

Clinical Policy: Holter Monitors

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[Coding Implications](#)

[Revision Log](#)

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Description

This policy provides medical necessity guidelines for Holter monitoring up to 48 hours. For Holter monitoring beyond 48 hours, see clinical decision support criteria.

Ambulatory electrocardiogram (ECG) monitoring provides a view of cardiac activity over an extended period of time and can be performed using various techniques. The method selected to conduct ambulatory ECG monitoring depends on the desired outcome and the frequency and duration of symptoms. Continuous Holter monitoring for 24 to 48 hours is the most practical initial approach for those with daily or near daily unexplained symptoms, as well as for assessing the efficacy of medication and other treatments for cardiac arrhythmias.¹

Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation[®] that Holter monitoring with a Food and Drug Administration (FDA) approved device is **medically necessary** for members/enrollees \geq 18 years old who require 24 to 48 hours of cardiac activity monitoring with any of the following symptoms or indications:
 - A. Evaluation of any of these unexplained indications: syncope, near-syncope, episodic dizziness, recurrent palpitations, episodic shortness of breath or chest pain;
 - B. Evaluation of neurological events when transient atrial fibrillation or flutter is suspected;
 - C. Evaluation of syncope, near-syncope, episodic dizziness, or palpitations in whom a probable cause other than an arrhythmia has been identified but in whom symptoms persist despite treatment of this other cause;
 - D. Evaluation of members/enrollees with cardiomyopathy (e.g., arrhythmogenic right ventricular cardiomyopathy (ARVC), hypertrophic cardiomyopathy (HCM), dilated cardiomyopathy), or a first-degree relative with ARVC or HCM;
 - E. Evaluation of possible or documented prolonged QT syndromes;
 - F. To screen for asymptomatic arrhythmia in a members/enrollees with Brugada syndrome;
 - G. Assessment of efficacy of medication for arrhythmia treatment when baseline arrhythmia frequency is reproducible and of sufficient frequency to permit analysis;
 - H. Detection of proarrhythmic responses to antiarrhythmic therapy in members/enrollees at high risk;
 - I. Assessment of the function of pacemakers or implantable cardioverter defibrillators (ICD) with frequent palpitations, syncope, or near-syncope, and to assist in programming of enhanced features;
 - J. Evaluation of suspected pacemaker or ICD component failure or malfunction when device interrogation is inconclusive;
 - K. Assessment of efficacy of adjunctive medications in members/enrollees receiving frequent ICD therapy;
 - L. Assessment of suspected variant angina;

- M. Evaluation of recurrent chronic heart failure when arrhythmia is suspected;
- N. Evaluation of possible arrhythmias post ablation procedures;
- O. Baseline or periodic screening for those with adult congenital heart disease.

II. It is the policy of health plans affiliated with Centene Corporation that Holter monitoring with an FDA approved device is **medically necessary** for pediatric members/enrollees < 18 years old who require 24 to 48 hours of cardiac activity monitoring with any of the following symptoms or indications:

- A. Evaluation of syncope, near-syncope, or dizziness in members/enrollees with identified cardiac disease, previously documented arrhythmia, or pacemaker dependency;
- B. Evaluation of syncope or near-syncope associated with exertion when cause is not established;
- C. Evaluation of unexplained syncope, near-syncope, or sustained palpitation when there is no overt clinical evidence of heart disease;
- D. Assessment of efficacy of medications for arrhythmia following initiation of treatment or during rapid somatic growth;
- E. Evaluation of patients with cardiomyopathy, or a first-degree relative with arrhythmogenic right ventricular cardiomyopathy;
- F. Evaluation of possible or documented prolonged QT syndromes;
- G. Evaluation of palpitation in a member/enrollee with prior surgery for congenital heart disease and significant residual hemodynamic abnormalities;
- H. Evaluation of asymptomatic congenital complete atrioventricular (AV) block, non-paced;
- I. Evaluation of cardiac rhythm after transient AV block associated with heart surgery or catheter ablation;
- J. Evaluation of rate-responsive or physiological pacing function in symptomatic members/enrollees.

III. It is the policy of health plans affiliated with Centene Corporation that Holter monitoring for any other indication not included in this policy is **not medically necessary** because efficacy has not been established.

