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FROM ED TO HOME

BEST PRACTICES FOR COLLABORATIVE
MCOT IMPLEMENTATION FOR
INTERDEPARTMENTAL CARE

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CV BUSINESS WHITE PAPER

With Support From: **PHILIPS**

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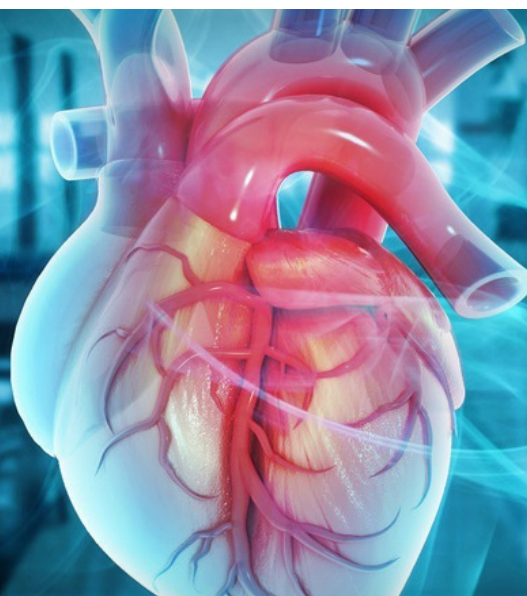
INTRODUCTION

In today's healthcare landscape, cardiovascular service lines face increasing pressure to reduce hospital admissions while maintaining high-quality patient care. Syncope and atrial fibrillation hospitalizations remain a significant source of admissions and healthcare burden. Syncope alone accounts for more than one million emergency department (ED) visits per year in the U.S., accounting for approximately 1% of annual ED visits.¹

ED providers face significant challenges preventing unnecessary admissions for common complaints such as syncope and palpitations. While concerning, these symptoms often have benign causes, making it difficult to confidently rule out severe conditions in a more acute ED environment. Additionally, EDs are contending with increased patient volumes, staffing and resource shortages, staff burnout, overcrowding, extended length of stay (LOS), patients leaving without being seen, and frequent ED visits.

One technology that can enhance the post-ED discharge capabilities is Philips Mobile Cardiac Telemetry – MCOT.* While MCOT is not approved for use within the ED itself, it can be utilized to monitor a patient following an in-patient stay or ED evaluation to transition patients into the proper care pathway. By enrolling patients on MCOT post discharge, EDs can improve capacity and patient throughput, allowing for more efficient use of resources while maintaining a higher continuity of care for their patients.

This CV business white paper aims to provide healthcare administrators with a comprehensive overview of the best practices when utilizing MCOT in the ED post-discharge setting. It also provides a detailed analysis of the operational, quality and financial factors that should be considered when evaluating the implementation of this technology.



* Philips Mobile Cardiac Telemetry (MCOT) includes the MCOT device with SmartDetect algorithm. MCOT supports MCT and Cardiac Event services, which include an end of service report, technician electrocardiogram review, and urgent/emergent notification of detected cardiac events when appropriate.

Overview of Philips Mobile Cardiac Telemetry – MCOT

Philips MCOT offers up to 30 days of connected^{**} monitoring and provides notifications for urgent and emergent events, along with reports that deliver data and insights to support clinical decision-making. Urgent and emergent notifications and actionable reports provide data and insights to accelerate confident, cardiac care and helps healthcare providers diagnose and intervene earlier.† While Philips MCOT's potential benefits in the post-ED discharge setting are promising, it is essential to carefully evaluate the operational, quality and economic implications. Healthcare administrators who may not be familiar with the clinical details of MCOT may benefit from exploring the practical considerations, potential impact on patient outcomes and cost-effectiveness² of this technology to make informed decisions about its adoption and integration into the ED workflow.

A Multifaceted Solution

To address this challenge, cardiovascular service lines need to implement a solution that encompasses several key aspects:

- Evidence-based approach.
- Patient-centered care.
- Diagnostic and resource efficiency.
- Addressing avoidable admissions.
- Cost-effectiveness.
- Multidisciplinary collaboration.

