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Ambulatory Cardiac Monitors and Outpatient Telemetry Corporate Medical Policy

File Name: Ambulatory Cardiac Monitors and Outpatient Telemetry

File Code: 2.02.VT08

Origination: 10/2015

Last Review: 03/2023

Next Review: 11/2023

Effective Date: 06/01/2023

Description/Summary

The following are descriptions of various cardiac event monitors:

1. **Continuous AECG monitoring (24- or 48-hour Holter monitoring):** The Holter monitor reports total heart beats as well as average and maximum/minimum heart rates. It provides representative hourly samples of the ECG tracing and episodes of tachyarrhythmia and the etiology of the arrhythmias as well as pauses. The monitor detects a number of premature beats (supraventricular and ventricular), ST segment changes, member-reported symptoms associated ECG findings and the longest R-R interval with pause greater than three seconds. The Holter monitor is a reasonable test for members with daily or near daily symptoms.
2. **Continuous AECG “patch” monitoring** for periods longer than 2 days (e.g. Zio[®] Patch, Preventice[®], Vital Connect[®] and others): These devices are single-use AECG monitors which do not require the patient to apply and remove adhesive leads on a daily basis or recharge batteries frequently. These devices have the capability of collecting all rhythm data for up to 14 days. Uses include evaluation of suspected cardiac arrhythmia (e.g. ventricular tachycardia (VT), supraventricular tachycardia (SVT), paroxysmal atrial fibrillation (AF), atrioventricular block, symptomatic bradycardia and symptomatic pauses. These devices have also been showed to be effective in identifying paroxysmal atrial fibrillation as a treatable cause of cryptogenic cerebrovascular accident.
3. **External cardiac event detection monitoring** (e.g. external loop monitoring): An external loop monitor has the capability to monitor an individual for long durations (e.g. up to 30 days) and thus has a higher chance of providing a diagnosis to those

whose symptoms occur infrequently. The autotrigger function is used to detect asymptomatic arrhythmias including paroxysmal atrial fibrillation. It is recommended for those with infrequent short-duration transient symptoms, reoccurring over weeks or months. One disadvantage of these devices is that of limited device memory. They generally store 30 seconds to 2 minutes before and after an event, either patient or autotriggered.

4. **Mobile cardiac outpatient telemetry monitoring** (e.g. CardioNet[®], Inc.): MCOT monitors members in real-time using built-in detection algorithms and cellular technology. It holds up to 96 hours of memory and allows providers to capture significant arrhythmic events, even when no symptoms are experienced.
5. **Cardiac event detection monitoring (implantable loop monitoring)**: An implantable loop recorder (ILR) is rarely the preferred initial test for ambulatory ECG monitoring (AECG). However, this test can be useful for members with infrequent (e.g. less than monthly) symptoms that are potentially harmful to the individual. An ILR is implanted subcutaneously in a member's upper left chest and left for 3 years or longer.

Policy

Coding Information

Click the links below for attachments, coding tables & instructions.

[Attachment I - CPT[®] Code Table & Instructions](#)

When a service may be considered medically necessary

The following cardiac monitors are considered **medically necessary** when device-specific and age-specific criteria are met.

Device-Specific Criteria:

Continuous 24- 48-hour ambulatory ECG Holter monitor use is considered **medically necessary**:

As a diagnostic tool to evaluate frequent or daily occurring symptoms or arrhythmias unlikely to be diagnosed by a standard 12-lead ECG **AND** results of Holter testing will provide diagnostic or treatment information necessary for management

External cardiac event detection monitoring (e.g. external loop monitoring up to 30 days) is considered **medically necessary**:

- As a diagnostic tool when documentation confirms symptoms occur infrequently enough that arrhythmia is unlikely to be diagnosed by a 24- or 48-hour Holter monitor **AND** results of testing will provide diagnostic or treatment information necessary for the management

The use of longer-term (greater than 48 hours and up to 14 days) external "patch" ECG

monitoring by continuous rhythm recording and storage (e.g., Zio Patch® and similar devices) is considered **medically necessary** in the evaluation of individuals suspected of having an arrhythmia:

- Following Holter monitoring when the results of the Holter monitoring were non-diagnostic or inconclusive; **OR**
- As an alternative to Holter or external loop/event monitoring when symptoms are infrequent (less frequently than once every 48 hours); **OR**
- Following recent radiofrequency ablation of arrhythmogenic focus, to assess an arrhythmia that may be asymptomatic; **OR**
- Following cryptogenic stroke where initial workup for atrial fibrillation such as a baseline ECG or inpatient hospitalization with cardiac telemetry was negative.

