

# UPMC Health Plan POLICY AND PROCEDURE MANUAL

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**SUBJECT:** Outpatient/Mobile Real Time Cardiac Surveillance Systems  
**INDEX TITLE:** Medical Management  
**ORIGINAL DATE:** October 2006

**This policy applies to the following lines of business: (Check those that apply.)**

<b>Commercial:</b>					
HMO ( )		POS ( )		PPO ( )	
Fully Insured ( )		Self-funded/ASO ( )		HSA ( )	
Medicare Select ( )		Medicare Supplement ( )			
<b>DPW-MA:</b>					
Health Choices ( )			Voluntary ( )		All (X)
<b>CMS-MA:</b>					
OH ( )		WV ( )		PA ( )	All (X)
HMO (X)	PPO (X)	Specialty Needs Plan (X)		Part D ( )	PFFS ( )
<b>PID-CHIP:</b>					
Free ( )		Sub ( )		Full ( )	All (X)
<b>APPLICABLE TO:</b>					
Community Care ( )		Work Partners ( )			

## I. POLICY

It is the policy of UPMC Health Plan to cover outpatient/mobile real-time cardiac surveillance when it is medically necessary as detailed in this policy and covered under the member's benefit plan.

UPMC Health Plan recognizes the needs of members with cardiac arrhythmias for which a traditional Holter monitoring or cardiac event recording have either been unrevealing or which are not expected to provide adequate, reliable information. The use of real time cardiac surveillance systems are therefore considered as appropriate and consistent with good medical practice.

All denials are based on medical necessity and appropriateness as determined by a UPMC Health Plan Medical Director (Medical Director).

## II. DEFINITIONS

N/A

### **III. PURPOSE**

The purpose of this policy is to define the conditions under which a Outpatient/Mobile Real Time Cardiac Surveillance System would be indicated in members with cardiac arrhythmias.

### **IV. SCOPE**

This policy applies to various UPMC Health Plan departments as indicated by the Benefit and Reimbursement Committee. These include but are not limited to: Medical Management, Benefit Configuration and Claims departments.

### **V. PROCEDURE**

#### **A. Medical Description / Background**

Ambulatory electrocardiography (AECG) or outpatient/mobile based cardiac monitoring refers to diagnostic studies that record the heart rhythm over a prolonged time period. AECG tests are performed in an outpatient setting during usual daily activities and sleep. They are used to recognize record and characterize abnormal electrical activity of the heart.

There are 3 types of AECGs:

- 1. Continuous Recorders, Non-activated (Holter Monitor)** - The electrocardiogram (EKG) tracing is recorded continuously over 24-48 hours, using either magnetic tape or digital technology. Typically after 24 hours (occasionally 48 hours), the device is removed, the tape is analyzed and a report of the heart's activity is created.
- 2. Intermittent Recorders, Patient or Event-activated (Cardiac Event Monitors)-Pre-symptom Memory Loop**- Loop recorders that capture a predetermined length of recorded cardiac rhythm both before and after activation. These may have an auto-trigger feature that does not require patient activation. Cardiac event monitors are typically left in place for up to 30 days. When cardiac related events are strongly suspected, but symptoms occur too infrequently for capture with a Holter Monitor or event recorder, an implantable or insertable loop recorder may be considered. Implantable loop monitors may be left in place for up to 14 months.

Post-symptom (no memory loop) - A post-symptom event recorder does not require electrodes to be attached to the body. When symptoms occur, the patient presses the recording device against the chest and activates it by pressing a button. It does not have a memory loop and the heart rhythm is only recorded subsequent to the onset of symptoms. The data may be transmitted telephonically.

**3. Outpatient/Mobile Cardiac Telemetry (Real-time Heart Monitors) –**

There are 2 types of real-time cardiac surveillance systems: home based and mobile/wearable cardiac telemetry (MCT).

Home Based

Real-time cardiac surveillance system is an automatically activated device that requires no patient intervention to either capture or transmit an arrhythmia when it occurs. It operates as telemetry for the home, providing cardiac surveillance with automatic rapid notification of rhythm abnormalities. The patient wears a portable electrocardiogram (ECG) sensor for continuous monitoring. The sensors transmit signals via telephone when the patient is within the range of a close-by base station. Upon arrhythmia detection, the device transmits the ECG wave to the receiving center staffed by certified cardiac technicians 24 hours per day, 7 days per week. The physician can be called and/or the patient notified within minutes of a serious heart rhythm abnormality.

