restrictive physiology.

References: [1] [27] [26] [25] [25] [34]

7. Peri-procedural planning for **ANY** of the following:
- a. Atrial septal defect (ASD) or patent foramen ovale (PFO) pre-procedure evaluation for closure for **EITHER** of the following:
 - i. Atrial septal anatomy and atrial septal aneurysm assessment.
 - ii. Percutaneous device closure assessment for suitability.
 - b. Left atrial appendage (LAA) is occluded **AND** transesophageal echocardiogram (TEE) **AND** heart CT were **NOT** completed for surveillance at 45 days (or at the guidance of the Food and Drug Administration (FDA)) **AND** evaluation for **ANY** of the following:
 - i. Device leakage
 - ii. Device migration
 - iii. Device stability
 - c. Peri-procedural care to guide pre-procedure or invasive procedure planning, or post-procedural follow-up.
 - d. Pre-Radiofrequency ablation planning to evaluate left atrium and pulmonary veins, **AND NO** prior heart CT completed.
 - e. Transaortic valve repair (TAVR) is planned **AND NO** prior heart CT is completed.
 - f. Transcatheter mitral valve intervention is planned **AND** TEE or TTE are non-diagnostic or indeterminate.

References: [1] [27] [2] [12]

8. Valvular heart disease is suspected or known and **ANY** of the following:
- a. Bioprosthetic valvular dysfunction is suspected **AND** TEE or TTE are non-diagnostic or indeterminate.
 - b. Valvular stenosis, regurgitation **OR** valvular masses are suspected **AND** TTE is non-diagnostic or indeterminate.

References: [1] [27] [24]

MRI Heart Summary of Changes

MRI heart had the following version changes from 2024 to 2025:

- Added the following to keep in line with current evidence:
 - "Ischemic cardiomyopathy is **EXCLUDED**." Under Cardiomyopathy or heart failure" new indication per ACR

- "Ischemic heart disease is known and **NO** prior treatment." under "Chronic chest pain" new indication per ACR
- Changed "Aortic growth rate" under "Aortic pathology" from 0.4 cm per year to 0.5 cm per year per EBM
- Removed the following as current evidence no longer supports the indication:
 - "Presyncope/syncope is known and cardiac etiology is suspected." due to lack of EBM
- Reworded "Pericardial disease" into "Dyspnea is known, **NO** ischemia **AND** cardiac arrhythmia or pericardial disease is suspected." for clarity

MRI Heart Procedure Codes

Table 1. MRI Heart Associated Procedure Codes

CODE	DESCRIPTION
75557	Cardiac magnetic resonance imaging for morphology and function without contrast material
75559	Cardiac magnetic resonance imaging for morphology and function without contrast material; with stress imaging
75561	Cardiac magnetic resonance imaging for morphology and function without contrast material(s), followed by contrast material(s) and further sequences;
75563	Cardiac magnetic resonance imaging for morphology and function without contrast material(s), followed by contrast material(s) and further sequences; with stress imaging
C9762	Cardiac magnetic resonance imaging for morphology and function, quantification of segmental dysfunction; with strain imaging
C9763	Cardiac magnetic resonance imaging for morphology and function, quantification of segmental dysfunction; with stress imaging

MRI Heart Definitions

Ablation therapy is a medical procedure that involves the destruction of abnormal tissue using various energy sources such as heat, cold or electrical energy.

Amyloidosis is a disorder characterized by the deposition of a waxy translucent substance consisting primarily of protein in bodily organs and tissues.

Aneurysm occurs when part of an artery wall weakens, allowing it to abnormally balloon out or widen.

Anomalous coronary artery (ACA) is a heart defect that occurs when the coronary arteries are malformed or abnormal. This condition is also known as a congenital coronary artery anomaly (CAA).

Aortic coarctation is a congenital narrowing of the aorta, typically located near the ligamentum arteriosum just distal to the origin of the left subclavian artery.

Aortic root is the section of the aorta that extends from the aortic valve annulus to the sinotubular junction, including the aortic valve, sinuses of Valsalva, and the origin of the coronary arteries.

Apical aneurysm is a thin-walled dyskinetic or akinetic segment located in the distal left ventricular (LV) apex, often associated with hypertrophic cardiomyopathy (HCM) and midventricular obstruction.

Arrhythmogenic right ventricular dysplasia (ARVD) (also called arrhythmogenic right ventricular cardiomyopathy, right ventricular cardiomyopathy or right ventricular dysplasia) is a genetic disorder characterized by the replacement of right ventricular myocardium with fibrous and fatty tissue, leading to ventricular arrhythmias, heart failure, and sudden cardiac death.