Background

The most common use of ambulatory electrocardiogram (ECG) monitoring is the evaluation and diagnosis of cardiac arrhythmias or conduction abnormalities. The device continuously monitors the heart's electrical activity for a period of 24 to 48 hours. The member/enrollee has a self-activated event marker which identifies when they are experiencing symptoms such as palpitations, syncope/near-syncope, dizziness, shortness of breath, chest pain, or episodic fatigue. This is especially helpful in members/enrollees who experience symptoms too infrequent to be caught on a standard ECG.¹

The recorded data are analyzed with the event markers to determine if the symptoms are related to an arrhythmia. There are four outcomes this analysis could provide. Useful findings include the simultaneous documentation of a cardiac arrhythmia capable of producing the noted symptoms, which can lead to directed therapy for the arrhythmia; and symptoms that occur without arrhythmia, demonstrating symptoms are not related to an arrhythmia. Of equivocal value, the findings may show that a cardiac arrhythmia is present, but no symptoms were present

during the recording, indicating the arrhythmia may or may not be related to the symptoms. Lastly, if there were no symptoms during the recording and there were no arrhythmias identified, the recording is not useful.¹

Ambulatory ECG is also helpful in assessing the efficacy of antiarrhythmic therapy. It is noninvasive, provides quantitative data, and permits correlation of symptoms with ECG phenomena. It does have some limitations in regard to its use as a therapeutic guide, which should be taken into consideration. Additionally, ambulatory ECG monitoring is useful in assessing pacemakers and implantable cardioverter defibrillators (ICDs), as it can evaluate symptoms of palpitations, syncope, or near-syncope to assess device function; assist in the programming of enhanced features; evaluate suspected component failure or a malfunctioning device; and assess concomitant pharmacological therapy for members/enrollees receiving frequent ICD therapy.^{1,2}

Due to the advancement of technological capabilities in ambulatory ECG assessment, it can provide accurate and clinically meaningful information about myocardial ischemia in patients with coronary disease. The most commonly encountered ambulatory ECG sign of ischemia is ST-segment depression and, while this is an important finding, it is important to note that ST-segment changes and other repolarization abnormalities can occur for reasons other than ischemia. These conditions must be considered when evaluating the predictive value of ST-segment changes in each specific member/enrollee. Furthermore, ambulatory ECG can be beneficial in members/enrollees suspected of having variant angina. Periods of ST-segment elevation indicative of transmural ischemia can be identified in those with variant angina or high-grade proximal stenosis.^{1,3}

In the pediatric population, ambulatory ECG can be used for the same indications as for adults, in addition to a number of pediatric-specific concerns. Monitoring in children with heart disease, with or without symptoms, is used to observe the evolution of disease processes, identify medication dose changes required due to growth, and identify the progressive onset of late arrhythmias after surgery for congenital heart defects.^{3,4} Likewise, this monitoring is beneficial in pediatric members/enrollees with hypertrophic or dilated cardiomyopathies or known or suspected prolonged QT syndromes.⁵ Ambulatory ECG can also be used to evaluate asymptomatic pediatric members/enrollees with congenital complete atrioventricular (AV) block in order to identify those at increased risk for sudden arrhythmic events who may benefit from prophylactic pacemaker implantation.^{1,3,4}

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2022, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| CPT® Codes | Description |
|-------------------|--|
| 93224 | External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; includes recording, scanning analysis with report, review and interpretation by a physician or other qualified health care professional |
| 93225 | External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; recording (includes connection, recording, and disconnection) |
| 93226 | External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; scanning analysis with report |
| 93227 | External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; review and interpretation by a physician or other qualified health care professional |

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

| ICD-10-CM Code | Description |
|-----------------------|---|
| G45.9 | Transient cerebral ischemic attack, unspecified |
| G71.00 through G71.09 | Muscular dystrophy |
| G99.0 | Autonomic neuropathy in diseases classified elsewhere |
| I20.0 through I20.9 | Angina pectoris |
| I24.0 through I24.9 | Other acute ischemic heart diseases |
| I25.10 | Atherosclerotic heart disease of native coronary artery without angina pectoris |
| I25.112 | Atherosclerotic heart disease of native coronary artery with refractory angina pectoris |
| I25.702 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with refractory angina pectoris |
| I25.712 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with refractory angina pectoris |
| I25.722 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with refractory angina pectoris |
| I25.732 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with refractory angina pectoris |
| I25.752 | Atherosclerosis of native coronary artery of transplanted heart with refractory angina pectoris |
| I25.762 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with refractory angina pectoris |
| I25.792 | Atherosclerosis of other coronary artery bypass graft(s) with refractory angina pectoris |
| I34.0 through I34.9 | Nonrheumatic mitral valve disorders |