Strategic Planning

In crafting a comprehensive and effective program, early collaboration in the planning process is paramount. The identification and engagement of key operational and clinical leaders as champions are essential elements for successful program development and implementation. Of particular importance is the establishment of a close working relationship between electrophysiology (EP) specialists and ED champions. This interdisciplinary approach ensures that the initiative benefits from diverse expertise, fostering a holistic perspective that addresses both the technical intricacies of EP and the urgent care dynamics of the ED. By leveraging these collaborative synergies from the outset, the program is better positioned to overcome potential challenges, streamline processes, and ultimately improve patient outcomes and operational efficiencies.

Key representatives include:

Cardiology provider champion (EP advanced practice provider [APP] with physician oversight).

- ED physician champion.
- Cardiology leadership.
- Ancillary staff.
- Quality coordinators.
- IT personnel.
- Philips representatives.



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- The EP APPs and ED physician champions are crucial in coordinating efforts and educating on the clinical aspects of syncope.

^{**} Connected does not mean continuous data transmission. Data receipt and processing may be impacted by a variety of factors, including cellular, Bluetooth connection and wireless transmission. Please see the product labeling [MCOT Product Labeling](#) for more information.

† Compared to Philips extended Holter.

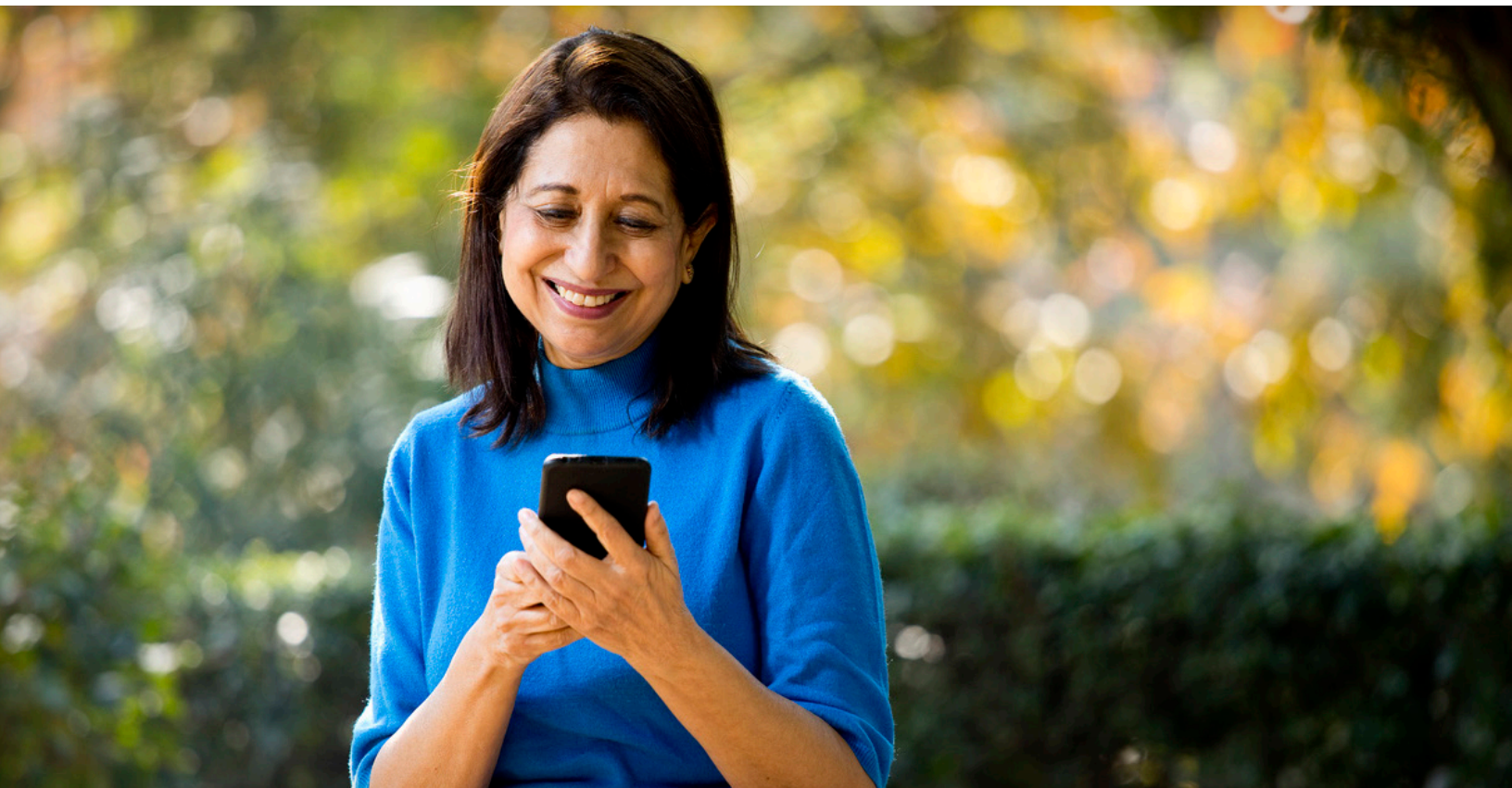
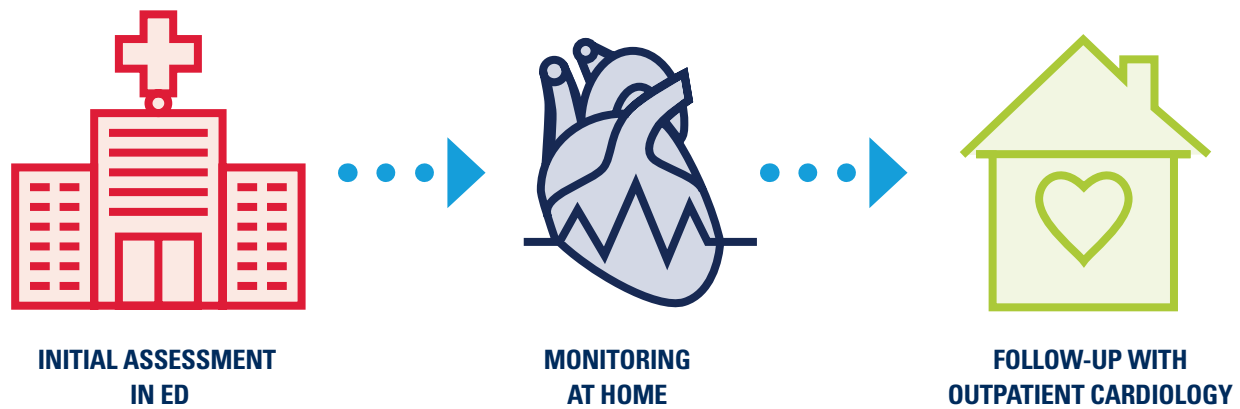
Clinical Pathway Development: A Three-Phase Approach

The team will need to develop a comprehensive clinical pathway that addresses each phase of patient care (**Figure 1**). The pathway should be integrated into current workflows to minimize disruptions as much as possible. This pathway should clearly delineate responsibilities and processes across the ED, home monitoring and outpatient cardiology settings.

It is vital to develop a process for discharging a patient from the ED with two key interventions:

1. MCOT with up to 30 days of monitoring,
2. Follow-up appointment with cardiology in two to three days.

Figure 1. Clinical Pathway Development



1 Initial Assessment in the ED: Optimizing MCOT Implementation

Target Population Identification

Identify patients whose conditions often resulted in syncope or loss of consciousness, leading to unnecessary hospitalizations. Use your data to identify your population and focus on:

- Vasovagal syncope.
- Dysautonomia.
- Palpitations.
- Dehydration.
- Unexplained falls.
- Atrial fibrillation or other arrhythmias.