Ascending aorta is the initial, upward-curving section of the aorta, the largest artery in the body, that carries oxygen-rich blood from the heart.

Athlete's Heart Syndrome is a constellation of structural and functional changes that occur in the heart of people who train for prolonged durations (eg, at least 1 hour most days) and/or frequently at high intensities. The changes are asymptomatic.

Atrial fibrillation (AF) is a cardiac rhythm disorder characterized by uncontrolled atrial activation without effective atrial contraction. On the electrocardiogram (ECG), P waves are absent. AF is characterized by rapid oscillations or fibrillatory waves that vary in amplitude, shape and timing associated with an irregular ventricular response.

- **Paroxysmal AF** terminates spontaneously or with intervention within 7 days of onset. Episodes typically convert back to sinus rhythm within 48 hours.
- **Persistent AF** is continuous AF sustained beyond 7 days.

Atrial septal defect (ASD) is an opening in the septal wall that separates the two top chambers of the heart (the atria) that occurs before the birth of an individual. The defect can allow oxygen-rich blood to leak into the oxygen-poor blood chambers in the heart.

Bicuspid aortic valve is an inherited form of heart disease in which two of the three leaflets of the aortic valve fuse together during development in utero, creating a less efficient two leaflet valve. The aortic valve plays a crucial role in ensuring the unidirectional flow of blood from

Biprosthesis valvular dysfunction is deterioration of the leaflets or supporting structures resulting in thickening, calcification, tearing or disruption of the prosthetic valve materials with eventual associated valve hemodynamic dysfunction, manifested as stenosis or regurgitation.

Cardiac infiltrative disease (infiltrative cardiomyopathy) is characterized by the deposition of abnormal substances that cause the ventricular walls to become progressively rigid, thereby impeding ventricular filling. Infiltrative cardiomyopathies can have extracellular or intracellular infiltration. When infiltration is intracellular, it's more accurately called a myocardial storage disorder.

Cardiomyopathy is a disease of the heart muscle characterized by structural and functional abnormalities in the absence of significant coronary artery disease, hypertension, valvular disease or congenital heart disease.

Coarctation is a stricture or narrowing especially of a canal or vessel.

Computed tomography (CT) is an imaging test that uses X-rays to computer analysis to generate cross sectional images of the internal structures of the body that can be displayed in multiple planes.

Congenital heart disease (CHD) is a term for a variety of birth defects that affect heart anatomy and function. Congenital is defined as present since birth. CHD occurs when the heart, or blood vessels near the heart, do not develop normally. Common heart defects include: atrial septal defect, coarctation of the aorta, d-transposition of the great arteries, Ebstein's anomaly, patent ductus arteriosus, tetralogy of fallot, total anomalous pulmonary venous connection and ventricular septal defect.

Coronary artery aneurysm (CAA) is a localized, irreversible dilation of a coronary artery that's at least 1.5 times larger than the normal segment next to it.

Coronary artery disease (CAD) is caused by plaque buildup in the walls of the arteries that supply blood to the heart (called coronary arteries) and other parts of the body.

Dissection refers to the separation of the layers within the wall of an artery, most commonly the aorta, due to a tear in the intimal layer, leading to the formation of a false lumen.

Dyspnea is the sensation of difficult, labored or unpleasant breathing, often described as breathlessness, chest tightness or difficulty breathing.

Echocardiography is a diagnostic test which uses ultrasound waves to make images of the heart chambers, valves and surrounding structures. It can measure cardiac output and is a sensitive test for fluid around the heart (pericardial effusion). It can also be used to detect abnormal anatomy or infections of the heart valves.

Ehlers-Danlos syndrome is a group of hereditary connective tissue disorders that manifests clinically with skin hyperelasticity, hypermobility of joints, atrophic scarring and fragility of tissues.

Ejection fraction (EF) is a measurement of how much blood the left ventricle pumps out with each contraction. It is measured in percentages with a normal measurement usually between 50 and 70%.

Electrocardiogram (ECG or EKG) is a test that measures and records the electrical activity of the heart. The ECG electrical activity is divided into the P wave, PR interval, QRS complex, QT interval, ST segment, T wave and U wave. An ECG is useful in establishing many cardiac diagnoses.

Embolism is an obstruction of an artery, typically by a clot of blood or an air bubble, that has traveled from another part of the body.

Endomyocardial fibrosis (EMF) is a disease that causes fibrosis of the apical endocardium of the right or left ventricle of the heart. It is a type of restrictive cardiomyopathy.

