Cardiac Monitoring Policy

NSW HEALTH | REDESIGN

October 2008

Better patient journeys for cardiology patients across NSW

Cardiac monitoring is a routine activity which is carried out in hospitals throughout NSW.

Over time individual hospitals have developed a range of protocols and standards for cardiac monitoring. This has resulted in variance in practice between hospitals and between Area Health Services

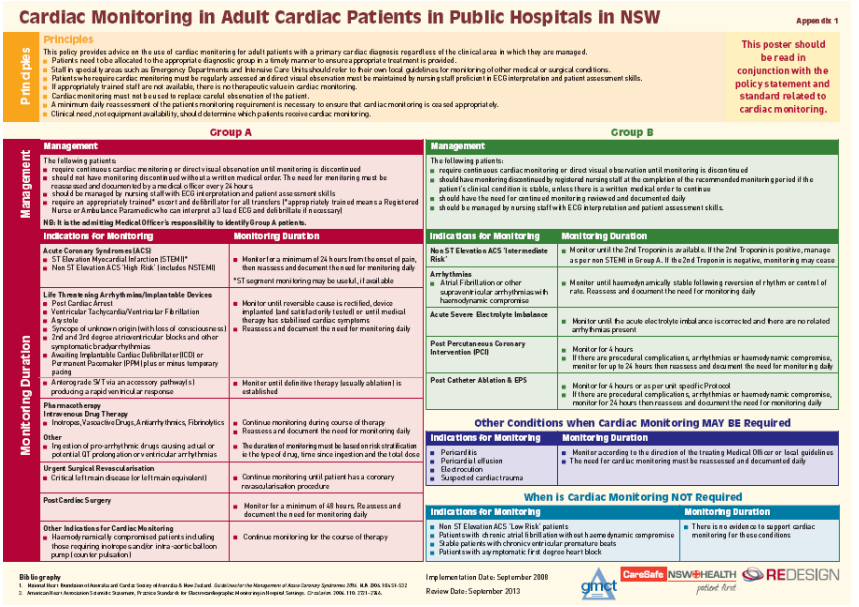
This Policy has been developed using the available evidence to assist clinicians to provide best practice in the management of adult cardiac patients who require cardiac monitoring.

The policy represents the recommended minimum standards for cardiac monitoring for adult patients with a primary cardiac diagnosis regardless of the clinical area in which they are managed.

Benefit for Patients

Compliance with the policy will improve patient outcomes and timely discharge through the appropriate use of cardiac monitoring in public hospitals in NSW.

This work has resulted from a collaboration between the State-wide Cardiology Redesign Project and the GMCT Cardiac Network



Cardiac Monitoring in Adult Cardiac Patients in Public Hospitals in NSW

Appendix 1

Principles

This policy provides advice on the use of cardiac monitoring for adult patients with a primary cardiac diagnosis regardless of the clinical area in which they are managed.

- Patients need to be allocated to the appropriate diagnostic group in a timely manner to ensure appropriate treatment is provided.
- Staff in specialty areas such as Emergency Departments and Intensive Care Units should refer to their own local guidelines for monitoring of other medical or surgical conditions.
- Patients who require cardiac monitoring must be regularly assessed and direct visual observation must be maintained by nursing staff proficient in ECG interpretation and patient assessment skills.
- If appropriately trained staff are not available, there is no therapeutic value in cardiac monitoring.
- Cardiac monitoring must not be used to replace careful observation of the patient.
- A minimum daily reassessment of the patients monitoring requirement is necessary to ensure that cardiac monitoring is ceased appropriately.
- Clinical need, not equipment availability, should determine which patients receive cardiac monitoring.

This poster should be read in conjunction with the policy statement and standard related to cardiac monitoring.

Group A

Management

The following patients:
- require continuous cardiac monitoring or direct visual observation until monitoring is discontinued
- should not have monitoring discontinued without a written medical order. The need for monitoring must be reassessed and documented by a medical officer every 24 hours
- should be managed by nursing staff with ECG interpretation and patient assessment skills
- require an appropriately trained* escort and defibrillator for all transfers (*appropriately trained means a Registered Nurse or Ambulance Paramedic who can interpret a 3 lead ECG and defibrillate if necessary)

NB: It is the admitting Medical Officer's responsibility to identify Group A patients.