Streamlined Communication and Workflow Integration

To streamline the patient enrollment and device management processes and minimize disruptions to the ED workflow, establish clear communication channels between cardiology, ED, Philips and other care providers involved in patient care. This ensures this process is an established part of the ED discharge pathway.

The enrollment process involves several key steps:

1. Provider orders: MCOT and follow-up at the cardiology clinic.
2. Patient education on the device.
3. Registration in the device system.
4. Patient discharge from the ED with the MCOT device kit.
5. Transfer of care to the outpatient cardiology clinic.

2 Home Monitoring: Ensuring Successful Remote Cardiac Monitoring

Patient Education and Preparation

Comprehensive patient and caregiver education is crucial for the successful implementation of MCOT at home. A proactive approach to training significantly reduces the risk of incorrect device application and improves adherence to the monitoring protocol.

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- ✓ Create a quick reference guide for ED providers and team members to aid in patient selection.
- ✓ Create an order set within the electronic health record (EHR) to reduce clicks.
- ✓ Utilize the ED nurse to educate the patient about the device and its usage while the charge nurse, ED administrative assistant or technician registers it.
- ✓ Use of vendor's standardized education materials.
- ✓ Divide responsibilities among ED team members to facilitate efficiency and job satisfaction.
- ✓ Clearly define roles and responsibilities for each step of the process.
- ✓ Provide patients with the MCOT device kit for at-home application.
- ✓ Use of vendor's dedicated helpline for patients needing assistance with set-up.

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- ✓ Develop standardized education materials (consider video tutorials).
- ✓ Offer a dedicated helpline for patients needing assistance with set-up.

Technical Support and Troubleshooting

Establishing a robust support system is essential for addressing technical issues and patient questions promptly. This support structure should be easily accessible and available 24/7 to ensure continuous monitoring.

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- ✓ Partner with the device manufacturer to provide dedicated technical support.
- ✓ Establish a dedicated phone line in the ED for discharged patients.
- ✓ Develop a frequently asked questions document addressing common problems and solutions.

Monitoring Patient Activation and Compliance

Patient compliance and device activation can be challenging aspects of home monitoring. Implementing a proactive process to address non-activation or interruption in transmission is crucial for maintaining the integrity of the monitoring program.

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- ✓ Implement a follow-up protocol for patients who have not activated their devices within 24 hours of discharge.
- ✓ Conduct regular check-ins with patients to ensure proper device usage and address any concerns.
- ✓ Utilize data analytics to identify trends in non-compliance and develop targeted interventions.

Enhancing Patient Experience and Engagement

Creating a positive patient experience is key to ensuring long-term compliance and successful monitoring outcomes.



3 Follow-up With Outpatient Cardiology: Streamlining Post-ED Care

Order Management and Communication

Ensuring a seamless transition from the ED to outpatient cardiology is crucial for continuity of care. Implementing a robust order management system is essential for this process.

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- ✓ Utilize the EHR for closed-loop communication between the ED and outpatient cardiology.
- ✓ Implement automated alerts within the EHR to notify outpatient cardiology of new MCOT orders.
- ✓ Establish a clear pathway for order receipt and confirmation.
- ✓ Conduct regular audits to ensure all orders are properly received and processed.

Patient Scheduling and Device Activation

Timely follow-up is critical for patients discharged with MCOT. Efficient scheduling and device activation processes are key to assisting patients in successfully completing their service.

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- ✓ Aim for appointment scheduling with their primary care physician or cardiologist within two to three days of the patient's ED presentation.
- ✓ Reserve specific appointment slots for MCOT follow-ups.
- ✓ Implement a streamlined process for device activation in the outpatient setting.
- ✓ Establish a protocol for submitting prior authorizations promptly.

Data Monitoring and Interpretation

Effective management of MCOT data is helpful for intervention and patient care.

