COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES
Policy Title: Transcutaneous Cardiac Pacing		Policy Number: 727
APPROVED: Administration:	Steven L. Carroll, Paramedic	Date: January 1, 2026
APPROVED: Medical Director	Daniel Shepherd, MD	Date: January 1, 2026
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I. PURPOSE: To define the indications, procedure and documentation for the use of transcutaneous cardiac pacing by paramedics

II. AUTHORITY: Health and Safety Code, Sections 1797.220 and 1798. California Code of Regulations, Title 22, Sections 100145 and 100169.

III. POLICY: Paramedics may utilize transcutaneous cardiac pacing (TCP) on adult patients (age 14 or greater) in accordance with Ventura County Policy 705 – Symptomatic Bradycardia, Adult.

IV. PROCEDURE:

A. Training: Prior to using TCP, the paramedic must successfully complete a training program approved by the VC EMS Medical Director, which includes operation of the device to be used.

B. Indications: Symptomatic bradycardia (heart rate less than 40 bpm with one or more of the following signs or symptoms):

1. Altered level of consciousness
2. Chest pain
3. Abnormal skin signs
4. Profound weakness
5. Shortness of breath
6. Hypotensive (Systolic BP less than 90mm Hg)

C. Contraindications:

1. Absolute
   a. Asystole
2. Relative
   a. Hypothermia – patient warming measures have precedence. (Base Hospital contact required).

D. Patient Treatment

1. Patient assessment and treatment per 705: Bradycardia treatment protocol.
2. Explain the TCP procedure to the patient.
3. Place pacing electrode pads and attach pacing cable to pacing device per manufacturer's recommendations.
4. Attach 4-Lead to the patient.
5. Set pacing mode to demand mode, pacing rate to 70 BPM, and current at 40 milliamps (mA), or manufacturer recommendation.
    a. Demand mode requires that the 4-Lead be on the patient.
6. Activate pacing device and increase the current in 10 mA increments. This should be done in rapid escalation until electrical capture is achieved (each pacemaker impulse produces a QRS complex). If there is intermittent or doubt about electrical capture, continue to increase the current in 10 mA increments.
7. Assess patient for mechanical capture (pacemaker produces a pulse with each QRS complex) and clinical improvement (BP, pulses, skin signs, LOC).

NOTE: Patients with high grade AV block (second degree type II or third-degree block) who do not have symptoms do not require pacing. However, equipment should be immediately available if symptoms arise. Patients with symptoms who respond initially to atropine should have pacing equipment immediately available.

E. Transfer of Care

1. Communicate – this is a key component when transferring care of a patient who has TCP in place. There should be direct communication between the paramedic and hospital provider who will be taking over patient care.
2. Pause – Paramedic should be familiar with the cardiac monitor TCP pausing capabilities.
    a. Utilizing the pause feature allows for the underlying rhythm to be observed without completely shutting off the TCP.
3. Plan – The healthcare team should formulate a plan together for how the patient will be safely transitioned from the EMS gurney to the hospital bed without interrupting pacing.
4. Transfer - Once a plan is in place, transfer the patient.

F. Documentation

1. The use of TCP must be documented.
2. Vital signs must be documented every 5 minutes.