The use of mobile cardiac telemetry is considered **medically necessary** for individuals who meet **BOTH** A and B below:

- A. The individual has one of the following conditions:
 - Individuals who have symptoms suggestive of cardiac arrhythmias occurring less frequently than once every 48 hours; **OR**
 - For the detection of suspected paroxysmal atrial fibrillation following cryptogenic stroke when the monitoring is expected to guide medical management with anticoagulants; **AND**
- B. The individual has had a non-diagnostic external ambulatory cardiac event monitoring trial of not fewer than 14 continuous days

The use of implantable AEMs, either patient-activated or autoactivated, is considered **medically necessary** in the following situations:

- In the small subset of individuals who experience recurrent symptoms so infrequently that a prior trial of other external AEMs has been unsuccessful.
- In individuals who require long-term monitoring for atrial fibrillation or suspected atrial fibrillation

Age-Specific Criteria:

Documentation should include prior testing and results. Requests must also indicate one or more of the following age-specific criteria are met for request to be considered medically necessary:

1. Adults:
 - a. Evaluation of infrequent recurrent symptoms (e.g. presyncope, syncope, lightheadedness, palpitations, shortness of breath, chest pains or dizziness) that may be associated with arrhythmia
 - b. Evaluation of members with unexplained recurrent palpitation after complete examination

- c. Assessment of individuals with documented coronary artery disease (CAD) for silent myocardial ischemia
- d. Monitoring members who have had surgical or catheter ablation of atrial fibrillation when discontinuation of systemic anticoagulation is being considered.
- e. Assessment of individuals who have had a history of cryptogenic stroke along with evidence of prior non-diagnostic tests
- f. Evaluation of members with idiopathic hypertrophic or dilated cardiomyopathies to detect arrhythmias
- g. Evaluation of the function of pacemakers or implantable cardioverter defibrillators in individuals who are symptomatic, to assist in device programming or where component malfunction is suspected

2. Pediatric:

- a. Antiarrhythmic drug efficacy, during rapid somatic growth
- b. Asymptomatic congenital atrioventricular block, non-paced
- c. Documented or potential long QT syndromes (LQTS)
- d. Hypertrophic or dilated cardiac myopathies
- e. Palpitations in members with previous surgery for congenital heart disease and significant residual hemodynamic abnormalities.
- f. Previously documented arrhythmia or pacemaker dependency.
- g. Syncope, near syncope associated with exertion or dizziness with known heart disease

NOTE: Repeat studies within a 1-year time frame are subject to review based on medical necessity.

When a service is considered investigational

The use of ambulatory cardiac event monitors and mobile cardiac outpatient telemetry as a screening tool in the asymptomatic patient without prior history of atrial fibrillation, or in individuals with history of atrial fibrillation for the assessment for atrial fibrillation burden, is considered **investigational**.

The use of outpatient cardiac telemetry not meeting criteria above and for all other indications is considered **investigational**.

Other uses of AEMs, including outpatient cardiac telemetry and mobile applications, are considered investigational, including but not limited to monitoring asymptomatic individuals with risk factors for arrhythmia, monitoring the effectiveness of antiarrhythmic medications, and detection of myocardial ischemia by detecting ST-segment changes is considered **investigational**.

Cardiac event monitors are considered **investigational** for all other indications.