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- ✓ Utilize dedicated device clinics for outpatient monitoring.
- ✓ Ensure sufficient resources and well-defined workflows for device management.
- ✓ Establish clear escalation processes for critical findings.
- ✓ Implement regular training sessions for staff on data interpretation and management.

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- ✓ Implement an APP-led approach with physician oversight.
- ✓ Collaborate with the ED to forecast appointment needs and adjust staffing accordingly.
- ✓ Consider appointing a dedicated intake coordinator to manage the patient intake process.
- ✓ Regularly assess workload and adjust staffing levels as needed.

By implementing these comprehensive strategies, outpatient cardiology departments can ensure efficient, high-quality follow-up care for patients discharged from the ED with MCOT, leading to a 38% lower risk for emergency readmissions.***



*** In a retrospective study of 2,244 stroke hospitalizations, patients monitored with MCOT had a 38% lower risk of emergency readmissions for ischemic stroke. (MCOT 6.8% vs. ILR 10.6%, HR: 1.60, 95% CI: 1.18 - 2.17, p=.002). Philips claim #182. Claim #182

Implementation

The implementation of Philips Mobile Cardiac Telemetry – MCOT can be piloted and then rolled out in phases to ensure smooth integration and adequate staff training. A phased approach allows for adjustments based on pilot results and facilitates the gradual adoption of the new workflow.

- **Pilot Phase:** Starting with a small, selected group of ED providers.
 - ✓ Test with the select group of patients as identified.
- **Phased Rollout:** Gradually expand to more providers/clinical presentations.
 - ✓ Ensures a smooth integration and adequate staff training.
 - ✓ Allows for adjustments based on pilot results.
 - ✓ Facilitates the gradual adoption of the new workflow.
- **Staff Engagement and Adoption**
 - ✓ Effective communication with staff is essential for managing clinical change and workflow adjustments.
 - ✓ Initial training sessions will help staff embrace the new process.
 - ✓ As trust in the process grows, referrals from the ED will also increase.
 - ✓ Over time, sometimes in only three to six months, providers and nurses recognize the ease and effectiveness of the process for patients.
 - ✓ Routinely integrated into the ED discharge pathway.

Staff Training and Education

One major challenge can be obtaining buy-in from ED staff. Comprehensive education on symptom identification and management, appropriate lab orders, electrocardiogram interpretation, physical assessments and orthostatic vitals from cardiology can help address this. Education opportunities can be time well spent in building trust and ensuring the ED team is comfortable with the new process.

- ✓ Develop APP-led sessions on clinical symptom presentation and management.
- ✓ Incorporate into onboarding for new team members and providers.
- ✓ Conduct in-service sessions with MCOT product demonstrations.
- ✓ Develop online learning modules for convenient access and utilize Philips training resources.
- ✓ Offer face-to-face training sessions for hands-on experience and immediate feedback.
- ✓ Maintain open lines of communication with the team.
- ✓ Provide ongoing support and refresher training as needed.

By implementing this structured and multifaceted approach to education and training, healthcare organizations can ensure that ED staff are well-prepared to integrate MCOT into their workflow. This comprehensive strategy enhances patient care, improves operational efficiency, and fosters a culture of continuous improvement in cardiac care delivery.



Ongoing Monitoring and Performance Evaluation

Implementing robust quality assurance measures is crucial for the ongoing success and improvement of the program. A comprehensive approach to quality improvement management ensures high-quality patient care, operational efficiency and financial stability. This approach integrates formal methodologies with a culture of continuous improvement.

1. Regular Audits and Reviews

- ✓ Conduct systematic audits at 30-, 60- and 90-day intervals to assess documentation accuracy, billing processes and overall program performance.
- ✓ Review patient outcomes, operational metrics and financial impacts on a monthly basis.
- ✓ Analyze compliance rates and patient outcomes to identify trends and areas for improvement.

