

Cardiac event monitoring

These services may or may not be covered by your HealthPartners plan. Please see your plan documents for your specific coverage information. If there is a difference between this general information and your plan documents, your plan documents will be used to determine your coverage.

Administrative Process

Prior authorization is required for:

1. Mobile cardiovascular telemetry (MCT),
2. Implantable cardiac loop recorders,

Prior authorization is not required for the following external unattended cardiac monitoring devices:

1. Holter monitors,
2. Ambulatory event monitors (AEM).

Coverage

Indications that are covered for mobile cardiac telemetry (MCT)

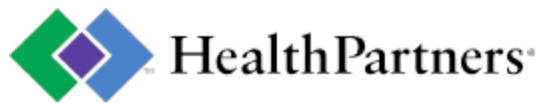
1. MCT is covered when ordered by a cardiologist, electrophysiologist or neurologist (or nurse practitioner or physician assistant (PA) practicing in one of these specialties); and
2. One of A.-E. below is present:
 - A. Unexplained syncope, pre-syncope and / or palpitation;
 - B. Assessment of asymptomatic or symptomatic arrhythmia in patients who are status-post electrophysiology ablation procedure;
 - C. To monitor patient's response to medication prescribed to treat an arrhythmia;
 - D. History of heart transplantation;
 - E. For evaluation of members with suspected atrial fibrillation as a cause of cryptogenic stroke
3. In addition, the medical record must indicate that one of the following applies:
 - A. Suspected cardiac arrhythmia not detected with standard Holter monitor or ambulatory event monitoring. Standard monitoring must have been performed within the past 90 days / during this episode of care. Summary report must be submitted with the prior authorization; or
 - B. Symptoms occur infrequently such that the arrhythmia is unlikely to be diagnosed by Holter (in a 48 hour period) or ambulatory event monitoring.

Indications that are covered for implantable cardiac loop recorders (ILR)

1. ILR is covered for evaluation of symptoms such as syncope, dizziness, palpitation or similar symptoms when ordered by a cardiologist, electrophysiologist or neurologist (or nurse practitioner or physician assistant (PA) or practicing in one of these specialties); and
 - A. A cardiac arrhythmia is suspected as a cause of the symptoms; and
 - B. The medical record indicates that one of the following applies:
 - i. Suspected cardiac arrhythmia is not detected with standard cardiac monitoring (non-implantable ambulatory event monitoring or mobile cardiac telemetry). Standard monitoring must have been performed within the past 90 days / during this episode of care; or
 - ii. Symptoms occur infrequently such that the arrhythmia is unlikely to be diagnosed by standard cardiac monitoring (non-implantable ambulatory event monitoring or mobile cardiac telemetry)
2. ILR is covered for cryptogenic stroke with suspected occult atrial fibrillation as the cause of the stroke when ordered by a cardiologist, electrophysiologist or neurologist (or physician assistant (PA) or nurse practitioner (NP) supervised by a physician in one of these specialties); and
 - A. Suspected cardiac arrhythmia is not detected with standard cardiac monitoring (non-implantable ambulatory event monitoring or mobile cardiac telemetry). Standard monitoring must have been performed within the past 90 days / during this episode of care.

Indications that are not covered

1. LifeWatch Holter Plus MCT Service (ACT Ex) because there is no evidence that reflex testing sequences have better outcomes than standard testing.
2. Mobile phone "apps" that monitor heart rhythm are considered investigational because there is insufficient scientific evidence to prove their clinical value.



Definitions

Cryptogenic stroke is defined as a brain infarction not clearly attributable to a definite cause or origin.

Holter monitor (also known as continuous external unattended cardiac monitoring device). Provides a continuous record of the electrocardiogram for up to 48 hours (some models allow up to 72 hours).

Ambulatory event monitor (AEM, also known as loop recorder) is worn for 20-30 days. These devices may have memory loop recording, auto-triggering and/or patient triggering features.

Next Generation Holter Monitors / ambulatory event monitors, such as:

- iRhythm Zio® Patch is an externalized, single-use monitor. Unlike Holter monitors, this device can be worn during showering and daily activities and remain on the patient for more than 48 hours and up to 14 days.
- CardioNet CardioKey is a long-term cardiac rhythm monitor that provides continuous monitoring for up-to-14 days.

Mobile cardiac telemetry (MCT), (also known as real-time continuous attended cardiac monitoring systems) is offered by a variety of companies, such as, but not limited to, CardioNet Mobile Cardiac Outpatient Telemetry (MCOT®) Service ; and LifeWatch Mobile Cardiac Telemetry(MCT), this type of device is similar to an AEM, with one important difference. The device is completely automatic and requires no patient intervention to either capture or transmit electrocardiographic data. These systems typically use some sort of wireless technology (such as cellular phone networks) to transmit the data to the company's central monitoring facility, where the electrocardiogram is analyzed in real-time. The patient's physician is notified of potentially significant electrocardiographic events based upon criteria prescribed by the physician. Such notification is done daily or even more frequently, and may be delivered by email or fax. Like an AEM, the duration of an MCT study is typically up to 30 days.

