# MEDICAL POLICY

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| **POLICY TITLE** | **AMBULATORY EVENT MONITORS AND MOBILE CARDIAC OUTPATIENT TELEMETRY** |
| **POLICY NUMBER** | **MP 2.036** |

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|---|---|
| **Effective Date:** | **1/1/2024** |



## I. POLICY

### Ambulatory Event Monitor

The use of patient-activated or auto-activated external ambulatory event monitors (AEM) or continuous ambulatory monitors that record and store information for periods longer than 48 hours may be considered **medically necessary** as a diagnostic alternative to Holter monitoring in the following situations:

- Individuals who experience infrequent symptoms (less frequently than every 48 hours)
- Individuals who have undergone a nondiagnostic Holter monitor for symptoms suggestive of cardiac arrhythmias (i.e., palpitations, dizziness, presyncope, or syncope).
- Individuals who have been treated with catheter ablation, and in whom discontinuation of systemic anticoagulation is being considered or to document the results of an ablative procedure for arrhythmia
- Individuals in whom antiarrhythmic drug therapy has been initiated or withdrawn to document the results of the intervention
- Individuals with cryptogenic stroke who have a negative standard work-up for atrial fibrillation (AF) and in whom the results of a 24 hour Holter monitor are likely to be nondiagnostic
- Individuals suspected of having cardiac ischemia to record electrocardiographic changes

The use of AEM more than once in any given 30 day period is **not medically necessary**.

The use of external ambulatory event monitors for all other indications is considered to be **investigational**. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

### Implantable Cardiac Loop Recorder

The use of Implantable Cardiac Loop Recorder, either patient-activated or auto-activated, may be considered **medically necessary** in the following situations:

- In Individuals who experience recurrent symptoms thought to be due to a cardiac arrhythmia so infrequently that prior evaluation with an AEMs or Mobile Cardiac Outpatient Telemetry **(**MCOT) has been unsuccessful.

- In Individuals with cryptogenic stroke who have had a negative standard work-up for AF, including evaluation with an external ambulatory event monitor or MCOT (see Policy Guidelines section)

The use of Implantable Cardiac Loop Recorder is considered to be **investigational** for all other indications. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

### Mobile Cardiac Outpatient Telemetry (MCOT, Real-Time Outpatient Cardiac Monitoring, Ambulatory Electrocardiography [AECG])

Mobile cardiac outpatient telemetry may be considered **medically necessary** for any of the following indications when the use of a Holter Monitor or other AEM has not or would not be diagnostic:

### Adult Clinical Criteria

- To establish the diagnosis or management of recurrent symptoms related to an arrhythmia (i.e., presyncope, syncope, dizziness, or palpitations) that occur less frequently than once every 48 hours for which a diagnosis or treatment has not been determined after standard diagnostic workup (e.g., complete clinical history and physical examination, standard 12-lead electrocardiography [ECG], cardiac imaging)
- Prolonged monitoring is required specifically to ensure the absence of AF prior to discontinuation of anticoagulation therapy
- To monitor for the purpose of regulating antiarrhythmic drug dosages
- To monitor Individuals who have had surgical or ablative procedures for arrhythmias
- For diagnosis in Individuals who experienced a cryptogenic stroke and have a negative work-up for AF when the etiology of the symptoms/conditions of arrhythmia has not been determined after standard diagnostic workup (e.g., a complete clinical history and physical examination, standard 12-lead ECG, cardiac imaging)

### Pediatric Clinical Criteria

In accord with the American College of Cardiology/American Heart Association (ACC/AHA), indications for pediatric AECG monitoring, including MCOT monitoring, may be considered **medically necessary** for the evaluation of the following indications:

- Antiarrhythmic drug efficacy
- Asymptomatic congenital atrioventricular (AV) block, nonpaced
- Syncope, near syncope, or dizziness with recognized heart disease, previously documented arrhythmia, or pacemaker dependency
- Syncope or near syncope associated with exertion when the cause is not established by other methods

- Hypertrophic or dilated cardiac myopathies
- Possible or documented long QT syndromes
- Palpitations in individuals with prior surgery for congenital heart disease and significant residual hemodynamic abnormalities

The use of MCOT or AEOG is considered to be **investigational** for all other indications. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

### Policy Guidelines for **Mobile Cardiac Outpatient Telemetry**

Real-time outpatient cardiac monitoring is contraindicated for use in individuals at high risk of developing sustained ventricular tachycardia or ventricular fibrillation and/or would be more appropriately cared for in a hospital setting.