2. Continuous Feedback Loop

- ✓ Establish a robust feedback mechanism between the ED and outpatient cardiology to refine the referral process.
- ✓ Implement regular interdepartmental meetings to discuss program performance and address any challenges.

3. Patient Outcome Monitoring

- ✓ Track key performance indicators (KPIs) such as readmission rates, time to diagnosis and patient satisfaction scores.
- ✓ Regularly review these metrics to adjust protocols and improve patient care.
- ✓ Utilize data analytics to identify patterns and predict potential issues before they occur.

4. Stakeholder Feedback

- ✓ Solicit and analyze feedback from patients, staff and healthcare providers through surveys, focus groups and one-on-one interviews.
- ✓ Use this feedback to drive continuous improvement.
- ✓ Implement a suggestion system for staff to contribute ideas for process improvement.

5. Interdepartmental Collaboration

- ✓ Ensure cardiology expertise is readily available to the ED, particularly during peak hours.
- ✓ Foster collaboration between departments to enhance continuity of care and timely interventions.
- ✓ Develop cross-functional teams to address complex cases and system-wide improvements.

6. Data-Driven Decision-Making

- ✓ Leverage MCOT data to inform clinical decision-making.
- ✓ Use data analytics to identify avoidable admissions and optimize resource allocation.
- ✓ Regularly review performance reports with device manufacturers to stay updated on the latest metrics and benchmarks.

7. Continuous Education and Training

- ✓ Provide ongoing education and training for staff on MCOT best practices and process improvements.
- ✓ Keep staff informed about the latest developments in cardiac monitoring and relevant clinical guidelines.
- ✓ Encourage professional development and certification in relevant areas of expertise.

8. Technology Optimization

- ✓ Explore new features or upgrades that could enhance patient care.
- ✓ Ensure seamless integration of MCOT data with existing EHR systems.
- ✓ Stay informed about emerging technologies in cardiac monitoring and evaluate their potential benefits.

By adhering to these best practices and maintaining a commitment to continuous improvement, healthcare organizations can ensure that their Philips programs deliver high-quality care, operational efficiency and financial sustainability. This approach not only enhances patient outcomes but also positions the organization as a leader in innovative cardiac care delivery.

Key Benefits for Using Philips Mobile Cardiac Telemetry – MCOT

- **Can Help to Improve Patient Outcomes**
 - Enhances earlier detection of cardiac events.⁵
 - Reduces risk of readmission.⁵
 - Improves patient experience and engagement with their own healthcare.
- **Enhanced Clinical Decision-Making and Care Coordination**
 - Provides prompt analysis to healthcare providers.
 - Improves communication and collaboration between the ED and other care providers.
- **Increased Operational Efficiency**
 - Improves ED capacity and resource utilization.
 - Streamlines patient flow and throughput in the ED.
 - Potential for increased patient volume and capacity.
- **Cost Effectiveness**
 - Potential cost savings from reduced ED visits, hospital admissions, readmissions and LOS.⁵

Economic Benefit and Value Proposition

Implementing an MCOT program requires careful planning and a clear understanding of its value proposition.

The value proposition of the MCOT is multifaceted. First, it can enhance time efficiency by streamlining processes, resulting in significant time savings for both patients and healthcare providers. This efficiency contributes to improved patient satisfaction, as individuals receive appropriate care. The economic benefit can be realized through direct savings from avoided hospital admissions.^{***} Additional positive economic outcomes can result from improvements in quality of care, such as enhanced diagnostic accuracy, which contribute to long-term patient outcomes.

Prescribing MCOT post-ED discharge can effectively balance clinical outcomes and economic value. This approach aligns with broader organizational goals of improving patient care and maintaining operational efficiency.