Reference Resources

1. UpToDate - Ambulatory ECG Monitoring. Literature review current through 11/2022. Accessed 12/2022.
2. Blue Cross and Blue Shield Association. Ambulatory Event Monitors and Mobile Cardiac Outpatient Telemetry, MPRM #2.02.08. Last reviewed: 6/2022. Accessed: 12/2022.
3. Heart-Rhythm Monitoring for evaluation of cryptogenic stroke. NEJM 2014; 370:2532-2533
4. Atrial Fibrillation and Stroke. Card Electrophysiol Clin. 2021 Mar;13(1) 243-255
5. Newer technologies for detection of atrial fibrillation. BJM 2018;363:k3946
6. American College of Cardiology: Atrial Fibrillation Burden: AHA Scientific Statement April 23, 2018
7. Rothman SA, Laughlin JC, Seltzer J, Walia JS, Baman RI, Siouffi SY, Sangrigoli RM, Kowey PR. The diagnosis of cardiac arrhythmias: a prospective multi-center randomized study comparing mobile cardiac outpatient telemetry versus standard loop event monitoring. J Cardiovasc Electrophysiol. 2007 Mar;18(3):241-7. doi: 10.1111/j.1540-8167.2006.00729.x. PMID: 17318994.
8. Rothman SA, Laughlin JC, Seltzer J, Walia JS, Baman RI, Siouffi SY, Sangrigoli RM, Kowey PR. The diagnosis of cardiac arrhythmias: a prospective multi-center randomized study comparing mobile cardiac outpatient telemetry versus standard loop event monitoring. J Cardiovasc Electrophysiol. 2007 Mar;18(3):241-7. doi: 10.1111/j.1540-8167.2006.00729.x. PMID: 17318994.

Document Precedence

Blue Cross and Blue Shield of Vermont (BCBSVT) Medical Policies are developed to provide clinical guidance and are based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. The applicable group/individual contract and member certificate language, or employer's benefit plan if an ASO group, determines benefits that are in effect at the time of service. Since medical practices and knowledge are constantly evolving, BCBSVT reserves the right to review and revise its medical policies periodically. To the extent that there may be any conflict between medical policy and contract/employer benefit plan language, the member's contract/employer benefit plan language takes precedence.

Audit Information

BCBSVT reserves the right to conduct audits on any provider and/or facility to ensure compliance with the guidelines stated in the medical policy. If an audit identifies instances of non-compliance with this medical policy, BCBSVT reserves the right to recoup all non-compliant payments.

Administrative and Contractual Guidance

Benefit Determination Guidance

Prior approval may be required and benefits are subject to all terms, limitations and conditions of the subscriber contract.

Incomplete authorization requests may result in a delay of decision pending submission of missing information. To be considered complete, see policy guidelines above.

NEHP/ABNE members may have different benefits for services listed in this policy. To confirm benefits, please contact the customer service department at the member's health plan.

Federal Employee Program (FEP): Members may have different benefits that apply. For further information please contact FEP customer service or refer to the FEP Service Benefit Plan Brochure. It is important to verify the member's benefits prior to providing the service to determine if benefits are available or if there is a specific exclusion in the member's benefit.

Coverage varies according to the member's group or individual contract. Not all groups are required to follow the Vermont legislative mandates. Member Contract language takes precedence over medical policy when there is a conflict.

If the member receives benefits through an Administrative Services Only (ASO) group, benefits may vary or not apply. To verify benefit information, please refer to the member's employer benefit plan documents or contact the customer service department. Language in the employer benefit plan documents takes precedence over medical policy when there is a conflict.

Policy Implementation/Update information

11/2015	Adoption of BCBSA policy #2.02.08. Category III codes require prior approval.
09/2017	External input received. Added description changes. References updated. Policy statements remain unchanged.
11/2018	Changed medical policy name from Ambulatory Cardiac Event Monitors and Mobile Cardiac Outpatient Telemetry to Ambulatory Cardiac Monitors and Outpatient Telemetry. Clarification around medical necessity and Investigational criteria. Updated references. Added codes 33285 & 33286 effective 01/01/2019- Deleted codes 33282 & 33284 effective 01/01/2019.
01/2020	Adaptive Maintenance Updated: Added code G2066 as requiring prior approval effective 01/01/2020.
11/2020	Policy reviewed Added policy language for evaluation of atrial fibrillation burden as not medically necessary. Updated references.