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| ICD-10-CM Code | Description |
|-------------------------|--|
| I35.0 through I35.9 | Nonrheumatic aortic valve disorders |
| I36.0 through I36.9 | Nonrheumatic tricuspid valve disorders |
| I37.0 through I37.9 | Nonrheumatic pulmonary valve disorders |
| I42.0 | Dilated cardiomyopathy |
| I42.1 | Obstructive hypertrophic cardiomyopathy |
| I42.2 | Other hypertrophic cardiomyopathy |
| I42.3 | Endomyocardial (eosinophilic) disease |
| I42.4 | Endocardial fibroelastosis |
| I42.5 | Other restrictive cardiomyopathy |
| I42.6 | Alcoholic cardiomyopathy |
| I42.7 | Cardiomyopathy due to drug and external agent |
| I42.8 | Other cardiomyopathies |
| I42.9 | Cardiomyopathy, unspecified |
| I44.0 through I44.7 | Atrioventricular and left bundle-branch block |
| I45.0 through I45.9 | Other conduction disorders |
| I46.2 through I46.9 | Cardiac arrest |
| I47.0 through I47.9 | Paroxysmal tachycardia |
| I48.0 through I48.92 | Atrial fibrillation and flutter |
| I49.01 through I49.9 | Other cardiac arrhythmias |
| I50.1 through I50.9 | Heart failure |
| I51.7 | Cardiomegaly |
| I63.00 through I63.9 | Cerebral infarction |
| I67.841 through I67.848 | Cerebral vasospasm and vasoconstriction |
| Q20.0 through Q20.9 | Congenital malformations of cardiac chambers and connections |
| Q21.0 through Q21.9 | Congenital malformations of cardiac septa |
| Q22.0 through Q22.9 | Congenital malformations of pulmonary and tricuspid valves |
| Q23.0 through Q23.9 | Congenital malformations of aortic and mitral valves |

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| ICD-10-CM Code | Description |
|-----------------------|---|
| Q24.0 through Q24.9 | Other congenital malformations of heart |
| Q25.0 through Q25.9 | Congenital malformations of great arteries |
| R00.0 through R00.9 | Abnormalities of heart beat |
| R06.00 through R06.09 | Dyspnea |
| R07.2 | Precordial pain |
| R07.89 | Other chest pain |
| R07.9 | Chest pain, unspecified |
| R42 | Dizziness and giddiness |
| R53.81 through R53.83 | Other malaise and fatigue |
| R55 | Syncope and collapse |
| R94.31 | Abnormal electrocardiogram [ECG] [EKG] |
| Z48.812 | Encounter for surgical aftercare following surgery on the circulatory system |
| Z82.41 | Family history of sudden cardiac death |
| Z87.74 | Personal history of (corrected) congenital malformations of heart and circulatory systems |
| Z94.1 | Heart transplant status |
| Z95.0 | Presence of cardiac pacemaker |
| Z95.810 | Presence of automatic (implantable) cardiac defibrillator |

| Reviews, Revisions, and Approvals | Revision Date | Approval Date |
|---|---------------|---------------|
| Policy developed and specialist reviewed | 08/16 | 08/16 |
| ICD-10-CM code table updated | 11/16 | |
| Added “Evaluation of patients with cardiomyopathy, or a first-degree relative with arrhythmogenic right ventricular cardiomyopathy” as an indication to the adult criteria and expanded pediatric criteria for cardiomyopathy- “evaluation of patients with hypertrophic or dilated cardiomyopathy” to the same as the adult cardiomyopathy criteria. Added “Evaluation of possible or documented prolonged QT syndromes” and “To screen for asymptomatic arrhythmia in a patient with Brugada syndrome;” to adult criteria. Added ICD-10-CM Codes I42.8 and Z82.41 | 08/17 | 08/17 |
| References reviewed and updated. | 06/18 | 06/18 |
| References reviewed and updated. Specialist review. | 05/19 | 06/19 |
| Annual review completed. References and codes reviewed/updated. ICD-10 codes I42.3 through 7 were added; R06.00 through R06.09 description changes to Dyspnea | 04/20 | 04/20 |

| Reviews, Revisions, and Approvals | Revision Date | Approval Date |
|---|---------------|---------------|
| Replaced all instances of “member” with “member/enrollee.” References reviewed and updated. | 04/21 | 04/21 |
| This policy provides medical necessity guidelines for Holter monitoring up to 48 hours. For Holter monitoring beyond 48 hours, see clinical decision support criteria. | 12/21 | |
| Annual review completed. Changed “review date” in the header to “date of last revision” and “date” in the revision log header to “revision date.” Minor rewording with no clinical significance. Added the following criteria to I.M. “Evaluation of recurrent chronic heart failure, when arrhythmia is suspected” and I.N. “Evaluation of possible arrhythmias post ablation procedures”. References reviewed and updated. Specialist review. | 09/22 | 09/22 |
| Added new ICD-10 codes I25.112, I25.702, I25.712, I25.722, I25.732, I25.752, I25.762 and I25.792 to policy. | 04/23 | |
| Annual review. Criteria I. updated to specify a Food and Drug Administration (FDA) approved Holter monitor device, and age in Criteria I. changed from > 18 years old to ≥ 18 years old. Criteria I.D. updated to include arrhythmogenic right ventricular cardiomyopathy (ARVC), hypertrophic cardiomyopathy (HCM), dilated cardiomyopathy, or a first degree relative with HCM. Added Criteria I.O. for baseline or periodic screening for those with adult congenital heart disease. Criteria II. updated to specify an FDA approved Holter monitor device, and age in Criteria II. changed from ≤ 18 years old to < 18 years old. Minor rewording in background with no impact on criteria. References reviewed and updated. Reviewed by internal specialist. | 09/23 | |

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Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in

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developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

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This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

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Note: For Medicaid members/enrollees, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable

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NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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