Implantable cardiac loop recorder (ILR) –Implantable cardiac loop recorders (ILRs) assess arrhythmias in symptomatic and asymptomatic patients. The device is implanted subcutaneously in the left side of the chest. Such a device provides constant surveillance and both retrospective and prospective ECG data, and may be left in place for up to 3 years. Examples of this device include, but are not limited to, the Reveal® XT LINQ, and the Confirm® RX.

LifeWatch Holter Plus MCT Service (ACT Ex) uses the technology of a 3-channel ambulatory cardiac telemetry platform and remote retrieval of digital Holter data to provide arrhythmia diagnosis. This two part service begins as a 24-48 hour Holter Analysis, and if the Holter is negative, the ACT 3-channel real-time telemetry starts for up to 30 days.

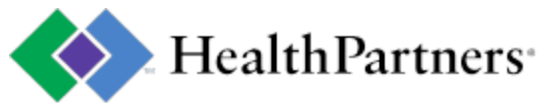
Codes

If available, codes are listed below for informational purposes only, and do not guarantee member coverage or provider reimbursement. The list may not be all-inclusive.

Codes	MCT codes – require prior authorization
93228	External mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; physician review and interpretation with report
93229	External mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible 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 physician prescribed transmission of daily and emergent data reports

Codes	Implantable Loop Recorder codes – require prior authorization
33285	Insertion, subcutaneous cardiac rhythm monitor, including programming.
C1764	Event recorder, cardiac (implantable)

Codes	AEM codes – No prior authorization
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, physician review and interpretation
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)
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 download and analysis
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; physician review and interpretation
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	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
0297T	External electrocardiographic recording for more than 48 hours up to 21 days by continuous rhythm recording and storage; scanning analysis with report.
0298T	External electrocardiographic recording for more than 48 hours up to 21 days by continuous rhythm recording and storage; review and interpretation

Codes	Holter monitor codes – No prior authorization
93224	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; includes recording, scanning analysis with report, physician review and interpretation
93225	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; recording (includes connection, recording, and disconnection)
93226	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; scanning analysis with report
93227	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; physician review and interpretation

CPT Copyright American Medical Association. All rights reserved. CPT is a registered trademark of the American Medical Association.

Products

This information is for most, but not all, HealthPartners plans. Please read your plan documents to see if your plan has limits or will not cover some items. If there is a difference between this general information and your plan documents, your plan documents will be used to determine your coverage. These coverage criteria may not apply to Medicare Products if Medicare requires different coverage. For more information regarding Medicare coverage criteria or for a copy of a Medicare coverage policy, contact Member Services at 952-883-7979 or 1-800-233-9645.

Approved Medical Director Committee 3/25/10; Published 4/1/10; Prior approval effective 7/1/10; Revised 10/15/10, 1/1/11, 1/26/11, 4/6/11; 7/5/11, 9/28/11, 3/1/14, 10/27/14, 3/10/15, 4/21/17, 4/20/18; Annual Review 4/2011, 4/2012, 4/2013, 3/1/14, 10/2014. 3/2015, 3/2016, 3/2017, 3/2018, 3/2019.

References

1. Afazl, M. R., Gunda, S., Waheed, S., Sehar, N., Maybrook, R. J., Dawn, B., & Lakkireddy, D. (2015). Role of outpatient cardiac rhythm monitoring in cryptogenic stroke: A systematic review and Meta-Analysis. *Pacing and Clinical Electrophysiology*, 38(10), 1236–1245. doi:10.1111/pace.12688.
2. American Heart Association Councils on clinical cardiology, cardiovascular nursing, cardiovascular disease in the young, and stroke, and the Quality of Care and Outcomes Research Interdisciplinary Working Group; and the American College of Cardiology Foundation. In collaboration with the Heart Rhythm Society. Endorsed by the American Autonomic Society, Strickberger, S. A., Benson, W., Biaggioni, I., Callans, D. J., Cohen, M. I., Ellenbogen, K. A., ... Sila, C. A. (2006). AHA/ACC scientific statement on the evaluation of syncope. *Circulation*, 113, 316*327.
3. Benditt, D. Syncope in adults: Clinical manifestations and diagnostic evaluation. In: UpToDate, Kowey, P. and Hockberger, RS (Eds), UpToDate, Waltham, MA. (Accessed on February 11, 2019.)
4. Calkins H, Brugada J, Packer DL, et al. European Heart Rhythm Association (EHRA); European Cardiac Arrhythmia Society (ECAS); American College of Cardiology (ACC); American Heart Association (AHA); Society of Thoracic Surgeons (STS). HRS/EHRA/ECAS expert Consensus Statement on catheter and surgical ablation of atrial fibrillation: recommendations for personnel, policy, procedures and follow-up. A report of the Heart Rhythm Society (HRS) Task Force on catheter and surgical ablation of atrial fibrillation. *Heart Rhythm*. 2007;4(6):816-861.

