



**REGION 11
CHICAGO EMS SYSTEM
PROCEDURE**

Title: Transcutaneous Pacing - ALS

Section: Cardiac Management

Approved: EMS Medical Directors Consortium

Effective: May 17, 2021

TRANSCUTANEOUS PACING - ALS

INDICATIONS

- Bradycardia (HR < 50/min) with a pulse causing the patient to be unstable with signs of shock including hypotension (SBP < 100 mmHg) that continues after atropine administration.

CONTRAINDICATIONS

- Pulseless or asymptomatic bradycardia

EQUIPMENT

- Cardiac monitor/defibrillator
- Cardiac leads
- Therapy electrode pads
- Therapy cable

PROCEDURE

1. Apply personal protective equipment: gloves.
2. Apply cardiac monitor leads and identify bradycardia that requires transcutaneous pacing (12-lead ECG if available).
3. Identify and treat underlying causes.
4. Assess adequate oxygenation.
5. Assess pulse and blood pressure.
6. Establish IV access.
7. Consider analgesia prior to procedure per Pain Management protocol.
8. Attach therapy pads to therapy cable and connect to the cardiac monitor/defibrillator.
9. If necessary, clean and dry skin or remove excess chest hair with razor.
10. Apply pads in the anterior-lateral placement or anterior-posterior placement (per manufacturer specific guidelines) and press down firmly. Pads should not be placed directly over implanted devices (cardiac defibrillators or pacemakers).
11. Assure safe environment – evaluate risk of sparks, combustibles, oxygen-enriched environment.



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12. Activate pacer mode to "PACER".
13. Note marker on ECG rhythm near the middle of each QRS complex.
14. Select rate and increase to 80 beats per minute
15. Select current and increase to 50 mA.
16. Gradually increase delivered current until electrical capture is achieved (observed pacer spikes followed by wide QRS complexes and tall "T waves"). The average current needed for capture is between 50-100 mA.
17. Palpate the patient's pulse and check blood pressure to assess for mechanical capture.
18. Reassess patient condition.
19. If pulseless, discontinue pacing and initiate Incident Command for Cardiac Arrest (ICCA) procedure.