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Mobile Outpatient Cardiac Telemetry (MOCT)

(Cardiac event monitoring)

Date of Origin: 03/2017 **Last Review Date: 04/22/2026** **Effective Date: 05/01/2026**

Dates Reviewed: 05/2017, 03/2018, 06/2019, 07/2020, 07/2021, 06/2022, 07/2023, 07/2024, 04/2025, 04/2026

Developed By: Medical Necessity Criteria Committee

I. Description

Mobile outpatient cardiac telemetry (MOCT) or mobile cardiac telemetry (MCT) includes a small sensor and monitor that patients can wear during their daily activities. MOCT has an extended memory capable of continuous measurement of heart rate and rhythm over several days. Cardiac events are detected even if the patient is asymptomatic. The recordings are transmitted to a central surveillance center for real-time analysis with possible initiation of anti-arrhythmic drug treatment.

Several studies have demonstrated superior results with the MOCT over standard loop event monitors in detecting significant arrhythmias. One randomized controlled study involved 305 patients randomized to either the LOOP recorder or MOCT and monitored for up to 30 days. A diagnosis was found in 88 percent of the patients in the MOCT patients and 75 percent of the LOOP patients. The difference in findings was due to the asymptomatic findings captured with the MOCT.

II. Criteria: CWQI HCS-0207

A. OHSU HS considers Mobile Outpatient Cardiac Telemetry (MOCT) for patients who meet ALL of the following:
   a. Patient has symptoms suggestive of an underlying arrhythmia including but not limited to 1 or more of the following:
      i. Unexplained episodes pre-syncope and syncope of unknown etiology, or severe palpitations
      ii. Stroke or transient cerebral ischemia, possibly secondary to atrial fibrillation
      iii. Post ablation arrhythmia detection
      iv. Evaluation of response to anti-arrhythmic drug therapy
   b. Failure to detect an arrhythmia with 1 or more of the following:
      i. Holter monitor failed to detect arrhythmia during a 24-48 hour period; **or**
      ii. Patch Type monitor failed to detect arrhythmia for 15 continuous days; **or**
      iii. Cardiac event monitor (e.g. external loop recorder) failed to detect an underlying arrhythmia causing the symptoms for 30 continuous days: **or**
      iv. The episodes do not last long enough to activate the monitor; **or**
      v. The patient is unable to manage the technical requirements of a loop recorder.

III. Information Submitted with the Request:

1. Chart notes documenting indication
2. Documentation of previous Holter monitor or event monitor reports

IV. CPT or HCPC codes covered:

Codes	Description
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 a query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days: review and interpretation with the report by a physician or other qualified health care professional
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

V. Annual Review History

Review Date	Revisions	Effective Date
03/2017	New Criteria	7/15/2017
03/28/2018	Annual Review: Formatting changes	03/28/2018
06/26/2019	Annual Review: No changes	07/01/2019
06/24/2020	Annual Review: No changes	08/01/2020
07/28/2021	Annual Review: No content changes	08/01/2021
06/22/2022	Annual Review: No content changes	07/01/2022
07/26/2023	Annual Review: No changes	08/01/2023
07/24/2024	Annual Review: No content changes. Grammar updates	08/01/2024
04/23/2025	Annual Review: Added Holter monitor 24-48 hours; Patchy type monitor -15 continuous days	05/01/2025

04/22/2026	Annual Review: References update	05/01/2026

VI. References

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2. Fabian D, Ahmed, I 2023: Ambulatory ECG monitoring. Retreived from https://www.ncbi.nlm.nih.gov/books/NBK597374/
3. Crawford et al 1999. Circulation. ACC/AHA Guidelines for Ambulatory Electrocardiography: Executive Summary and Recommendations : A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the Guidelines for Ambulatory Electrocardiography) Developed in Collaboration With the North American Society for Pacing and Electrophysiology. Retrieved from https://www.ahajournals.org/doi/10.1161/01.cir.100.8.886
4. Cardiac event detection LCD L33952 Retrieved from https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?lcdid=33952&ver=19&=
5. Local Coverage Determination (LCD): Electrocardiographic (EKG or ECG) Monitoring (Holter or Real-time Monitoring) (L34636) Wisconsin Physicians Service Insurance Corporation; accessed 2026. https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?lcdid=34636&ver=38&
6. Zimetbaum, P. & Goldman, A. (2010). Contemporary reviews in cardiovascular medicine: Ambulatory arrhythmia monitoring choosing the right device. Circulation, 122, 1629-1636.
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. Journal of Cardiovasc Electrophysiol. 2007;18(3): 1-7.
8. Joshi, AL, Kowey, PR., Prystowsky, EN, Benditt, DG., Cannom, DS, Pratt, CM., McNamara, A., Sangrigoli, RM., First experience with Mobile Cardiac Outpatient Telemetry (MOCT) system for diagnosis and management of cardiac arrhythmia. Am J Cardiology. 2005; 95(7): 878-881.
9. January CT, Wann LS, Alpert JS, et al. 2014 AHA/ACC/HRS Guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the Heart Rhythm Society. J Am Coll Cardiol. 2014 Dec 2;64(21): e1-e76.

Appendix 1- Covered Diagnosis Codes

ICD-10	ICD-10 Description
I44.0 – I44.7	Atrioventricular and left bundle-branch block
I45.0 – I45.9	Other conduction disorders
I47.1 – I47.9	Supraventricular tachycardia
I48.0 – I48.9	Atrial fibrillation and flutter
I49.1 – I49.8	Atrial premature depolarization
I49.5	Sick sinus syndrome
R42	Dizziness and giddiness
R55	Syncope and collapse

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

Jurisdiction(s): 5, 8	**NCD/LCD Document (s):**
No NCD or Noridian LCD available	

NCD/LCD Document (s):
NA

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	Applicable State/US Territory	Contractor
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC