Mountain Counties
EMERGENCY MEDICAL SERVICES AGENCY

POLICIES AND PROCEDURES

POLICY: 554.10
TITLE: Acute Pulmonary Edema

EFFECTIVE: ~~02/01/25~~DRAFT
REVIEW: ~~02/2028~~DRAFT
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

ACUTE PULMONARY EDEMA

I. AUTHORITY
Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9

II. PURPOSE
To serve as a patient treatment standard for EMRs, EMTs, AEMT~~'~~s, and Paramedics within their scope of practice.

III. PROTOCOL
History may include: elderly patient, heart problems (hypertension, congestive heart failure), dyspnea worse when lying down (orthopnea), symptoms of acute myocardial infarction~~MI~~, takes "water pills," sudden weight gain, cough with pink frothy sputum.

Medications may include: digoxin, lanoxin, digitoxin, chlorothiazide, furosemide, hydrochlorothiazide, bumetanide.

Physical findings may include: rales, distended neck veins, pedal or presacral edema.

Provider Key: F = First Responder/EMR E = EMT O = EMT Local Optional SOP
P = Paramedic A=Advanced EMT D = Base Hospital Physician Order Required

	F	E	O	~~A~~	P	
ASSESSMENT	X	X	X	X	X	
PULSE OXIMETRY: apply and monitor.		X	X	X	X	
CAPNOGRAPHY: apply and monitor.					X	
OXYGEN: if pulse oximetry < 94% or signs of respiratory distress or hypoperfusion.	X	X	X	X	X	
ECG MONITOR: lead placement may be delegated. Treat as indicated.					X	
POSITION: sitting (as tolerated).	X	X	X	X	X	
VASCULAR ACCESS: P - IV/IO, AEMT - IV only, rate as indicated.				X	X	

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	F	E	O	A	P
***NITROGLYCERIN**: • 0.4 mg sublingual, (1 tablet/spray) for systolic BP 100-120 mmHg. • 0.8 mg sublingual, (2 tablets/sprays) for systolic BP 120-200 mmHg. • 1.2 mg sublingual, (3 tablets/sprays) for systolic BP > 200 mmHg. May repeat every 3-5 minutes, maximum of 9 tablets/sprays. Hold when respiratory distress is alleviated, severe headache develops, or systolic BP drops below 100mmHg. **AND** ***NITROGLYCERIN PASTE** 1" (If systolic BP < 100 mmHg, NTG should be withheld or discontinued by wiping off with a clean towel).				X	X
BASE CONTACT: for additional NTG orders.						X
CPAP or POSITIVE PRESSURE VENTILATION: as indicated.		X	X	X	X	
MORPHINE: 2–5 mg increments IV/IO. May repeat as needed not to exceed 20 mg per 30 minutes. Hold for systolic BP < 90.					X	
PUSH DOSE EPINEPHRINE: for hypotension – titrate to SBP ≥ 90 • Mix 1 mL of Epi 1:10,000 (0.1 mg/mL) with 9 mL of NS = concentration of 1:100,000 (0.01 mg/mL) • Label syringe "epinephrine 10 mcg/mL" • 0.5 – 1 mL (5-10 mcg) IVP every 1-5 minutes If SBP does not stabilize ≥ 90 after two doses, consider epinephrine drip. Refer to 554.88 RX GUIDELINES.					X	

***Nitroglycerin shall not be given to pts who have taken PDE-5 inhibitors (sildenafil, Cialis, Viagra or similar) within the last 48 hours; instead, start with Morphine**

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