This service is not indicated for all Individuals with arrhythmias. It should be used only in circumstances where traditional Holter monitoring or cardiac event recording is not expected to provide adequate information or has been unrevealing.

This system is also not indicated for use as a screening tool.

This monitoring is expected to not be reported more than once in a 30-day period and is expected to not be reported more than twice in a twelve month period.

## II. PRODUCT VARIATIONS TOP

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations as discussed in Section VI. Please see additional information below.

**FEP PPO** - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at: https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies.

## III. DESCRIPTION/BACKGROUND TOP

Various devices are available for outpatient cardiac rhythm monitoring. These devices differ in the types of monitoring leads used, the duration and continuity of monitoring, the ability to detect arrhythmias without patient intervention, and the mechanism of delivering the information from patient to clinician. These devices may be used to evaluate symptoms suggestive of arrhythmias (eg, syncope, palpitations), and may be used to detect atrial fibrillation (AF) in patients who have undergone cardiac ablation of AF or who have a history of cryptogenic stroke.

### Cardiac Arrhythmias

Cardiac monitoring is routinely used in the inpatient setting to detect acute changes in heart rate or rhythm that may need urgent response. For some conditions, a more prolonged period of monitoring in the ambulatory setting is needed to detect heart rate or rhythm abnormalities that may occur infrequently. These cases may include the diagnosis of arrhythmias in patients with signs and symptoms suggestive of arrhythmias as well as the evaluation of paroxysmal atrial fibrillation (AF).

Cardiac arrhythmias may be suspected because of symptoms suggestive of arrhythmias, including palpitations, dizziness, or syncope or presyncope, or because of abnormal heart rate or rhythm noted on exam. A full discussion of the differential diagnosis and evaluation of each of these symptoms is beyond the scope of this review, but some general principles on the use of ambulatory monitoring are discussed.

Arrhythmias are an important potential cause of syncope or near syncope, which in some cases may be described as dizziness. An electrocardiogram (ECG) is generally indicated whenever there is suspicion of a cardiac cause of syncope. Some arrhythmic causes will be apparent on ECG. However, for patients in whom an ECG is not diagnostic, longer monitoring may be indicated. The 2009 joint guidelines from the European Society of Cardiology and 3 other medical specialty societies suggested that, in individuals with clinical or ECG features suggesting an arrhythmic syncope, ECG monitoring is indicated; the guidelines also stated that the “duration (and technology) of monitoring should be selected according to the risk and the predicted recurrence rate of syncope. Similarly, guidelines from the National Institute for Health and Care Excellence (2014) on the evaluation of transient loss of consciousness, have recommended the use of an ambulatory ECG in individuals with a suspected arrhythmic cause of syncope. The type and duration of monitoring recommended is based on the individual’s history, particularly the frequency of transient loss of consciousness. The Holter monitor is recommended if transient loss of consciousness occurs several times a week. If the frequency of transient loss of consciousness is every 1 to 2 weeks, an external event recorder is recommended; and if the frequency is less than once every 2 weeks, an implantable event recorder is recommended.

Similar to syncope, the evaluation and management of palpitations is patient-specific. In cases where the initial history, examination, and ECG findings are suggestive of an arrhythmia, some form of ambulatory ECG monitoring is indicated. A position paper from the European Heart Rhythm Association (2011) indicated that, for individuals with palpitations of unknown origin who have clinical features suggestive of arrhythmia, referral for specialized evaluation with consideration for ambulatory ECG monitoring is indicated.

### Atrial Fibrillation Detection

AF is the most common arrhythmia in adults. It may be asymptomatic or be associated with a broad range of symptoms, including lightheadedness, palpitations, dyspnea, and a variety of more nonspecific symptoms (e.g., fatigue, malaise). It is classified as paroxysmal, persistent, or permanent based on symptom duration. Diagnosed AF may be treated with antiarrhythmic

medications with the goal of rate or rhythm control. Other treatments include direct cardioversion, catheter-based radiofrequency- or cryo-energy-based ablation, or one of several surgical techniques, depending on the patient's comorbidities and associated symptoms.