Mobile/Wearable/MCT

MCT is a wearable mobile monitor that provides real-time cardiac surveillance at a remote site. In this system, the patient wears a small telemetry transmitter that sends the ECG to the computer with modem where the real-time analysis occurs. When the ECG violates certain alarm limits, the ECG strip is automatically sent to the receiving center via the computer modem or wireless communication from any location where wireless services are available

The receiving center also has the capability to receive and review a patient's ECG strip in real-time, at any time during the episode of monitoring. Qualified technicians perform ECG surveillance 24 hours a day. The patient's physician is notified of ECG abnormalities based on the notification criteria. This rapid arrhythmia recognition and physician notification allows timely intervention. In addition, this system provides an analysis and report of 24 hours of monitoring, similar to Holter studies. Therefore, the concomitant use of cardiac surveillance, Holter monitoring, and /or event monitoring would not be necessary.

**B. Specific Indications**

An outpatient/mobile, real-time cardiac surveillance system may be indicated for **any** of the following members who have demonstrated a need for cardiac monitoring:

1. Members who require monitoring for known, non life-threatening arrhythmias, such as atrial fibrillation, other supra-ventricular arrhythmias, evaluation of various brady arrhythmias and intermittent bundle branch block, or
2. Members recovering from cardiac surgery who have had documented atrial arrhythmias, or
3. Members with symptomatic underlying structural disease, or
4. Members with no structural heart disease but who have recurrent severe symptoms (i.e., recurrent syncope), in whom all testing is negative and an implantable event recorder is contemplated, or
5. Members with uncontrolled atrial fibrillation post-pneumonectomy.

AND

When **all** of the following 3 criteria are met:

1. There is a low likelihood of a potentially life-threatening cardiac event  
AND
2. Other testing and/or monitoring have been unrevealing or is inappropriate for the member  
AND
3. It is anticipated that the results of this service would provide diagnostic and treatment information.

**C. Limitations**

1. Real-Time Cardiac Surveillance is **not indicated** for the following:
  - Members at high risk of developing sustained ventricular tachycardia or ventricular fibrillation
  - Members who would be more appropriately cared for in a hospital setting.
  - Use of cardiac surveillance and Holter or event monitoring for the same member on the same day
  - Services performed for screening purposes
  - Members with mild to moderate symptoms of palpitations or weakness
  - Not indicated for all members with indications for cardiac monitoring. It should be used only in circumstances where traditional Holter monitoring or cardiac event recording is not expected to provide adequate information has been unrevealing
3. Monitoring is limited to once in a thirty (30) day period and no more than twice in a twelve (12) month period. In the event more time is needed, requests for longer intervals of monitoring must be accompanied by documentation that clearly supports the medical necessity of the continued surveillance.
4. In order to ensure quality of care to the member receiving this service, this service should be ordered and interpreted by providers with experience in caring for these types of patients. These providers should also possess a thorough knowledge of the patient receiving the service.
5. The concomitant use of cardiac surveillance, Holter monitoring, and /or event monitoring is considered not medically necessary.
6. For services provided by an independent diagnostic testing facility (IDTF):
  - The procedure must be performed under the general supervision of a physician specializing in cardiology or internal medicine.
  - In general supervision, the procedure is furnished under the physician's overall direction and control, but the physician's presence is not required during the performance of the procedure. Under general supervision, the training of the non physician personnel who actually perform the diagnostic procedure and the maintenance of the necessary equipment and supplies is the continuing responsibility of the physician.
  - National or state-level training and certification requirements for non physician personnel include:
    - Certified Cardiographic Technician (CCT) (Cardiovascular Credentialing International (CCI))

- Registered nurse with current certification in Advanced Cardiac Life Support (ACLS)
- Emergency Medical Technician (EMT) with current ACLS certification

#### **D. Information Required for Review**

In order for medical necessity to be established, adequate information must be furnished by the treating physician. Necessary information includes:

1. A physician's prescription or letter of medical necessity.
2. Documentation supporting the member's need for real-time cardiac surveillance that includes the member's diagnosis, results of other diagnostic testing that has been inconclusive in identifying member's cardiac condition or documentation of why other testing is inappropriate for the member.
3. Copies of the transmitted ECGs with the provider's response to them should be maintained by the performing provider.

#### **E. Review Process**

1. The Medical Management staff assigned to review obtains the clinical information to determine if there is adequate clinical information. If the case does not meet the established criteria, it is referred to a UPMC Health Plan Medical Director.
2. If referred, the Medical Director determines if the requested service is medically necessary and appropriate.
3. The Medical Management staff completes the review process and communicates the review decision according to the Timeliness of UM Decisions policy for the member's benefit plan.

#### **G. Variations**

##### **Medical Assistance Product (MA)**

Wearable mobile cardiac telemetry is not covered as it is not on the MA fee schedule.

