

REAL-TIME REMOTE MONITORING PRE- AND POST-SURGICAL PROCEDURE WITH COALA

RATIONALE FOR PATIENT MONITORING

Research has shown that approximately 20% of patients that undergo cardiac surgery are readmitted to the hospital within 60 days. New-onset arrhythmias are a common problem following cardiothoracic surgery and represent a major source of morbidity and mortality.

Following infection, arrhythmias are the second most common cause of readmission within 30 days. Arrhythmias are also common following major non-cardiac surgery. Patients with atrial fibrillation have higher odds for stroke following surgery.

Real-time ambulatory monitoring offers novel abilities to remotely monitor surgical patients pre- and post-procedure.

THE MONITORING EQUIPMENT

The Coala Heart Monitor (“Coala”) is a unique patient-empowered innovation enabling real-time diagnostic-quality ECG reporting and analysis, paired with the capability of digital sound recordings of both the heart and lungs.

The Coala platform consists of the Coala device, the Coala App, the Coala cloud (analysis), and the Coala Care Healthcare provider portal.

PATIENT SELECTION

Patients who may be at risk of arrhythmias pre- or post-procedure, and patients that have a personal smartphone.

AMBULATORY MONITORING OBJECTIVES

- 1. Reduce readmissions and improve Outcomes** – alerts in real-time if the patient develops arrhythmias. This enables early intervention for rhythm related issues, helps to reduce unnecessary hospital/ER visits and shortens time in hospital due to early intervention.
- 2. More comprehensive clinical data** – by monitoring prior to procedure the patient’s baseline rhythms can be recorded to identify potential surgical risks. Post-operative monitoring provides data to identify any changes or risks, and ensure medication is not causing any adverse effects.
- 3. Improve Patient Experience** – reduce patient anxiety with real-time feedback and tether to healthcare provider.

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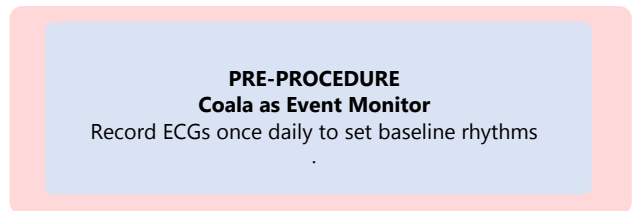
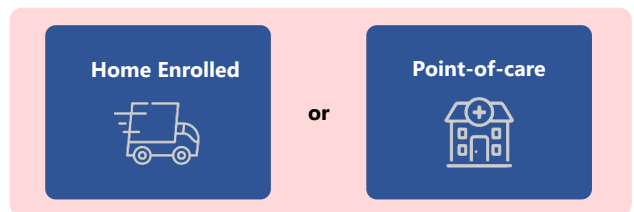
CLINICAL WORK FLOW



Patient

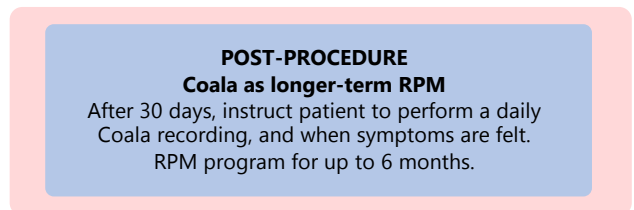
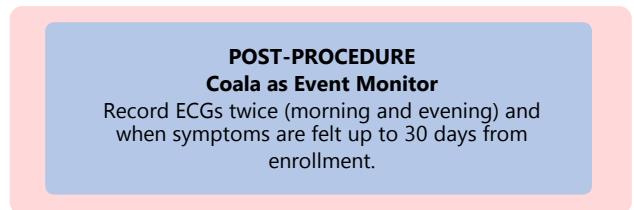
PRE-PROCEDURE

1. On initiation of new Coala program in your clinic first define the Event Monitor Notification Criteria's with the 24/7 Monitoring Center. Email notification to Arrhythmia@slhv.com or Fax 314-653-3679.
2. Register new Patient in Coala Care. When surgery is scheduled, order Coala Heart Monitor as 30-day Event Monitor with Hook-up either Point-of-care or by Home Enrollment. If Home Enrolled, patient will receive Coala Heart Monitor within a few days and will be instructed remotely how to get started.
3. Instruct patient to record with the Coala once daily for pre-procedure baseline rhythms.



POST-PROCEDURE

1. Post-surgery and discharge, instruct patient to perform two daily Coala recordings (mornings, evenings) and when symptoms are felt.
2. After 30-days of initial enrolment, use the ability to extend patient to a RPM program. Instruct patient to perform one daily recording, and when symptoms are felt, for an additional 30-60 days.
3. Patient data can be accessed remotely in real-time from Coala Care Portal. Instruct nurse or MA to check patient progress and data on a daily basis. Send patient reminders if needed.



END OF MONITORING

Generate final ECG report in Coala Care. Review and store. Patient returns monitor to clinic or to Coala Life in provided return envelope (if Home Enrolled). Bill applicable codes.



Real-time patient follow-up

REFERENCES

1. Tribarne A et al. Readmissions after cardiac surgery: Experience of the national institutes of health/canadian institutes of health research cardiothoracic surgical trials network. *Ann. Thorac. Surg.* 2014;98:1274-1280.
2. Peretto, G. et al. Postoperative arrhythmias after cardiac surgery: incidence, risk factors, and therapeutic management. *Cardiol. Res. Pract.* (2014).
3. Walsh SR et al. Postoperative Arrhythmias in General Surgical Patients. *Ann R Coll Surg Engl.* 2007;89(2):91-95.
4. Gialdini G et al. Perioperative Atrial Fibrillation and the Long-term Risk of Ischemic Stroke. *JAMA.* 2014;312(6):616-622