Stroke in AF occurs primarily as a result of thromboembolism from the left atrium. The lack of atrial contractions in AF leads to blood stasis in the left atrium, and this low flow state increases the risk of thrombosis. The area of the left atrium with the lowest blood flow in AF, and therefore the highest risk of thrombosis, is the left atrial appendage. Multiple clinical trials have demonstrated that anticoagulation reduces the ischemic stroke risk in patients at moderate- or high-risk of thromboembolic events. Oral anticoagulation in patients with AF reduces the risk of subsequent stroke and is recommended by American Heart Association, American College of Cardiology, and Heart Rhythm Society (2014) joint guidelines on patients with a history of stroke or transient ischemic attack.

Ambulatory ECG monitoring may play a role in several situations in the detection of AF. In patients who have undergone ablative treatment for AF, if ongoing AF can be excluded with reasonable certainty, including paroxysmal AF which may not be apparent on ECG during an office visit, anticoagulation therapy could potentially be stopped. In some cases where identifying paroxysmal AF is associated with potential changes in management, longer term monitoring may be considered. There are well-defined management changes that occur in patients with AF. However, until relatively recently the specific role of long-term (ie, greater than 48 hours) monitoring in AF was not well-described.

Patients with cryptogenic stroke are often monitored for the presence of AF, because AF is estimated to be the cause of cryptogenic stroke in more than 10% of patients, and AF increases the risk of stroke. Paroxysmal AF confers an elevated risk of stroke, just as persistent and permanent AF do. In individuals with a high risk of stroke, particularly those with a history of ischemic stroke that is unexplained by other causes, prolonged monitoring to identify paroxysmal AF has been investigated.

### Cardiac Rhythm Ambulatory Monitoring Devices

Ambulatory cardiac monitoring with a variety of devices permits the evaluation of cardiac electrical activity over time, in contrast to a static ECG, which only permits the detection of abnormalities in cardiac electrical activity at a single point in time.

A Holter monitor is worn continuously and records cardiac electrical output continuously throughout the recording period. Holter monitors are capable of recording activity for up to about 24 to 72 hours. Traditionally, most Holter monitors had 3 channels based on 3 ECG leads. However, some currently available Holter monitors have up to 12 channels. Holter monitors are an accepted intervention in a variety of settings where a short period (24-48 hours) of comprehensive cardiac rhythm assessment is needed (e.g., suspected arrhythmias when symptoms [syncope, palpitations] are occurring daily). These devices are not the focus of this review.

Various classes of devices are available for situations where longer monitoring than can be obtained with a traditional Holter monitor is needed. Because there may be many devices within each category, a comprehensive description of each device is beyond our scope. Devices vary in how data are transmitted to the location where the ECG output is interpreted. Data may be transmitted via cellular phone or landline, or by direct download from the device after its return to the monitoring center. The device classes are described in Table 1.

**Table 1. Ambulatory Cardiac Rhythm Monitoring Devices**

| Device Class | Description | Device Examples |
|---|---|---|
| **Noncontinuous devices with memory (event recorder)** | Devices not worn continuously but rather activated by patient and applied to skin in the precordial area when symptoms develop | • Zio® Event Card (iRhythm Technologies)<br>• REKA E100™ (REKA Health) |
| **Continuous recording devices with longer recording periods** | Devices continuously worn and continuously record via one or more cardiac leads and store data longer than traditional Holter (14 days) | • Zio® XT Patch and ZIO ECG Utilization Service (ZEUS) System (iRhythm Technologies) |
| **External memory loop devices (patient or autotriggered)** | Devices continuously worn and store a single channel of ECG data in a refreshed memory. When the device is activated, the ECG is then recorded from the memory loop for the preceding 30-90 seconds and for next 60 seconds or so. Devices may be activated by a patient when symptoms occur (patient-triggered) or by an automated algorithm when changes suggestive of an arrhythmia are detected (autotriggered). | • Patient-triggered: Explorer™ Looping Monitor (LifeWatch Services)<br>• Auto-triggered: LifeStar AF Express™ Auto-Detect Looping Monitor (LifeWatch Services)<br>• Auto-triggered or patient-triggered: King of Hearts Express® AF (Card Guard Scientific Survival) |
| **Implantable memory loop devices (patient- or autotriggered)** | Devices similar in design to external memory loop devices but implanted under the skin in the precordial region | • Auto-triggered or patient-triggered: Reveal® XT ICM (Medtronic) and Confirm Rx Insertable™ Cardiac Monitor (Abbott)<br>• Auto-triggered: BioMonitor, (Biotronik) |
| **Mobile cardiac outpatient telemetry** | Continuously recording or autotriggered memory loop | • CardioNet MCOT (BioTelemetry) |

| | | |
|---|---|---|
| | devices that transmit data to a central recording station with real-time monitoring and analysis | • LifeStar Mobile Cardiac Telemetry (LifeWatch Services)<br>• Zio AT(iRhythm) |

