

**PARKLAND HEALTH & HOSPITAL SYSTEM
LEADERSHIP & ORGANIZATIONAL DEVELOPMENT**

**COMPETENCY VALIDATION
TEMPORARY PACEMAKERS – TRANSVENOUS**

Name: _____ ID#: _____

Unit: _____ Date: _____

Temporary Transvenous Pacemakers – Insertion	1 st Attempt (P or F)	2 nd Attempt (P or F)	Comments
1. State at least 2 indications for temporary transvenous pacemaker insertion. (Acute MI, heart block, or symptomatic bradyarrhythmias, and patients susceptible to cardiac arrest while undergoing anesthesia or surgery)			
2. Calls for Time-Out per procedure.			
3. Washes hands and gathers necessary equipment.			
4. Prepares the pulse generator: insert new battery, secure patient extension cable into the appropriate sockets, and turn the pulse generator on briefly to verify that it is functioning, then turn off.			
5. Ensure emergency equipment is present and functioning.			
6. Verify presence of patent IV catheter, hang TKO IV fluid.			
7. Verify the patient is connected to the cardiac monitor, pulse oximeter, and blood pressure monitoring device.			
8. All personnel assisting with procedure will don cap, mask, and goggles. Assist provider with sterile gown and gloves.			
9. Assist provider with insertion as needed.			
10. Once inserted, hold the patient extension cable so the provider may insert the pacing lead wires into the appropriate socket. (i.e. positive to positive, negative to negative). The blue end of wire is inserted and advanced as far as possible.			
11. Secure the wire by screwing down the plastic knobs, making sure the wire does not slip.			
12. Verify the connections between pacing wire and extension cable and pulse generator are correctly placed and secure.			
13. Set rate, output/mA, and sensitivity/mV on the pulse generator as ordered by the Provider. The settings may be manipulated to assess pacing threshold and sensing threshold for patient.			
14. After the provider sutures the pacing catheter in place, apply a sterile dressing. Secure with tape as needed to prevent dislodgement.			
15. Suspend the pulse generator from an IV pole next to the patient.			
16. Obtain post procedure 12-lead EKG and chest x-ray.			
17. Document: <ul style="list-style-type: none"> a. Patient's underlying heart rate/rhythm; vital signs b. Date and time of pacemaker insertion c. Type of pacing wire inserted and insertion site d. Name of the provider performing procedure e. Type of pulse generator and pacemaker settings f. Patient tolerance of procedure g. Assessment of pacemaker function h. CXR verification of placement i. Patient teaching 			
Temporary Transvenous Pacemaker – Care of Patient			
18. Verify the pacemaker settings on the pulse generator. If not consistent with the provider's orders, consult with the provider.			

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19. Check the pulse generator for a low battery indication. A new 9-volt battery should last ~ 1 week.			
20. Assess insertion site to ensure dressing is dry and intact, and the pacing catheter is taped securely.			
21. Change dressing every 72 hours and prn damp, loose or soiled. May change dressing every 7 days if biopatch is used.			
22. Check that all connections are secure and no tension is on the pacing catheter lead wires.			
23. Monitor ECG for appropriate pacing, sensing and capture, and presence of arrhythmias.			
24. Identify and Troubleshoot <u>Failure to Capture</u> (pacing spikes not followed by QRS (or p wave if atrial pacing). Pacemaker is firing, but fails to depolarize the myocardium which results in decreased cardiac output): List at least 2. a. Check all connections, change battery if low, consider changing pulse generator. b. Reposition patient on the side (try left side first) c. Check output/mA setting. Notify the provider. d. If patient is symptomatic, emergency drugs or a transcutaneous pacemaker may be indicated.			
25. Identify and Troubleshoot <u>Failure to Sense</u> (pacing spikes occurring when not needed and are too close to the patient's beats. Pacemaker is failing to sense patient's intrinsic beats and is firing inappropriately which could result in arrhythmias): List at least 2. a. Check all connections, change battery is low, consider changing pulse generator b. Reposition patient on the side (try left side first) c. Check sensitivity/mV. Notify the provider.			
26. Utilize electrical safety precautions (may cause microshocks to the myocardium and trigger ventricular fibrillation): a. Wear gloves if handling the exposed tips of the pacemaker lead wires b. Ensure all connections between pacing wires and cable and pulse generator are secure and inserted completely so that no uncovered metal is exposed c. Keep dressing over the pacemaker dry at all times d. Cover exposed pacing wire tips if they are not connected to the pulse generator or cable e. Ensure all electrical equipment in the room is grounded. To ground yourself from the build up of static electricity, touch the bed prior to touching the pacemaker equipment. f. Do not touch electrical equipment and lead wires simultaneously			
27. State rationale for discontinuing the pacemaker.			

The completion of this form validates the above nurse's competency for this skill.

#1 Pass / Fail Competency Validator Signature: _____

#2 Pass / Fail Competency Validator Signature: _____