Clinical Policy: Holter Monitors

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Plan Effective Date: 06/2018
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Coding Implications
Revision Log

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 PA Health & Wellness (PHW) uses InterQual Criteria for review of these services.

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 PA Health & Wellness (PHW) that Holter monitoring with a Food and Drug Administration (FDA) approved device is **medically necessary** for 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 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 PA Health & Wellness 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.

It is the policy of PA Health & Wellness (PHW) that Holter monitoring for any other indication not included in this policy is **not medically necessary** because efficacy has not been established. Holter monitoring lasting more than 48 hours is generally considered not medically necessary.*

*It is the policy of PA Health & Wellness (PHW)® that determinations for services that are considered **not medically necessary** must be considered on a case-by-case basis by a physician or ad hoc committee and must be made in accordance with the Benefit Plan Contract provisions and applicable state and federal requirements. Denials will require medical director review. For Holter / Cardiac Event monitoring beyond 48 hours, PHW uses InterQual Criteria for review of these services.

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 programing 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 2023, 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, physician review and interpretation
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
G71.0- 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
I25.112	Atherosclerosic 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-I34.9	Nonrheumatic mitral valve disorders
I35.0-I35.9	Nonrheumatic aortic valve disorders

ICD-10-CM Code	Description
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
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

ICD-10-CM Code	Description
Z95.0	Presence of cardiac pacemaker
Z95.810	Presence of automatic (implantable) cardiac defibrillator

Reviews, Revisions, and Approvals	Date	Approval Date
Policy developed	04/18	06/18
References reviewed and updated. Specialist review.	10/19	
Annual review completed. References and codes reviewed/updated. ICD-10 codes I42.3-7 were added; R06.00-R06.09 description changes to Dyspnea	10/2020	12/7/2021
Annual review completed. References and codes reviewed/updated.	9/29/2021	
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. Added new ICD-10 codes I25.112, I25.702, I25.712, I25.722, I25.732, I25.752, I25.762 and I25.792 to policy. Added language regarding the use of InterQual Criteria for review of cardiac event monitoring beyond 48 hours.	06/2023	07/23/2023
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.	06/2024	07/2024
Annual review. Removed criteria II. regarding efficacy not established for all other indications. New codes added to existing ranges including I24.81 and I24.89. References and codes reviewed and updated.	10/2024	

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