ECG: electrocardiogram

There are also devices that combine features of multiple classes. For example, the LifeStar ACT Ex Holter (LifeWatch Services) is a 3-channel Holter monitor, but is converted to a mobile cardiac telemetry system if a diagnosis is inconclusive after 24 to 48 hours of monitoring. The BodyGuardian® Heart Remote Monitoring System (Preventice Services) is an external autotriggered memory loop device that can be converted to a real-time monitoring system. The eCardio Verité™ system (eCardio) can switch between a patient-activated event monitor and a continuous telemetry monitor. The Spiderflash-T (LivaNova) is an example of an external auto-triggered or patient-triggered loop recorder, but, like the Zio Patch, can record 2 channels for 14 to 40 days.

### REGULATORY STATUS

Some of the newer devices are described in the Background section for informational purposes. Because there may be many devices within each category, a comprehensive description of individual devices is beyond the scope of this review. U.S. Food and Drug Administration (FDA) product codes include: DSH, DXH, DQK, DSI, MXD, MHX.

## IV. RATIONALE

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### Summary of Evidence

### Ambulatory Event Monitoring

For individuals who have signs and/or symptoms suggestive of arrhythmia(s) who receive patient- or autoactivated external ambulatory event monitoring or continuous ambulatory monitoring storing information for more than 48 hours, the evidence includes prospective and retrospective studies reporting on the diagnostic yield. Relevant outcomes are overall survival and morbid events. Observational studies have consistently shown that continuous monitoring with longer recording periods detects more arrhythmias than 24- or 48-hour Holter monitoring. Particularly for patients who, without the more prolonged monitoring, would only undergo shorter term monitoring, the diagnostic yield is likely to identify arrhythmias that may have therapeutic implications. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have AF following ablation who receive long-term ambulatory cardiac monitoring, the evidence includes one randomized controlled trial (RCT) comparing ambulatory event monitoring with standard care and several observational studies. Relevant outcomes are overall survival, morbid events, medication use, and treatment-related morbidity. The RCT evaluating a long-term monitoring strategy after catheter ablation for AF reported significantly higher rates of AF detection. The available evidence has suggested that long-term monitoring for AF

postablation is associated with improved outcomes. However, the specific type of monitoring associated with the best outcomes is not established, because different long-term monitoring devices were used across the studies. Trials demonstrating improved outcomes have used event monitors or implantable monitors. In addition, there are individual patient considerations that may make one type of monitor preferable over another. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have cryptogenic stroke with a negative standard workup for AF who receive long-term ambulatory cardiac monitoring, the evidence includes systematic reviews of RCTs comparing ambulatory event monitoring with standard care. Relevant outcomes are overall survival, morbid events, medication use, and treatment-related morbidity. Randomized controlled trials evaluating a long-term AF monitoring strategy poststroke have reported significantly higher rates of AF detection with longer term ambulatory monitoring. The available evidence has suggested that long-term monitoring for AF after cryptogenic stroke is associated with improved outcomes, but the specific type of monitoring associated with the best outcomes is not established, because different long-term monitoring devices were used across the studies. Trials demonstrating improved outcomes have used event monitors or implantable monitors. In addition, there are individual patient considerations that may make one type of monitor preferable over another. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are asymptomatic with risk factors for AF who receive long-term ambulatory cardiac monitoring, the evidence includes RCTs and observational studies. Relevant outcomes are overcall survival, morbid events, medication use, and treatment-related morbidity. Multiple observational studies showed that the use of ambulatory monitors would result in higher AF detection compared with routine care. Randomized controlled trials found higher AF detection and initiation of anticoagulants with monitoring, but no impact on health outcomes. The only RCT (LOOP Trial) with sufficient statistical power and duration to evaluate health outcomes found no difference between monitoring and standard care on the primary endpoint of combined stroke or systemic arterial embolism (HR 0.80; 95% CI 0.61 to 1.05; P =.11) or any secondary endpoints after 6 years of follow-up. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