Fibrosis is the pathological replacement of normal tissue architecture with rigid, collagen-rich connective tissue, leading to organ dysfunction.

Heart failure (HF) (also known as **congestive heart failure [CHF]**) is a condition that develops when the heart is unable to pump enough blood for the body's needs. HF occurs when the heart cannot fill with enough blood or is too weak to pump properly. Decompensated heart failure is sudden worsening (exacerbation) of heart failure symptoms (eg, difficulty breathing, lower extremity edema, fatigue) to where the heart can no longer continue to compensate for its full function.

Hemochromatosis is a condition characterized by excessive iron accumulation in various organs due to increased iron absorption, which can lead to serious complications such as liver cirrhosis, heart failure, diabetes, and skin pigmentation.

Hypertrophic cardiomyopathy (HCM) is an inherited cardiac condition characterized by unexplained left ventricular hypertrophy, often leading to impaired diastolic filling and potential obstruction of the left ventricular outflow tract.

Implantable cardiac defibrillator (ICD) is a battery-powered device placed under the skin that keeps track of the heart rate. Thin wires connect the ICD to the heart. If an abnormal heart rhythm (heart beating chaotically or much too fast) is detected, the device will deliver a shock to restore a normal heartbeat.

Indeterminate findings are inconclusive or insufficient for treatment planning.

Intracardiac refers to the area within the heart (eg, muscles, ventricles).

Ischemic Heart Disease is a term given to heart problems caused by narrowed heart arteries. When arteries are narrowed, less blood and oxygen reaches the heart muscle, increasing the risk of myocardial infarction. This is also called coronary artery disease and coronary heart disease.

Late gadolinium enhancement (LGE) is a method where cardiovascular magnetic resonance (CMR) images are obtained after the administration of gadolinium contrast material that accumulates into a tissue with increased extra cellular space. This method is suggestive of fibrosis in both the left and right ventricles.

Left Atrial Appendage (LAA) is a small, ear-shaped sac in the muscle wall of the left atrium of the heart.

Left ventricular hypertrophy (LVH) is an increase in the thickness of the left ventricular wall, often due to chronic pressure or volume overload, and can lead to heart failure.

Magnetic resonance imaging (MRI) is a non-invasive diagnostic technique that produces computerized images of internal body tissues and is based on nuclear magnetic resonance of atoms within the body induced by the application of radio waves.

Marfan syndrome is a disorder of connective tissue inherited as a dominant trait, characterized by abnormal elongation of the long bones and often with ocular and circulatory defects.

Myocardial infarction (MI), also called a heart attack, occurs when the blood flow that brings oxygen to the heart muscle is severely reduced or cut off completely. The coronary arteries that supply the heart muscle with blood flow can become narrowed from a buildup of fat, cholesterol

and other substances that together are called plaque. This process is known as atherosclerosis. When plaque within a coronary artery breaks, a blood clot forms around the plaque and can block the flow of blood through the artery to the heart muscle. Ischemia results when there is an inadequate blood supply to the heart muscle causing damage or death of part of the heart muscle, resulting in an MI.

Myocardial perfusion imaging (MPI) uses an intravenously administered radio-pharmaceutical to depict the distribution of blood flow in the myocardium. Perfusion imaging identifies areas of relatively reduced myocardial blood flow associated with ischemia or scar. The relative distribution of perfusion can be assessed at rest, during cardiovascular stress or both. This test is often called a nuclear stress test.

Myocarditis is inflammation of the muscle tissue of the heart (myocardium) that causes tissue death. Myocarditis may be caused by many disorders, including infection, toxins and drugs that affect the heart, and systemic disorders such as sarcoidosis, but often the cause is unknown.

Non-diagnostic is a result that does not lead to a confirmed diagnosis.

Patent Foramen Ovale (PFO) is a tunnel-like opening in the septum of the heart between the atria that remains open after birth. The small, flap-like foramen ovale is found between the right and left atria of the fetal heart and allows blood to bypass the lungs prior to birth.

Pediatric approximate ages are defined by the US Department of Health (USDH), the Food and Drug Administration (FDA), and the American Academy of Pediatrics (AAP) as the following:

1. Infancy, between birth and 2 years of age
2. Childhood, from 2 to 12 years of age
3. Adolescence, from 12 to 21 years of age, further defined by the AAP into:
 - a. Early (ages 11–14 years)
 - b. Middle (ages 15–17 years),
 - c. Late (ages 18–21 years)
 - d. Older ages may be appropriate for children with special healthcare needs.

Pericardial disease is a condition that affects the pericardium, the sac-like membrane that surrounds and protects the heart. It can cause inflammation, fluid buildup, and other problems that can interfere with the heart's function.

