Ambulatory Event Monitors and Mobile Cardiac Outpatient Telemetry
Corporate Medical Policy

The following are descriptions of various cardiac event monitors:

1. 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 several months.

2. 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 may be the preferred ambulatory ECG monitoring test for members with daily or near daily symptoms and for those who would prefer a comprehensive assessment of all cardiac activity over the given 24-48 hour interval.

3. Continuous AECG monitoring for periods greater than every 48 hours (e.g. Zio® Patch): The Zio® Patch is a single-use AECG monitor that has the capability of collecting data for up to 14 days for those with suspected cardiac arrhythmias (e.g. ventricular tachycardia (VT), supraventricular tachycardia (SVT), paroxysmal atrial fibrillation (AF), atrioventricular block, symptomatic bradycardia and greater than 3-second pauses.

4. 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
seven days) and thus has a higher chance of providing a diagnosis to those whose symptoms occur infrequently. It is recommended for those with infrequent short-duration transient symptoms, reoccurring over weeks or months.

5. 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.

Policy

Coding Information

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

Attachment 1- CPT® Code Table & Instructions

The implantation and removal of an insertable loop recorder are coded as follows:

33282: Implantation of patient-activated cardiac event recorder
33284: Removal of an implantable, patient-activated cardiac event recorder

The interpretation of the electrocardiograms (ECGs) recorded with ambulatory event monitors (AEMs) may be coded as follows:

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.

The above CPT® code represents a bundled CPT® code including all components of AEM monitoring, including ECG analysis of all the recorded strips during a 30-day period.

Other CPT® codes that can be used for AEM monitoring represent unbundling of the 93268 code. For example, CPT® code 93270 describes the connection, recording and disconnection of an external device; CPT® code 93271 describes the transmission download and analysis; and 93272 describes the physician review and interpretation of the ECG strips. AEM monitoring services may supply the monitoring, receipt of transmissions and analysis of the ECGs (ie, CPT® codes 93271 and 93272), but the provider supplies the hook-up and disconnection of the device (ie, CPT® code 93270). If this is the case, the unbundled codes may be used. It should also be noted that CPT® code 93272 (physician review and interpretation) applies to all ECGs transmit during a 30-day period; therefore, billing for each individual transmitted strip is not warranted.

Effective January 1, 2009, there are specific CPT® codes for mobile outpatient cardiac telemetry:

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.

93229: 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

Both of these codes can only be reported once per 30 days of service.

Effective in 2012, category III CPT® Codes were added for devices with longer recording capabilities:

0295T External electrocardiographic recording for more than 48 hours up to 21 days by continuous rhythm recording and storage; includes recording, scanning analysis with report, review and interpretation.
0296T; recording (includes connection and initial recording)
0297T; scanning analysis with report
0298T; review and interpretation

When a service may be considered medically necessary

BCBSVT considers the following cardiac event monitors medically necessary when age specific and device specific criteria are met.

General Criteria:

Cardiac event detection monitoring (e.g. implantable loop monitoring), mobile cardiac outpatient telemetry monitoring (MCOT), and Continuous AECG monitoring for periods greater than every 48 hours (e.g. Zio® Patch) are covered when:

- Documentation confirms symptoms occur infrequently that arrhythmia is unlikely to be diagnosed by a 24- or 48-hour Holter monitor and/or external cardiac event monitor AND results of this testing will provide diagnostic or treatment information necessary for the management of the member beyond what would be provided by the continuous 24- or 48-hour Holter monitor and/or external cardiac event monitor

Continuous ambulatory electrocardiography (AECG) monitoring (24- or 48-hour Holter monitor) is covered when:

- Documentation confirms symptoms occur infrequently that arrhythmia is unlikely to be diagnosed by a standard 12-lead ECG AND results of this testing will provide diagnostic or treatment information necessary for the management of the member beyond what would be provided by the 12-lead ECG

External cardiac event detection monitoring (e.g. external loop monitoring) is covered when:

- Documentation confirms symptoms occur infrequently that arrhythmia is unlikely to be diagnosed by a 24- or 48-hour Holter monitor AND results of this testing will provide diagnostic or treatment information necessary for the management of the member beyond what would be provided by the continuous 24- or 48-hour Holter monitor
Age-Specific Criteria:

The provider must also have all prior testing and result documentation and one or more of the following age specific criteria must be met for monitoring devices 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

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

Cardiac event monitors are considered investigational for all other indications.

Reference Resources

UpToDate Literature review current through: Jul 2017. | This topic last updated: Mar 15, 2017.

Harvard Pilgrim Cardiac Event monitors Policy May 2017

Blue Cross and Blue Shield Association. Ambulatory Event Monitors and Mobile Cardiac Outpatient Telemetry, MPRM #2.02.08. Last reviewed: May 2017.


58. Afzal MR, Gunda S, Waheed S, et al. Role of outpatient cardiac rhythm monitoring in


64. Joshi AK, Kowey PR, Prystowsky EN, et al. First experience with a Mobile Cardiac Outpatient Telemetry (MCOT) system for the diagnosis and management of cardiac arrhythmia. Am J Cardiol. Apr 1 2005;95(7):878-881. PMID 15781022


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 is 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 compete, see policy guidelines above.

An approved referral authorization for members of the New England Health Plan (NEHP) is
required. A prior approval for Access Blue New England (ABNE) members is required.
NEHP/ABNE members may have different benefits for services listed in this policy. To con
firm 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

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<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>11/2015</td>
<td>Adoption of BCBSA policy #2.02.08. Category III codes require prior approval.</td>
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<tr>
<td>09/2017</td>
<td>External input received. Added description changes. References updated.</td>
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Eligible providers
Qualified healthcare professionals practicing within the scope of their license(s).

Approved by BCBSVT Medical Directors         Date Approved

Gabrielle Bercy-Roberson, MD, MPH, MBA
Senior Medical Director
Chair, Health Policy Committee

Joshua Plavin, MD, MPH, MBA
Chief Medical Officer

Attachment I
CPT® Code Table & Instructions

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Number</th>
<th>Description</th>
<th>Policy Instructions</th>
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<td>CPT®</td>
<td>33282</td>
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<td>CPT®</td>
<td>33284</td>
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<td>93228</td>
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<td>93268</td>
<td>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 This code represents a bundled CPT code including all components of AEM monitoring, including ECG analysis of all the recorded strips during a 30-day period.</td>
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<td>93270</td>
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<td>93272</td>
<td>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</td>
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<td>External electrocardiographic recording for more than 48 hours up to 21 days by continuous rhythm recording and storage; includes recording, scanning analysis with report, review and interpretation</td>
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