### Implantable Loop Recording

For individuals who have signs and/or symptoms suggestive of arrhythmia with infrequent symptoms who receive patient- or autoactivated implantable ambulatory event monitoring, the evidence includes RCTs comparing implantable loop recorderings with shorter term monitoring, usually 24- to 48-hour Holter monitoring, and many observational studies. Relevant outcomes are overall survival, morbid events, medication use, and treatment-related morbidity. Studies assessing prolonged implantable loop recorders in patients have reported high rates of arrhythmia detection compared with shorter external event or Holter monitoring. These studies have supported use of a progression in diagnostics from an external event monitor to implantable loop recorder when longer monitoring is needed. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

### Outpatient Cardiac Telemetry

For individuals who have signs and/or symptoms suggestive of arrhythmia who receive outpatient cardiac telemetry, the evidence includes an RCT and nonrandomized studies evaluating rates of arrhythmia detection using outpatient cardiac telemetry. Relevant outcomes are overall survival and morbid events. The available evidence has suggested that outpatient cardiac telemetry is at least as good at detecting arrhythmias as ambulatory event monitoring. However, studies have not evaluated whether the real-time monitoring feature of outpatient cardiac telemetry leads to reduced cardiac events and mortality. The evidence is insufficient to determine the effects of the technology on health outcomes. However according to many guidelines from the American College of Cardiology/American Heart Association/the Heart Rhythm Society, outpatient cardiac telemetry is recommended when other AEMs have not been diagnostic.

## V. DEFINITIONS

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**HOLTER MONITOR** is a portable device small enough to be worn by a patient during normal activity. It consists of an electrocardiograph and a recording system capable of storing up to twenty-four hours of the patient's EKG record.

**MYOCARDIAL INFARCTION** is the loss of heart muscle as a result of coronary artery occlusion.

**SYNCOPE** is a sudden but transient total loss of consciousness with spontaneous resolution.

## VI. BENEFIT VARIATIONS

TOP

The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits and which require preauthorization. There are different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

## VII. DISCLAIMER

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*Capital Blue Cross's medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital Blue Cross' Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.*

## VIII. CODING INFORMATION

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**Note:** This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

**Ambulatory Event Monitors are Covered when Medically Necessary:**

| Procedure Codes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0650T | 93241 | 93242 | 93243 | 93244 | 93245 | 93246 | 93247 | 93248 |
| 93268 | 93270 | 93271 | 93272 | | | | | |

| ICD-10-CM Diagnosis Code | Description |
|---|---|
| G45.9 | Transient cerebral ischemic attack, unspecified |
| I20.1 | Angina pectoris with documented spasm |
| I20.2 | Refractory angina pectoris |
| I24.81 | Acute coronary microvascular dysfunction |
| I24.89 | Other forms of acute ischemic heart disease |
| I24.9 | Acute ischemic heart disease, unspecified |
| 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 |
| I25.82 | Chronic total occlusion of coronary artery |
| I42.0 | Dilated cardiomyopathy |
| I42.1 | Obstructive hypertrophic cardiomyopathy |

| ICD-10-CM Diagnosis Code | Description |
|---|---|
| I42.2 | Other hypertrophic cardiomyopathy |
| I42.8 | Other cardiomyopathies |
| I44.0 | Atrioventricular block, first degree |
| I44.1 | Atrioventricular block, second degree |
| I44.2 | Atrioventricular block, complete |
| I44.30 | Unspecified atrioventricular block |
| I44.39 | Other atrioventricular block |
| I44.4 | Left anterior fascicular block |
| I44.5 | Left posterior fascicular block |
| I44.60 | Unspecified fascicular block |
| I44.69 | Other fascicular block |
| I44.7 | Left bundle-branch block, unspecified |
| I45.0 | Right fascicular block |
| I45.10 | Unspecified right bundle-branch block |
| I45.19 | Other right bundle-branch block |
| I45.2 | Bifascicular block |
| I45.3 | Trifascicular block |
| I45.4 | Nonspecific intraventricular block |
| I45.5 | Other specified heart block |
| I45.6 | Pre-excitation syndrome |
| I45.81 | Long QT syndrome |
| I45.89 | Other specified conduction disorders |
| I45.9 | Conduction disorder, unspecified |
| I46.2 | Cardiac arrest due to underlying cardiac condition |
| I46.8 | Cardiac arrest due to other underlying condition |
| I46.9 | Cardiac arrest, cause unspecified |
| I47.0 | Re-entry ventricular arrhythmia |
| I47.10 | Supraventricular tachycardia, unspecified |
| I47.11 | Inappropriate sinus tachycardia, so stated |
| I47.19 | Other supraventricular tachycardia |
| I47.20 | Ventricular tachycardia, unspecified |

