NHS GG&C

Telemetry Guidelines

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i) Background

Cardiac rhythm monitoring by telemetry is a valuable tool if used appropriately. In each CCU in NHS GG&C there is a telemetry facility with a finite number of devices and the aim of these guidelines is to promote its use in the patients most likely to benefit.

ii) Patient Categories

A. Telemetry monitoring is recommended in most, if not all, of the following patients:

1. Patients who have been resuscitated from a cardiac arrest
2. Patients with any other haemodynamically unstable arrhythmia
3. Patients in the early phase of a troponin positive ACS.
4. Patients with 2nd or 3rd degree AV block
5. Patient with syncope with documented tachyarrhythmia or bradyarrhythmias
6. Patients with syncope with abnormal 12 lead ECG
7. Patients with arrhythmias complicating Wolff-Parkinson White syndrome with rapid anterograde conduction
8. Pacemaker dependent patients with newly implanted (<24 hours) or displaced leads.
9. Patients with a temporary pacing line
10. Patients with a prolonged QT interval with polymorphic ventricular ectopics, ventricular bigeminy or thought to be acute or responsible for arrhythmia.
11. Patients with a severe electrolyte imbalance with high risk of ventricular arrhythmia
12. Patients with acute LVF
13. Patients with other indications for intensive care (drug overdose with known arrhythmogenics, PTE, shock, acute respiratory failure)

B. Telemetry monitoring is reasonable but not essential in the following patients:

1. Patients with chest pain and high to intermediate risk of ACS.
2. Patients with syncope in absence of abnormal cardiac findings (Holter monitoring is an alternative)
3. Patients who have undergone pacemaker implantation but who are not pacing dependent.
4. Patients with a significantly prolonged QT >0.50s
5. Patients in AF with uncontrolled ventricular rate, especially with other structural heart disease
6. For the administration of drugs with high risk of ventricular arrhythmia

C. Telemetry monitoring not usually recommended in the following patients:

1. Patients with chest pain but low risk of ACS.
2. Patients who have an active DNACPR order and any arrhythmia detected on telemetry would not be acted upon.
3. For >48 hours where no major arrhythmia has been detected

iii) Discontinuing monitoring and Patient Prioritisation

There is a high service demand for telemetry and should be reviewed on a daily basis. In general, any cardiac monitoring >48 hours out-with the CCU environment should be discussed with the Consultant Cardiologists (Monday – Friday) to determine appropriateness.

In a situation where there is no telemetry available then there should be a clinical review by a senior member of clinical staff, based on the above criteria, of all patients currently on the system to allow prioritisation of modules. Unless there are other compelling clinical reasons, patients in category A would normally be prioritised over patients in category B and C. If there is still a shortage of modules after this process then bedside monitoring could be considered as an interim measure until a module becomes available.

iv) Application of telemetry out with CCU

The request for a telemetry module must be authorised by medical staff and the appropriate request form must be fully completed (Appendix A). In the event of the request form having incomplete documented information then the module will not be issued for use.

The completed form should be taken to CCU where a member of the nursing staff will use the details to create a patient profile and admit the patient into the Telemetry system.

The CCU nurse will identify an available module and record the chosen module's unique asset number on the request sheet.

The requestor will be issued with a clean module and a 5 lead attachment. The operator will be informed that they must insert 2 x AA batteries (new) and ensure that the module's green light is active before applying to the patient.

The CCU nurse will enter the unique asset number into the patient's on screen profile and then choose to start monitoring.

There will be no rhythm available until the module is fully attached to the patient, therefore the alarm monitoring selection can't be done at this stage.

v) Monitoring

The module should be attached to the patient using the standard electrode placement as shown in the diagram on the module.

The skin should be prepped to ensure robust electrode adhesion to the skin.

Electrodes should only be replaced during monitoring if they are dry, broken or contaminated.

Once the rhythm is established on the real-time CCU console screen then the CCU trained nursing staff should document the baseline rhythm on the event recording section of the request form. At this stage the CCU trained nurse must then select the

appropriate alarm monitoring based on presenting rhythm, presenting complaint and patient stability.

vi) Documentation

The CCU nurse will aim to document the real-time rate and rhythm every 4 hours for every patient on Telemetry at the time of analysis (Appendix B). During this time, the CCU nurse will also review any events that have been triggered since the last observation. If there have been any new events captured these will be commented on during the 4 hourly rhythm analysis. The ward will also be contacted and the information shared with a member of the trained nursing staff. Any false alarm events due to artefact will be deleted at this point.

