



EMERGENCY MEDICAL SERVICES AGENCY

Jared Bagwell, Director

Dr. Katherine Shafer MD, EMS Medical Director

Memorandum

DATE: August 15, 2025

TO: All Prehospital Personnel

FROM: Katherine Shafer, M.D., EMS Medical Director
Jared Bagwell, EMS Director

SUBJ.: **SJCEMSA Policy No. 5700, Advanced Life Support Treatment Protocols, V.1.9 and SJCEMSA Policy No. 2545, Endotracheal Intubation, updates.**

The purpose of this memo is to advise system participants of changes to SJCEMSA Policy No. 5700, Advanced Life Support Treatment Protocols v.1.9 and SJCEMSA Policy No. 2545, Endotracheal Intubation.

- I. EMS Policy No. 5700, Advanced Life Treatment Protocols, PODP-06, Pediatric Opiate Overdose - Sublingual administration of naloxone has been removed from SJCEMSA Policy No. PODP-06. Studies¹ have shown that the bioavailability of sublingual administration is less than 1% (Smith, 2024). While Intranasal raises the bioavailability to 50% (Smith, 2024), intravenous is still the preferred method of administration.

PODP-06 will be updated to version 1.9.1 and state:

Naloxone 0.4mg IV/IO, Max 4mg

Or

Naloxone 0.1mg/kg IM / IN (half in each nostril) max 4mg

- II. EMS Policy No. 5700, Advanced Life Treatment Protocols, AGEN-03, Adult Pain Management - Contraindications² to the use of Ketorolac in SJCESMA Policy No. AGEN-03 will no longer include "Acute Trauma," instead the contraindication will state: *Patients meeting major trauma triage criteria*.

AGEN-03 will be updated to version 1.9.1 and state:

Ketorolac Contraindications: >65Y/O, GI bleed, pregnancy, asthma, Acute coronary syndrome, Coagulation disorders, meets major trauma triage criteria, anticoagulation medications.

¹ Clinical Pharmacokinetics and Pharmacodynamics of Naloxone (Saari, Strang, & Ola, 2024)
Low Absolute Bioavailability of Oral naloxone in Healthy Subjects (Smith, 2024)

² Intravenous Acetaminophen Versus Ketorolac for Prehospital Analgesia: A Retrospective Data Review (Robert McArthur MD, 2024)

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- III. Policy No. 5700, Advanced Life support Treatment Protocols ATRA-02, PTR-02, & Policy No. 2545, Endotracheal Intubation, - All adult and pediatric **trauma** patients requiring assisted ventilation shall be ventilated at an increased rate of **twenty-four (24) breaths** per minute. - This change is made in coordination with San Joaquin County Emergency Medical Services Agency's (SJCEMSA) designated Level II Trauma Center - San Joaquin General Hospital (Trauma Center) and based on recommendations from Trauma Surgeons during SJCEMSA quarterly Trauma Audit Committee meetings. It is believed by the Trauma Center's rigorous continuous quality improvement program and Trauma Surgeons that this increase in ventilation rate is clinically beneficial to trauma patients who require assisted ventilation and should promote better patient outcomes. Current ventilation rates of eight to ten (8-10) breaths per minute for trauma patients have been associated with increased partial pressure of carbon dioxide (PaCO₂) and respiratory acidosis seen upon initial arrival at SJGH. Increased PaCO₂ can reflect metabolic changes that are a precursor of poor patient outcomes. SJCEMSA and the Trauma Center review and audit all trauma patient care that are treated at the Trauma Center and in partnership have developed a quality improvement/performance improvement project to review associated changes related to increased ventilation rates.

Additionally, bag-valve-mask (BVM) technique may also be attributed to hypoventilation in these patients. The use of two-person, EC clamp technique, a method used to achieve a proper seal with a BVM during ventilation is preferred and strongly suggested for all trauma patients being ventilated with a BVM device. The EC clamp technique requires a dedicated individual to hold the mask seal to perform the technique effectively. Patients requiring ventilation with a mask should have two people, one holding the EC clamp seal and one ventilating, whenever possible.

ATRA-02, PTR-02, & 2545 will be updated to version 1.9.1 and state:

If using BVM ventilate at 24 breaths per minute.

New policies and protocols will be available on our website on August 15, 2025 and be **effective August 22, 2025**.

For any questions, please contact Matthew R. Esposito at mesposito@sigov.org or (209)468-6818.