Clinical Policy: Holter Monitors

Reference Number: CP.MP.113
Last Review Date: 12/21

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

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. Holter monitoring, or continuous ambulatory ECG monitoring, for 24 to 48 hours is most practical as the initial monitor for members/enrollees with daily or near daily symptoms, as well as for assessing the efficacy of medication and other treatments for cardiac arrhythmias.

Policy/Criteria

I. It is the policy of health plans affiliated with Centene Corporation® that Holter monitoring is **medically necessary** for adults 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 palpitation 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 patients with cardiomyopathy, or a first-degree relative with arrhythmogenic right ventricular cardiomyopathy;
E. Evaluation of possible or documented prolonged QT syndromes;
F. To screen for asymptomatic arrhythmia in a patient 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 patients 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 patients receiving frequent ICD therapy;
L. Assessment of suspected variant angina.

II. It is the policy of health plans affiliated with Centene Corporation® that Holter monitoring 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 patients.

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 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/enrollee who experience symptoms too infrequent to be caught on a standard ECG.

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.

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 ICDs, as it can evaluate symptoms of palpitations, syncope, or near-syncope to assess device function; assist in the programing of enhanced features; evaluate

suspected component failure or a malfunctioning device; and assess concomitant pharmacological therapy for members/enrollees receiving frequent ICD therapy.

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.

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. Likewise, this monitoring is beneficial in pediatric members/enrollees with hypertrophic or dilated cardiomyopathies or known or suspected prolonged QT syndromes. Ambulatory ECG can also be used to evaluate asymptomatic pediatric members/enrollees with congenital complete AV block in order to identify those at increased risk for sudden arrhythmic events who may benefit from prophylactic pacemaker implantation.

Coding Implications

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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

CPT® Codes	Description
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 - G71.09	Muscular dystrophy
G99.0	Autonomic neuropathy in diseases classified elsewhere
I20.0-I20.9	Angina pectoris
I24.0-I24.9	Other acute ischemic heart diseases
I25.10	Atherosclerotic heart disease of native coronary artery without angina pectoris
I34.0-I34.9	Nonrheumatic mitral valve disorders
I35.0-I35.9	Nonrheumatic aortic valve disorders
I36.0-I36.9	Nonrheumatic tricuspid valve disorders
I37.0-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-I44.7	Atrioventricular and left bundle-branch block
I45.0-I45.9	Other conduction disorders
I46.2-I46.9	Cardiac arrest
I47.0-I47.9	Paroxysmal tachycardia
I48.0-I48.92	Atrial fibrillation and flutter
I49.01-I49.9	Other cardiac arrhythmias
I50.1-I50.9	Heart failure
I51.7	Cardiomegaly
I63.00-I63.9	Cerebral infarction
I67.841-I67.848	Cerebral vasospasm and vasoconstriction
Q20.0-Q20.9	Congenital malformations of cardiac chambers and connections
Q21.0-Q21.9	Congenital malformations of cardiac septa
Q22.0-Q22.9	Congenital malformations of pulmonary and tricuspid valves

ICD-10-CM Code	Description
Q23.0-Q23.9	Congenital malformations of aortic and mitral valves
Q24.0-Q24.9	Other congenital malformations of heart
Q25.0-Q25.9	Congenital malformations of great arteries
R00.0-R00.9	Abnormalities of heart beat
R06.00-R06.09	Dyspnea
R07.2	Precordial pain
R07.89	Other chest pain
R07.9	Chest pain, unspecified
R42	Dizziness and giddiness
R53.81-R53.83	Malaise and fatigue
R55	Syncope and collapse
R94.31	Abnormal electrocardiogram
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	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 I42.3-7 were added; R06.00-R06.09 description changes to Dyspnea	04/20	04/20
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	

References

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3. Gray B, Kirby A, Kabunga P, et al. Twelve-lead ambulatory electrocardiographic monitoring in Brugada syndrome: Potential diagnostic and prognostic implications. Heart Rhythm. 2017 Jun;14(6):866-874. doi: 10.1016/j.hrthm.2017.02.026.
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5. Madias C. Ambulatory ECG monitoring. In: UpToDate, Zimetbaum PJ (Ed), UpToDate, Waltham, MA. Accessed 03/26/21.
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8. McKenna WJ. Arrhythmogenic right ventricular cardiomyopathy: Diagnostic evaluation and diagnosis. UpToDate. Calkins H (Ed). Last updated Dec 16, 2019. Accessed March 26, 2021.

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 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.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

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 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.