Positron emission tomography (PET) scan is a procedure in which a small amount of radioactive glucose (sugar) is injected into a vein, and a scanner is used to make detailed, computerized pictures of areas inside the body where the glucose is taken up. It is a medical imaging test that shows the metabolic or biochemical function of organs and tissues.

Presyncope is the feeling that one is about to faint. Someone with pre-syncope may be lightheaded (dizzy) or nauseated, have a visual "gray out" or trouble hearing, have palpitations, or feel weak or suddenly sweaty.

Pseudoaneurysm, also called a false aneurysm, is a leakage of blood from an artery into the surrounding tissue. It occurs when there is a breach in the arterial wall.

Pulmonary hypertension is increased pressure in the pulmonary circulation that results in thickening and narrowing of the pulmonary arteries. Pulmonary hypertension can be either primary, the cause being idiopathic (unknown origin) or it can be secondary which occurs as a result of an identified medical condition.

Pulmonary stenosis is a heart valve disease that occurs when the pulmonary valve is too small, narrow or stiff. The pulmonary valve controls the flow of blood from the heart's right ventricle to the lungs.

Sarcoidosis is a chronic disease of unknown cause, that is characterized by the formation of nodules, especially in the lymph nodes, lungs, bones and skin.

Septal reduction therapy (SRT) is a treatment for patients with hypertrophic obstructive cardiomyopathy (HOCM) who have symptoms that are refractory to optimal medical therapy and interfere significantly with their lifestyle, involving either surgical septal myectomy or alcohol septal ablation. SRT is indicated for patients with severe symptoms (NYHA class III or IV) despite optimal medical therapy.

Stenosis refers to the abnormal narrowing of a bodily passage or vessel, which can occur in various anatomical locations and lead to different clinical implications depending on the site affected.

Stress Echocardiogram (ECHO) is a procedure that combines echocardiography with exercise to evaluate the heart's function at rest and with exertion. Echocardiography is an imaging procedure that creates a picture of the heart's movement, valves and chambers using high-frequency sound waves that come from a hand-held wand placed on the chest.

Sudden cardiac death (SCD) occurs when the heart malfunctions and unexpectedly and suddenly stops beating due to electrical impulse problems. Myocardial infarction increases the risk of SCD. Conditions associated with SCD include arrhythmogenic right ventricular dysplasia (ARVD), long QT syndrome, hypertrophic obstructive cardiomyopathy (HOCM) or Brugada syndrome.

Syncope is loss of consciousness resulting from insufficient blood flow to the brain.

Thoracic aortic aneurysm is an abnormal widening of the aorta between the aortic valve and the diaphragm. An aneurysm is defined as dilatation of the artery that is more than 50% of normal diameter for a given segment. Aneurysm formation is caused by a weakening of the medial layer of the aorta, which stretches outward, causing an out-pouching of the vessel wall. Thoracic aneurysms take four forms: fusiform, saccular, dissecting and false aneurysms.

Thrombosis is the formation of a blood clot (partial or complete blockage) within blood vessels, whether venous or arterial, limiting the natural flow of blood and resulting in clinical sequela.

Transcatheter aortic valve replacement (TAVR), also known as transcatheter aortic valve implantation (TAVI), is a minimally invasive catheter-based procedure to replace a narrowed

aortic valve that fails to open properly (aortic valve stenosis). A bioprosthetic valve is inserted percutaneously using a catheter and implanted in the orifice of the aortic valve.

Transcatheter mitral valve repair (TMVR), also known as transcatheter edge-to-edge repair (TEER) is used in the treatment of mitral regurgitation (MR). A TEER device involves clipping together a portion of the mitral valve leaflets as treatment for reducing mitral regurgitation (MR).

Transesophageal echocardiography (TEE) uses high-frequency sound waves (ultrasound) to make detailed pictures of the heart and the blood vessels that lead to and from it. Unlike a standard echocardiogram, the ECHO transducer that produces the sound waves for TEE is attached to a thin tube that passes through the mouth and throat, and into the esophagus. The esophagus is close to the upper chambers of the heart and clear images of the heart structures and valves can be obtained.

Transposition of the Great Arteries is a birth defect of the heart in which the two main arteries carrying blood out of the heart – the main pulmonary artery and the aorta – are switched in position, or “transposed.”

Transthoracic echocardiogram (TTE) is a test that obtains views of the heart by moving a small instrument called a transducer to different locations on the chest or abdominal wall.