5. Caplan, LR. Overview of the evaluation of stroke. In: UpToDate, Kasner, SE (Ed), UpToDate, Waltham, MA. (Accessed on February 13, 2019.)
6. ECRI Institute. (2014). Mobile Cardiac Outpatient Telemetry for Detecting Arrhythmias. Plymouth Meeting, PA: ECRI Institute.
7. Favilla, C. G., Ingala, E., Jara, J., Fessler, E., Cucchiara, B., Messé, S. R., ... & Kasner, S. E. (2015). Predictors of finding occult atrial fibrillation after cryptogenic stroke. *Stroke*, 46(5), 1210-1215.
8. Galli, A., Ambrosini, F., & Lombardi, F. (2016). Holter monitoring and loop recorders: from research to clinical practice. *Arrhythmia & Electrophysiology Review*, 5(2), 136-143.
9. Gladstone, D. J., Spring, M., Dorian, P., Panzov, V., Thorpe, K. E., Hall, J., ... & Sharma, M. (2014). Atrial fibrillation in patients with cryptogenic stroke. *New England Journal of Medicine*, 370(26), 2467-2477.
10. Hayes, Inc. Hayes Health Technology Brief. Implantable Cardiac Loop Recorders for Detection of Atrial Fibrillation Following Cryptogenic Stroke. Lansdale, PA: Hayes, Inc.; June, 2017, Reviewed June 2018
11. Hayes, Inc. Hayes Health Technology Brief. Mobile Cardiac Outpatient Telemetry (MCOT) CardioNet Ambulatory ECG Monitor; CardioNet Inc.) for Home Monitoring of Cardiac Patients. Lansdale, PA: Hayes, Inc.; September, 2011. Reviewed October, 2013; Archived October, 2014.
12. Hayes, Inc. Hayes Health Technology Brief. Zio Patch iRhythm Technologies Inc.) Long-Term Ambulatory Cardiac Rhythm Monitoring. Lansdale, PA: Hayes, Inc. February 2019.
13. Hayes, Inc. Hayes Medical Technology Directory Report. Implantable Cardiac Loop Recorders for Diagnosis and Management of Syncope in Adults. Lansdale, PA: Hayes, Inc.; March, 2016 Reviewed March, 2018.
14. Lee, R., Mittal, S., (2018), Utility and limitations of long-term monitoring of atrial fibrillation using an implantable loop recorder, *Heart Rhythm*, Volume 15, Issue 2, Pages 287-295.
15. Podrid, P. J. Ambulatory ECG monitoring. In: UpToDate, Zimetbaum, P. J. (Ed), UpToDate, Waltham, MA. (Accessed on February 4, 2019.)
16. Raviele, A., Giada, F., Bergfeldt, L., Blanc, J. J., Blomstrom-Lundqvist, C., Mont, L., ... Viskin, S. (2011). Management of patients with palpitations: a position paper from the European Heart Rhythm Association. *Europace*, 13, 920-934.
17. Rothman, S. A., Laughlin, J. C., Seltzer, J., Walia, J. S., Baman, R. I., Siouffi, S. Y., ... & Kowey, P. R. (2007). The diagnosis of cardiac arrhythmias: a prospective multicenter randomized study comparing mobile cardiac outpatient telemetry versus standard loop event monitoring. *Journal of cardiovascular electrophysiology*, 18(3), 241-247.
18. Sanna, T., Diener, H. C., Passman, R. S., Di Lazzaro, V., Bernstein, R. A., Morillo, C. A., ... & Lindborg, K. (2014). Cryptogenic stroke and underlying atrial fibrillation. *New England Journal of Medicine*, 370(26), 2478-2486.
19. Sposato, L. A., Cipriano, L. E., Saposnik, G., Vargas, E. R., Riccio, P. M., & Hachinski, V. (2015). Diagnosis of atrial fibrillation after stroke and transient ischaemic attack: a systematic review and meta-analysis. *The Lancet Neurology*, 14(4), 377-387.
20. Task Force for the Diagnosis and Management of Syncope; European Society of Cardiology (ESC); European Heart Rhythm Association (EHRA); Heart Failure Association (HFA); Heart Rhythm Society (HRS), Moya, A., Sutton, R., Ammirati F., Ammirati, F., Blanc, J. J., Brignole, M., Dahm, J. B., ... Wieling, W. Guidelines for the diagnosis and management of syncope (version 2009). *European Heart Journal*, 30(21), 2631-2671.
21. Task Force of the European Heart Rhythm Association, Brignole, M., Vardas, P., Hoffman, E., Huikuri, H., Moya, A., Ricci, R., ... Wieling, W. (2009). Indications for the use of diagnostic implantable and external ECG loop recorders. *Europace*, 11, 671-687.
22. Zimetbaum, P. J. Overview of palpitations in adults. In: UpToDate, Aaronson, M. D., & Melin, J. A. (Eds), UpToDate, Waltham, MA. (Accessed on February 13, 2019).