Monitoring Duration

Indications for Monitoring	Monitoring Duration
Acute Coronary Syndromes (ACS) ■ ST Elevation Myocardial Infarction (STEMI)* ■ Non ST Elevation ACS 'High Risk' (includes NSTEMI)	■ Monitor for a minimum of 24 hours from the onset of pain, then reassess and document the need for monitoring daily *ST segment monitoring may be useful, if available
Life Threatening Arrhythmias/Implantable Devices ■ Post Cardiac Arrest ■ Ventricular Tachycardia/Ventricular Fibrillation ■ Asystole ■ Syncope of unknown origin (with loss of consciousness) ■ 2nd and 3rd degree atrioventricular blocks and other symptomatic bradyarrhythmias ■ Awaiting Implantable Cardiac Defibrillator (ICD) or Permanent Pacemaker (PPM) (plus or minus temporary pacing	■ Monitor until reversible cause is rectified, device implanted (and satisfactorily tested) or until medical therapy has stabilised cardiac symptoms ■ Reassess and document the need for monitoring daily
■ Anterograde ΔV Tract an accessory pathway(s) producing a rapid ventricular response	■ Monitor until definitive therapy (usually ablation) is established
Pharmacotherapy Intravenous Drug Therapy ■ Inotropes, Vasoactive Drugs, Antiarrhythmics, Fibrinolytics Other ■ Ingestion of pro-arrhythmic drugs causing actual or potential QT prolongation or ventricular arrhythmias	■ Continue monitoring during course of therapy ■ Reassess and document the need for monitoring daily ■ The duration of monitoring must be based on risk stratification to the type of drug, time since ingestion and the total dose
Urgent Surgical Revascularisation ■ Critical left main disease (or left main equivalent)	■ Continue monitoring until patient has a coronary revascularisation procedure
Post Cardiac Surgery	■ Monitor for a minimum of 48 hours. Reassess and document the need for monitoring daily
Other Indications for Cardiac Monitoring ■ Haemodynamically compromised patients including those requiring inotrope s and/or intra-aortic balloon pump (counter pulsation)	■ Continue monitoring for the course of therapy

Group B

Management

The following patients:
- require continuous cardiac monitoring or direct visual observation until monitoring is discontinued
- should have monitoring discontinued by registered nursing staff at the completion of the recommended monitoring period if the patient's clinical condition is stable, unless there is a written medical order to continue
- should have the need for continued monitoring reviewed and documented daily
- should be managed by nursing staff with ECG interpretation and patient assessment skills.

Indications for Monitoring	Monitoring Duration
Non ST Elevation ACS 'Intermediate Risk'	■ Monitor until the 2nd Troponin is available. If the 2nd Troponin is positive, manage as per non STEMI in Group A. If the 2nd Troponin is negative, monitoring may cease
Arrhythmias ■ Atrial Fibrillation or other supraventricular arrhythmias with haemodynamic compromise	■ Monitor until haemodynamically stable following reversion of rhythm or control of rate. Reassess and document the need for monitoring daily
Acute Severe Electrolyte Imbalance	■ Monitor until the acute electrolyte imbalance is corrected and there are no related arrhythmias present
Post Percutaneous Coronary Intervention (PCI)	■ Monitor for 4 hours ■ If there are procedural complications, arrhythmias or haemodynamic compromise, monitor for up to 24 hours then reassess and document the need for monitoring daily
Post Catheter Ablation & EPS	■ Monitor for 4 hours or as per unit specific Protocol ■ If there are procedural complications, arrhythmias or haemodynamic compromise, monitor for 24 hours then reassess and document the need for monitoring daily

Other Conditions when Cardiac Monitoring MAY BE Required

Indications for Monitoring	Monitoring Duration
■ Pericarditis ■ Pericardial Effusion ■ Electrocution ■ Suspected cardiac trauma	■ Monitor according to the direction of the treating Medical Officer or local guidelines ■ The need for cardiac monitoring must be reassessed and documented daily

When is cardiac Monitoring NOT Required

Indications for Monitoring	Monitoring Duration
■ Non ST Elevation ACS 'Low Risk' patients ■ Patient with chronic atrial fibrillation without haemodynamic compromise ■ Stable patients with chronic ventricular premature beats ■ Patient with asymptomatic first degree heart block	■ There is no evidence to support cardiac monitoring for these conditions

Bibliography
1. National Heart Foundation of Australia and Cardiac Society of Australia & New Zealand. Guidelines for the Management of Acute Coronary Syndromes 2006. MJA 2006; 184 (S1): S1-S32.
2. American Heart Association Scientific Statement. Practice Standards for Electrocardiographic Monitoring in Hospital Settings. Circulation. 2004; 110: 2721-2746.

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Consultation

- Cardiac nurses and cardiologists - rural and metropolitan
- NSW Health State-wide Cardiology Project team
- The Greater Metropolitan Clinical Taskforce Cardiac Network
- ED physicians and nurses
- Ambulance Service of NSW
- Clinical Excellence Commission
- Cardiothoracic surgeons
- Consumer representatives

Policy Location

PD2008_055 - Cardiac Monitoring in Adult Cardiac Patients in Public Hospitals in NSW

http://www.health.nsw.gov.au/policies/pd/2008/pdf/PD2008_055.pdf

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