Temporary Pacing Guidelines

NOTE: Where possible a temporary wire should be avoided and a permanent system implanted if feasible.

A temporary pacemaker should be considered in the following circumstances:

- **A patient who is bradycardic and haemodynamically unstable, typically:**
  Ventricular rate < 40 bpm *and*
  BP < 100 mmHg systolic.

- **Heart block (2nd or 3rd degree) with:**
  Pauses > 5 seconds.

- **After myocardial infarction:**
  Symptomatic CHB with inferior MI.
  Asymptomatic CHB with anterior MI.

- **To overdrive pace to treat or prevent VT**

Insertion of a temporary pacing wire

- **A team is required for temporary wire insertion:**
  A substantive cardiology registrar, associate specialist, or consultant *and*
  A nurse from the Coronary Care unit *and*
  A radiographer (page via switchboard).

- **Location**
  Pacing room.

- **Antibiotics**
  Typically teicoplanin and gentamycin should be given prior to the procedure, as per protocol, or as soon after insertion as practical.

- **Approach**
  The operator should use the great vein he or she is most familiar with.
  This may be the femoral vein, or the right subclavian or internal jugular vein.
  An ultrasound probe should be used to locate the subclavian or internal jugular vein if appropriate.
  The femoral vein should be used if the patient has been thrombolysed (<6 hours TPA/TNK, <12 hours streptokinase) or is anti-coagulated.

- **Wires**
  A 5F wire should be used where possible.
  There are different shaped wires for superior and inferior vena cava approaches.

Ideally the wire will be positioned in apex of the right ventricle.
A stable position with a threshold <2.5volts is acceptable.
Stability can be checked by asking patient to take a deep breath and cough.
The sheath should typically be withdrawn from the femoral vein.

- **Pacemaker settings**
  The temporary box should be set to optimise patient haemodynamics.

Post-operative care

- **Location**
  The patient should be cared for on CCU, unless they require ITU.

- **Chest X-ray**
  A chest X-ray should typically be taken post insertion of the wire to confirm position and to ensure that there have been no complications (e.g. pneumothorax).

- **Pacemaker checks**
  The threshold, sensitivity and underlying heart rate should be checked daily (on the CCU ward round).
  The ongoing need to a TPW should be assessed daily.

- **Infection control**
  Antibiotics should be continued as per protocol (typically teicoplanin)
  Decolonisation for MRSA/MSSA should begin, unless the patient is known to be MRSA and MSSA negative.

- **Permanent system**
  If permanent system is required, it should be implanted in as timely a fashion as is possible, and space should be created on the next pacing list, if necessary by cancelling elective cases.

- **Concerns re function**
  If any member of the team has concerns about the subsequent performance of the temporary wire they are to contact the on-call cardiologist immediately. This may include:
  - A significant rise in threshold
  - Haemodynamic instability
  - Pericarditic chest pain
  - Diaphragmatic pacing