| ICD-10-CM Diagnosis Code | Description |
|---|---|
| I47.29 | OtherVentricular tachycardia |
| I47.9 | Paroxysmal tachycardia, unspecified |
| I48.0 | Paroxysmal atrial fibrillation |
| I48.3 | Typical atrial flutter |
| I48.4 | Atypical atrial flutter |
| I48.11 | Longstanding persistent atrial fibrillation |
| I48.19 | Other persistent atrial fibrillation |
| I48.20 | Chronic atrial fibrillation, unspecified |
| I48.21 | Permanent atrial fibrillation |
| I48.91 | Unspecified atrial fibrillation |
| I48.92 | Unspecified atrial flutter |
| I49.01 | Ventricular fibrillation |
| I49.02 | Ventricular flutter |
| I49.1 | Atrial premature depolarization |
| I49.2 | Junctional premature depolarization |
| I49.3 | Ventricular premature depolarization |
| I49.40 | Unspecified premature depolarization |
| I49.49 | Other premature depolarization |
| I49.5 | Sick sinus syndrome |
| I49.8 | Other specified cardiac arrhythmias |
| I49.9 | Cardiac arrhythmia, unspecified |
| I63.81 | Other cerebral infarction due to occlusion or stenosis of small artery |
| I63.89 | Other cerebral infarction |
| I63.9 | Cerebral infarction, unspecified |
| I67.841 | Acute cerebrovascular insufficiency |
| I67.848 | Other cerebrovascular vasospasm and vasoconstriction |
| R00.0 | Tachycardia, unspecified |
| R00.1 | Bradycardia, unspecified |
| R00.2 | Palpitations |
| R06.00 | Dyspnea, unspecified |
| R06.02 | Shortness of breath |

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| ICD-10-CM Diagnosis Code | Description |
|---|---|
| R06.03 | Acute respiratory distress |
| R06.09 | Other forms of dyspnea |
| R06.3 | Periodic breathing |
| R42 | Dizziness and giddiness |
| R55 | Syncope and collapse |
| Z79.01 | Long term (current) use of anticoagulants |
| Z79.02 | Long term (current) use of antithrombotics/antiplatelets |
| Z79.899 | Other long term (current) drug therapy |
| Z86.73 | Personal history of transient ischemic attack (TIA), and cerebral infarction without residual deficits |
| Z86.74 | Personal history of sudden cardiac arrest |
| Z87.74 | Personal history of (corrected) congenital malformations of heart and circulatory system |
| Z95.0 | Presence of cardiac pacemaker |

**Mobile Cardiac Outpatient Telemetry is Covered when Medically Necessary:**

| Procedure Codes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 93228 | 93229 | | | | | | | |

| ICD-10-CM Diagnosis Codes | Description |
|---|---|
| G45.9 | Transient cerebral ischemic attack, unspecified |
| I24.81 | Acute coronary microvascular dysfunction |
| I24.89 | Other forms of acute ischemic heart disease |
| I24.9 | Acute ischemic heart disease, unspecified |
| I42.0 | Dilated cardiomyopathy |
| I42.1 | Obstructive hypertrophic cardiomyopathy |
| I42.2 | Other hypertrophic cardiomyopathy |
| I44.0 | Atrioventricular block, first degree |
| I44.1 | Atrioventricular block, second degree |
| I44.2 | Atrioventricular block, complete |
| I44.30 | Unspecified atrioventricular block |
| I45.6 | Pre-excitation syndrome |