#### **H. Records Retention**

Records Retention for UPMC Health Plan documents, regardless of medium are provided within the UPMC Health System Policy and as indicated in the UPMC Insurance Services Division Policy and Procedure.

#### **I. References**

1. 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.* 2005; 95(7):878-81.
2. Medicare Policy: Real-time, Outpatient Cardiac Monitoring.  
<http://www.hgsa.com/professionals/lcd/m60b.html>.

3. Cigna Healthcare Coverage: Cardiac Event Monitors, No. 0085, effective 6/15/04.
4. Crawford MH et al., “ACC/AHA Guidelines for Ambulatory Electrocardiography: Report of the American College of Cardiology/American Heart Association Task Force of Practice Guidelines (Committee to Revise the Guidelines for Ambulatory Electrocardiography),” *Journal of the American College of Cardiology*, 1999; 34:912-948.
5. Highmark Medical Policy, Implantable Cardiac Loop Recorder, No. M-50; Effective 10/1/05.
6. Kadish AH et al. “ACC/AHA Clinical Competence Statement on Electrocardiography and Ambulatory Electrocardiography: A Report of the American College of Cardiology/American Heart Association/American College of Physicians-American Society of Internal Medicine Task Force on Clinical Competence (ACC/AHA Committee to Develop A Clinical Competence Statement on Electrocardiography and Ambulatory Electrocardiography),” *Journal of the American College of Cardiology* 2001; 32:2091-100.
7. Kinlay S et al. “Cardiac Event Recorders Yield More Diagnoses and Are More Cost-effective than 48-Hour Holter Monitoring in Patients with Palpitations: A Controlled Clinical Trial,” *Annals of Internal Medicine*, 1996; 124□ 1, Part 1): 1620.
8. Klootwijk P, CM Leenders and J Roelandt. “Usefulness of Transtelephonic Documentation of the Electrocardiogram During Sporadic Symptoms Suggestive of Cardiac Arrhythmias,” *International Journal of Cardiology*, 1986; 13:155-61.
9. Kowey PR et al. “First Experience with a Mobile Cardiac Outpatient Telemetry System for the Diagnosis and management of Cardiac Arrhythmias (abstract); Abstract ID: 100684, Publishing ID: 648. Presented at NASPE 2003 – 24th Annual Scientific Sessions, Poster Session V, May 16th, Washington D.C. Natrick, MA: NASPE – Heart Rhythm Society; 2003. Available at:
10. Krahn A, G Klein, R Yee and A. Skanes. “Randomized Assessment of Syncope Trial,” *Circulation*, 2001; 104:46-51.
11. Medicare Coverage Database: Centers for Medicare & Medicaid Services. Decision Memo for Electrocardiographic Services: CAG-00158N), issued: August 26, 2004.
12. Reiffel JA, R Schwarzberg and M Murry. “Comparison of Autotriggered Memory Loop Recorders versus Standard Loop Recorders versus 24-Hour Holter Monitors for Arrhythmia Detection,” *American Journal of Cardiology*, 2005; 95(9):1055-9.
13. Safe AF and RT Maxwell. “Transtelephonic Electrocardiographic Monitoring for Detection and Treatment of Cardiac Arrhythmia,” *Postgraduate Medicine*, 1990; 66:110-2.
14. Sivakumaran S et al., “A Prospective Randomized Comparison of Loop Recorders versus Holter Monitors in Patients with Syncope or Presyncope,” *American Journal of Medicine*, 2003; 115(1):1-5.
15. Highmark Medicare Services, Real-Time Outpatient Cardiac Monitoring, LCD No. M-60D. <http://www.highmarkmedicare.com/policy/partb/m1/m60d.html>
16. Highmark Medicare Services: Real-Time, Outpatient Cardiac Monitoring, LCD No. L27520, effective 12/12/08. <http://www.highmarkmedicare.com/policy/mac-ab/127520-r4.html>
17. ECRI Institute Hotline: Remote Cardiac Monitoring (AHRQ), 12/12/07. <https://members2.ecri.org/Components/EvidenceReports/Pages/10470.aspx>

18. ECRI Institute Hotline: Mobile Cardiac Outpatient Telemetry for Detecting Arrhythmias, 4/20/09.  
<https://members2.ecri.org/Components/Hotline/Pages/8782.aspx>
19. Sang B. Park, MD, Edward V. Platia, MD, et al., Cardiac Surveillance at Home, EP Lab Digest Vol. 2, Pub 11/1/02, Issue No. 6 (Nov/Dec).  
<http://www.eplabdigest.com/article/1137>

**Disclaimer:**

UPMC Health Plan medical payment and prior authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. The policies constitute only the reimbursement and coverage guidelines of UPMC Health Plan and its affiliated managed care entities. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies.

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