If there is evidence of significant arrhythmic events during monitoring then the priority for the CCU nurse would be to contact the ward trained nursing staff immediately during or after the event. The event will be stored in the patient's history but the CCU trained nurse must print a copy of the event and provide this to the ward trained nurse and attach a copy to the patients Telemetry request / observation form.

vii) Communication

The ward staff must inform the CCU nurse when there is interruption to the ECG monitoring, for example if the person is showering or if they are off the ward for a procedure. The CCU nurse will select the smart alarm option and this will temporarily suspend monitoring.

The CCU nurse will inform the ward staff of any sudden loss of rhythm analysis and the ward staff should aim to re-establish monitoring in a timely manner. In the event of a continuous loss of rhythm analysis and the ward has been contacted on 2 consecutive occasions then the smart alarm option will be used by the CCU nurse until monitoring can be re-established. The exclusion to this would be equipment failure. However, the ward staff must check the module, batteries, lead connections and electrodes in the first instance.

If a patient is transferring from medical receiving to cardiology or vice versa, then the ward staff must inform the CCU nurse of the patient's final destination to ensure that the patient profile remains updated for the entire monitoring period. Failure of the ward staff to ensure this information is provided to CCU may result in a delay in treatment in the event of life threatening arrhythmias.

viii) Discharge

When monitoring has been completed, the ward nursing staff must inform the CCU nursing staff.

The CCU staff will confirm that monitoring is completed and will choose to discharge the patient from the Telemetry system. The patient data is saved and a discharge summary is printed.

The discharge summary is attached to the patient's request form and given back to the ward nurse when the telemetry module is returned to CCU.

It is the responsibility of the ward staff to ensure that the module is returned to CCU in a timely manner. The module should be decontaminated before return to CCU.

No modules should be swapped between patients. All the modules should be returned to CCU when they are not in use and then they will be re-issued only when a new request form has been fully completed for the next intended patient use.

The batteries should be discarded after each patient use

ix) Decontamination

All the modules should be cleaned with general purpose detergent wipes between each patient use.

If the module has been used on a patient with suspected or confirmed C.dfficile or MRSA then the module should be decontaminated as per GG&C decontamination of near patient equipment policy.

If the module has been exposed to blood or bodily fluid contamination then it should be cleaned as per the GG&C decontamination guidance.

There should be an element of risk benefit applied when choosing to monitor patients that may compromise the operational use of the module. The types of patient to consider are acute confusion and dementia, uncontained faecal or urinary incontinence and violent or aggressive behaviour.

Appendix A

Is this patient DNACPR?

Yes ☐ No ☐

Telemetry Request Form

All details must be completed before a telemetry module will be provided from CCU.

Patient Name:	CHI:
Room Number:	Bed Number**:**
Requesting Ward:	Requesting Doctor:
Date of Request:	Time of request:

Telemetry Criteria

Please select which of the following criteria is applicable to the patient. If the criterion is other, then you must document the reason for telemetry.

Criteria	√
Resuscitated from a cardiac arrest	
Other haemodynamically unstable arrhythmia	
Early phase of a troponin positive ACS	
2nd or 3rd degree AV block	
Syncope with documented tachyarrhythmia or bradyarrhythmias	
Syncope with abnormal 12 lead ECG	
Arrhythmias complicating Wolff-Parkinson White syndrome with rapid anterograde conduction	
Pacemaker dependent with newly implanted device (<24 hours) or displaced leads.	
Temporary pacing line	
Significantly prolonged QT interval QTc >0.50s	
Severe electrolyte imbalance with high risk of ventricular arrhythmia	
Acute LVF	
Other indications for intensive care (drug overdose with known arrhythmogenics, PTE, shock, acute respiratory failure)	
Post -pacemaker implantation but who are not pacing dependent.	
Mildly prolonged QT (<0.50s) but thought to be acute or responsible for arrhythmia	
AF with uncontrolled ventricular rate, especially with other structural heart disease	
Administration of drugs with high risk of ventricular arrhythmia	
Other:	

Monitoring	
Start date:	Completed date:
Start time:	Completed time:

Requesting Dr Name:	Grade:	Page:

The need for continuing monitoring after 24 hours should be assessed daily.
When the Telemetry monitoring is discontinued, the module must be returned to CCU immediately after use.

Telemetry Module Serial Number:_____

Appendix B

Date	Time	Rate & Rhythm (any comments)	Signature