| ICD-10-CM Diagnosis Codes | Description |
|---|---|
| I45.81 | Long QT syndrome |
| I45.89 | Other specified conduction disorders |
| I47.0 | Re-entry ventricular arrhythmia |
| I47.10 | Supraventricular tachycardia, unspecified |
| I47.11 | Inappropriate sinus tachycardia, so stated |
| I47.19 | Other supraventricular tachycardia |
| I47.20 | Ventricular tachycardia |
| I47.9 | Paroxysmal tachycardia, unspecified |
| I48.0 | Paroxysmal atrial fibrillation |
| I48.3 | Typical atrial flutter |
| I48.4 | Atypical atrial flutter |
| I48.11 | Longstanding persistent atrial fibrillation |
| I48.19 | Other persistent atrial fibrillation |
| I48.20 | Chronic atrial fibrillation, unspecified |
| I48.21 | Permanent atrial fibrillation |
| I48.91 | Unspecified atrial fibrillation |
| I48.92 | Unspecified atrial flutter |
| I49.1 | Atrial premature depolarization |
| I49.2 | Junctional premature depolarization |
| I49.3 | Ventricular premature depolarization |
| I49.5 | Sick sinus syndrome |
| I63.81 | Other cerebral infarction due to occlusion or stenosis of small artery |
| I63.89 | Other cerebral infarction |
| I63.9 | Cerebral infarction, unspecified |
| I67.841 | Acute cerebrovascular insufficiency |
| I67.848 | Other cerebrovascular vasospasm and vasoconstriction |
| Q21.2 | Atrioventricular septal defect |
| R00.0 | Tachycardia, unspecified |
| R00.1 | Bradycardia, unspecified |
| R00.2 | Palpitations |
| R42 | Dizziness and giddiness |
| R55 | Syncope and collapse |
| Z79.01 | Long term (current) use of anticoagulants |
| Z79.02 | Long term (current) use of antithrombotics/antiplatelets |

| ICD-10-CM Diagnosis Codes | Description |
|---|---|
| Z79.899 | Other long term (current) drug therapy |
| Z87.74 | Personal history of (corrected) congenital malformations of heart and circulatory system |
| Z95.0 | Presence of cardiac pacemaker |

**Subcutaneous Cardiac Rhythm Monitoring is Covered when Medically Necessary:**

| Procedure Codes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 33285 | 33286 | 93285 | 93291 | 93298 | E0616 | C1764 | | |

***Covered if patient's prior evaluation with AEM or MCOT have been unsuccessful***

## IX. REFERENCES

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| POLICY TITLE | AMBULATORY EVENT MONITORS AND MOBILE CARDIAC OUTPATIENT TELEMETRY |
|---|---|
| POLICY NUMBER | MP 2.036 |

## X. POLICY HISTORY

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|---|---|
| MP 2.036 | **11/6/20 Consensus review.** No change to policy statement. References updated. |
| | **1/1/21 Administrative review.** New 2021 codes added to the policy as medically necessary with criteria; deleted codes removed. |
| | **06/15/2021 Coding updated:** Added new code 0650T |
| | **11/11/2021 Minor review.**<br>• Added "The use of AEM more than once in any give 30 day period is not medically necessary" to the AEM section<br>• MCOT section<br>o Added "when the use of a Holter Monitor or other AEM has not or would not be diagnostic" to the first paragraph<br>o Added management and treatment to first bullet<br>o Removed criteria point requesting provider document prior testing<br>o Added additional criteria to include discontinuation of anticoagulation therapy, regulating antiarrhythmic drug dosages and surgical/ablative procedures<br>o Deleted ICD/pacemaker criteria except for condition of device failure/malfunction<br>FEP language added. Background, Rationale and References updated. |
| | **08/15/2022 Administrative update**. ICD10 codes I20.2, I25.112, I25.702, I25.712, I25.722, I25.732, I25.752, I25.762, I25.792, I47.20, I47.29 added; I47.2 removed. Effective 10/1/2022. |
| | **12/1/2022 Administrative update.** Deleted codes 0497T & 0498T Effective 1/1/23. |
| | **12/2/2022 Consensus review.** No change to policy statement. Cross Referenced policies removed. Background, Rationale and References updated. |
| | **06/15/2023 Consensus review.** No change to policy statement. Rationale updated. References added. |
| | **09/11/2023 Administrative update.** ICD10 code definitions revised due to new code. Added ICD10 codes I24.81, I24.89, I47.10, I47.11 and I47.19. Removed ICD10 I47.1. Effective 10/1/2023 |
| | **12/12/2023 Admin Update:** Removed deleted code G2066. Effective 1/1/24. |

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