Troponin is a protein that's found in the cells of the heart muscle. Normally, troponin levels in blood are so low that only the most sensitive types of tests can measure them. But if the heart muscle is damaged, troponin leaks into the bloodstream, and the troponin blood levels will rise.

Truncus Arteriosus is a congenital defect of the heart that occurs when the blood vessel coming out of the heart in the developing baby fails to separate completely during development, leaving a connection between the aorta and pulmonary artery.

Turner's syndrome is a genetically determined condition that is typically associated with the presence of only one complete X chromosome and no Y chromosome. It is characterized by a female phenotype with underdeveloped (and usually infertile) ovaries and short stature.

Valvular heart disease is a condition when any valve in the heart has damage or is diseased. When heart valves are diseased, the heart cannot effectively pump blood throughout the body and has to work harder to pump, either while the blood is leaking back into the chamber or against a narrowed opening. This can lead to heart failure, sudden cardiac arrest and death.

Ventricular tachycardia (VT) is a rhythm disorder caused by abnormal electrical signals in the ventricles of the heart.

- **Monomorphic ventricular tachycardia** is ventricular tachycardia with stable QRS morphology.
- **Non-sustained ventricular tachycardia (NSVT)** is defined as 3 or more consecutive beats originating from the ventricle, lasting less than 30 seconds, at a rate more than 100 beats per minute (bpm).

- **Polymorphic ventricular tachycardia** is a ventricular rhythm, with a rate greater than 100 bpm with a varying QRS pattern that terminates spontaneously (causing syncope if lasting more than a few seconds) or will deteriorate into ventricular fibrillation, causing cardiac arrest.
- **Sustained ventricular tachycardia (SVT)** is defined as a ventricular rhythm more than 100 bpm (widened QRS complex with duration greater than 120 ms) lasting more than 30 seconds or requiring termination due to hemodynamic instability.

MRI Heart References

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Disclaimer section

Purpose

The purpose of the HealthHelp's clinical guidelines is to assist healthcare professionals in selecting the medical service that may be appropriate and supported by evidence to safely improve outcomes. Medical information is constantly evolving, and HealthHelp reserves the right to review and update these clinical guidelines periodically. HealthHelp reserves the right to include in these guidelines the clinical indications as appropriate for the organization's program objectives. Therefore the guidelines are not a list of all the clinical indications for a stated procedure, and associated Procedure Code Tables may not represent all codes available for that state procedure or that are managed by a specific client-organization.

Clinician Review

These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. Healthcare professionals using these clinical guidelines are responsible for all clinical decisions based on their assessment. All Clinical Reviewers are instructed to apply clinical indications based on individual patient assessment and documentation, within the scope of their clinical license.

Payment

The use of these clinical guidelines does not provide authorization, certification, explanation of benefits, or guarantee of payment; nor do the guidelines substitute for, or constitute, medical advice. Federal and State law, as well as member benefit contract language (including definitions and specific contract provisions/exclusions) take precedence over clinical guidelines and must be considered first when determining eligibility for coverage. All final determinations on coverage and payment are the responsibility of the health plan. Nothing contained within this document can be interpreted to mean otherwise.

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National and Local Coverage Determination (NCD and LCD)



NOTICE

To ensure appropriate review occurs to the most current NCD and/or LCD, always defer to <https://www.cms.gov/medicare-coverage-database/search.aspx>.

Background

National Coverage Determinations (NCD) and Local Coverage Determinations (LCD) are payment policy documents outlined by the Centers for Medicare and Medicaid Services (CMS) and the government's delegated Medicare Audit Contractors (MACs) that operate regionally in jurisdictions.

CMS introduced variation between different jurisdictions/Medicare Audit Contractors (MACs) and their associated covered code lists with the transition to ICD 10. The variation resulted in jurisdictions independently defining how codes are applied for exclusions, limitations, groupings, ranges, etc. for the medical necessity indications outlined in the NCD and LCD. Due to this variation, there is an inconsistent use/application of codes and coverage determinations across the United States between the different MACs.

In addition, **WITHOUT** notice, CMS can change the codes that indicate medical necessity and the format of the coverage determinations/associated documents (eg, Articles). This is an additional challenge for organizations to keep up with ongoing, unplanned changes in covered codes and medical necessity indications.

Medical Necessity Codes

Due to the variation in code application between jurisdictions/MACs and that updates can happen without notification, HealthHelp is not able to guarantee full accuracy of the codes listed for any Coverage Determination, and advises that prior to use, the associated Coverage Determination Articles are reviewed to ensure applicability to HealthHelp's programs and any associated NCDs and LCDs.

For Internal Use Only:

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