



Department of Public Health
Emergency Medical Services Agency

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Policy #: 552.35
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This policy supersedes any other existing policy on this subject.

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Subject: **TRANSCUTANEOUS PACING**

Authority: California Health and Safety Code, Section 1797.220, California Code of Regulations, Title 22, Division 9, Chapter 4

Purpose: To establish the conditions under which Transcutaneous Pacing may be used, and the procedures to be followed during such use.

Policy: Transcutaneous Pacing may be used for adult patients in the prehospital setting in Merced County only under the conditions and for the patients specified herein.

Definitions: **Agency** - means the Merced County EMS Agency, duly appointed by the Board of Supervisors.

Bradycardia or Bradycardic – means a patient with a cardiac rate of less than 60 beats per minute

TCP – means Transcutaneous Pacing, the external delivery of electrical energy for the purpose of stimulating a cardiac contraction (capture).

Unstable – for the purpose of this policy, may be defined as a systolic blood pressure less than 90 mmhg, with any of the following signs or symptoms:

- Severe chest pain;
- Severe shortness of breath
- Acutely altered mental status
- Signs or symptoms of shock
- Pulmonary edema

1. Indications

TCP may be utilized for the following patients after 2 mg of Atropine have been administered:

A. Hemodynamically unstable bradycardic adult patients unresponsive to drug therapy.

APPROVED:

ON-FILE

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- B. Patients in Asystole following electrocution, with a down time of less than 10 minutes
 - C. For patients on the order of a physician who is initiating an interfacility transfer. Under these circumstances, the paramedic should confirm the pacing settings from the transferring physician.
2. Contraindications:
- A. Hemodynamically or symptomatically stable patients.
 - B. Any patient in Asystole except as indicated above in section 1(B).

Procedure:

1. Consider administration of Morphine Sulfate for pain and/or Versed for sedation, as indicated in the Adult Treatment Protocols.
2. Place pads on the patient's chest and back. Set initial TCP rate at 80 beats per minute (bpm).
3. Begin output at 0 milliamps (mA). Increase by 10mA until capture/pulses are noted. Once capture is confirmed, continue pacing at a slightly higher output level (10%).
4. If capture is maintained but the patient remains symptomatic of inadequate tissue perfusion (BP < 90 systolic, altered level of consciousness), consider increasing rate by 10 bpm until symptoms resolve or 100 bpm is achieved.

Troubleshooting:

1. Make sure the pads are properly placed and have good contact with the skin.
2. Check the batteries of the pacer.
3. Use adequate energy to capture the rhythm.
4. Use adequate analgesia and sedation to minimize patient discomfort.