^{***} In a retrospective study of 2,244 stroke hospitalizations, patients monitored with MCOT had a 38% lower risk of emergency readmissions for ischemic stroke. (MCOT 6.8% vs. ILR 10.6%, HR: 1.60, 95% CI: 1.18 - 2.17, p=.002). Philips claim #182. Claim #182

KEY TAKEAWAYS FOR SUCCESS

1. Integrate MCOT into existing ED pathways.
2. Ensure timely access to cardiology appointments (two to three days after initial contact).
3. Implement EHR integration and closed-loop communication.
4. Continuously review processes and outcomes.
5. Foster collaboration and communication between departments.

CONCLUSION

MCOT has emerged as a critical component of cardiac care, offering a promising solution for managing patients in the outpatient setting with syncope, palpitations and other cardiac concerns. Recent studies have validated MCOT's effectiveness in detecting arrhythmias and providing data and insights to accelerate confident cardiac care.²

The implementation of MCOT has demonstrated significant benefits:

1. **Improved Diagnostic Accuracy:** MCOT has shown exceptional detection, high diagnostic yield and up to 30-days of monitoring duration compared to traditional monitoring methods.^{***}
2. **Cost-Effectiveness:** Studies have revealed that MCOT can lead to substantial cost savings, particularly in post-discharge monitoring for conditions like post-cryptogenic stroke.^{3,4} Patients monitored with MCOT following stroke had significantly lower cost of total care than those monitoring with ILR.²
3. **Lower Risk for Emergency Readmission:** Patients monitored with MCOT had a 38% lower risk for emergency readmission for ischemic stroke than those monitored with ILR.^{***}

By implementing a well-designed clinical pathway that integrates MCOT and fostering interdepartmental collaboration, cardiovascular service lines can significantly improve patient care, reduce costs and enhance overall efficiency. The success of MCOT programs hinges on factors such as seamless integration into existing workflows, ensuring rapid access to follow-up care, and leveraging data analytics for continuous improvement.

As healthcare continues to evolve, innovative approaches like MCOT will play an increasingly important role in delivering high-quality, patient-centered care while optimizing resource utilization. Cardiovascular service lines that embrace these technologies and processes will be well-positioned to meet the challenges of tomorrow's healthcare landscape, balancing clinical excellence with fiscal responsibility.

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REFERENCES

1. Mazzella AJ, Wood BS, Doad J, et al. Interhospital variability in hospital admissions for patients with low-risk syncope presenting to the emergency department. *Heart Rhythm O2*. 2024;5(7):435-443.
2. Norlock V, Vazquez R, Dunn A, et al. Comparing the outcomes and costs of cardiac monitoring with implantable loop recorders and mobile cardiac outpatient telemetry following stroke using real-world evidence. *J Comp Eff Res*. 2024;13(6):e240008.
3. Piccini JP, Mittal S, Snell J, et al. Costs and outcomes of mobile cardiac outpatient telemetry monitoring post-transcatheter aortic valve replacement. *J Comp Eff Res*. 2022;11(12):857-864.
4. Mittal S, Movsowitz C, Steinberg JS, et al. The value of mobile cardiac outpatient telemetry (MCOT) in the early detection and treatment of atrial fibrillation in post-cryptogenic stroke patients. *J Am Heart Assoc*. 2022;11(10):e024345.

RELATED RESOURCES

- Kitsiou S, Paré G, Jaana M, Gerber B. Patient satisfaction with a multisite, multiregional remote patient monitoring program for acute and chronic condition management. *J Med Internet Res*. 2023;25:e36723
- American Medical Association. How Telemedicine Helped This Health System's Patients Avoid the ED. *AMA-ASSN.org*. Published July 10, 2024. Accessed July 11, 2024. <https://www.ama-assn.org/practice-management/digital/how-telemedicine-helped-health-system-s-patients-avoid-ed>.
- Derkac WM, Finkelmeier JR, Horgan DJ, Hutchinson MD. Diagnostic yield of asymptomatic arrhythmias detected by mobile cardiac outpatient telemetry and auto trigger looping event cardiac monitors. *J Cardiovasc Electrophysiol*. 2017;28(12):1475-1478.



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