01/2021	Adaptive Maintenance Effective 01/01/2021: Removed codes 0295T, 0296T, 0297T, 0298T. Added codes 93241, 93242, 93243, 93244, 93245, 93246, 93247, 93248.
04/2021	External input received. Policy reviewed with clarification statements to existing policy statements. Removed code G2066 from requiring prior approval. References updated. Effective 07/01/2021 code 0650T requires prior approval per AM cycle.
08/2021	Removed policy statement from not medically necessary section for the use of screening as a tool with members with a history of atrial fibrillation to assess for atrial fibrillation burden. The change in policy statement is now located under the investigational section of the medical policy.
03/2023	Policy Reviewed. Updated description summary section from alphabetical order to sequence order of procedure testing. Language and formatting changes for clarity. Added medical necessity criteria for mobile cardiac telemetry. References updated. Added codes 93224, 93225, 93226, 93227 to coding table as not requiring prior approval. Added codes: 93228, 93229 to coding table a requiring prior approval. Removed code 0650T as requiring prior approval to medically necessary.

Eligible providers

Qualified healthcare professionals practicing within the scope of their license(s).

Approved by BCBSVT Medical Directors

Date Approved

Tom Weigel, MD, MBA
Vice President and Chief Medical Officer

Attachment I
CPT® Code Table & Instructions

Code Type	Number	Description	Policy Instructions
The following codes will be considered as medically necessary when applicable criteria have been met.			
CPT®	0650T	Programming device evaluation (remote) of subcutaneous cardiac rhythm monitor system, with iterative adjustment of the implantable device to test the function of the device and select optimal permanently programmed values with analysis, review and report by a physician or other qualified health care professional	
CPT®	33285	Insertion, subcutaneous cardiac rhythm monitor, including programming	
CPT®	33286	Removal, subcutaneous cardiac rhythm monitor	
CPT®	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	Prior Approval NOT Required
CPT®	93225	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; recording (includes connection, recording, and disconnection)	Prior Approval NOT Required
CPT®	93226	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; scanning analysis with report	Prior Approval NOT Required

CPT®	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	Prior Approval NOT Required
CPT®	93228	External mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; review and interpretation with report by a physician or other qualified health care professional	Requires Prior Approval- These codes can only be reported once per 30 days of service.
CPT®	93229	External mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; technical support for connection and patient instructions for use, attended surveillance, analysis and transmission of daily and emergent data reports as prescribed by a physician or other qualified health care professional	Requires Prior Approval- These codes can only be reported once per 30 days of service.
CPT®	93241	External electrocardiographic recording for more than 48 hours up to 7 days by continuous rhythm recording and storage; includes recording, scanning analysis with report, review and interpretation	Requires Prior Approval

CPT [®]	93242	External electrocardiographic recording for more than 48 hours up to 7 days by continuous rhythm recording and storage; recording (includes connection and initial recording)	Requires Prior Approval
CPT [®]	93243	External electrocardiographic recording for more than 48 hours up to 7 days by continuous rhythm recording and storage; scanning analysis with report	Requires Prior Approval
CPT [®]	93244	External electrocardiographic recording for more than 48 hours up to 7 days by continuous rhythm recording and storage; review and interpretation	Requires Prior Approval
CPT [®]	93245	External electrocardiographic recording for more than 7 days up to 15 days by continuous rhythm recording and storage; includes recording, scanning analysis with report, review and interpretation	Requires Prior Approval
CPT [®]	93246	External electrocardiographic recording for more than 7 days up to 15 days by continuous rhythm recording and storage; recording (includes connection and initial recording)	Requires Prior Approval
CPT [®]	93247	External electrocardiographic recording for more than 7 days up to 15 days by continuous rhythm recording and storage; scanning analysis with report	Requires Prior Approval
CPT [®]	93248	External electrocardiographic recording for more than 7 days up to 15 days by continuous rhythm recording and storage; review and interpretation	Requires Prior Approval

CPT®	93268	External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; includes transmission, review and interpretation by a physician or other qualified health care professional	
CPT®	93270	External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; recording (includes connection, recording, and disconnection)	
CPT®	93271	External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; transmission and analysis	
CPT®	93272	External patient and, when performed, auto activated electrocardiographic rhythm derived event recording with symptom-related memory loop with remote download capability up to 30 days, 24-hour attended monitoring; review and interpretation by a physician or other qualified health care professional	

HCPCS	G2066	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system, implantable loop recorder system, or subcutaneous cardiac rhythm monitor system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results	
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