PROTOCOL CHANGELOG

2025 – 2026 Protocol Updates

COUNTY OF SAN DIEGO
EMERGENCY MEDICAL SERVICES

SANDIEGOCOUNTYEMS.COM

Global Updates

“EKG” Updated to “ECG”

The “EKG” abbreviation was updated to “ECG” throughout all protocols.

Removal of “PRN” from Capnography

The “PRN” abbreviation was removed from capnography throughout all protocols.

State Regulation Re-chaptering

State regulation re-chaptering updates were made throughout all footnotes that referenced chapters within Title 22, Division 9.

Section I – Standards / Glossary / Abbreviations

S-100 Patient Management Standards

- **Title**
  - **Previous:** Protocol Standards
  - **Revision:** Patient Management Standards
- **Added:** subsection “Prehospital Treatment – 100.1”
- **Added:** subsection "BLS/ALS Transport Criteria **–** 100.2”

S-102 Abbreviation List

- **Added:** CNS – Central Nervous System
- **Added:** LVAD – Left Ventricular Assist Device
- **Added:** TdP – Torsades de Pointes

Section II – Inventory / Medication Lists / PDC / Skills List

S-103 BLS/ALS Ambulance Inventory

- **BLS Requirements – Bandaging supplies**
  - **Added:** Hemostatic gauze with a par level of 2
- **BLS Requirements – Optional items**
  - **Previous:** Automated cardiac compression device (will become a mandatory item for ALS on July 1, 2025)
  - **Revision:** Automated cardiac compression device
  - **Removed:** Hemostatic gauze
- **ALS Requirements – Other Equipment**
  - **Added:** Automatic cardiac compression device with a par level of 1
  - **Previous:** Nasogastric intubation setup (8, 18, and one of the following: 10 or 12)
  - **Revision:** Nasogastric tubes (8, 10, 12, 14, 18)
- **Replaceable Medications:**
  - **Removed:** Dextrose, 50% - 25 gm/50 mL
  - **Previous:** Dextrose, 10% – 25 gm/250 mL with a par level of 2
  - **Revision:** Dextrose, 10% – 25 gm/250 mL with a par level of 4
- **ALS Requirements – Optional Items**
  - **Added:** Dextrose, 50% - 25 gm/50 mL
  - **Removed:** Hemostatic gauze
  - **Added:** Ringer's lactate solution
  - **Added:** With the exception of amiodarone and ketamine, medications listed in P-401 may be infused with Ringer's lactate solution during periods when normal saline fluid is in shortage. This substitution shall be on a one-for-one basis, i.e., a protocol treatment of 250 mL normal saline fluid bolus may be replaced with a 250 mL Ringer's lactate fluid bolus. (*footnote*)

S-104 Skills List

- **CPAP – EMS Clinician**
  - Updated the EMS Clinician column to authorize EMTs and AEMTs to perform the skill
- **12-lead ECG – Indication**
  - **Previous:** Chest pain and/or Signs and symptoms suggestive of myocardial infarction
  - **Revision:** Chest discomfort/pain and/or signs and symptoms suggestive of myocardial infarction (e.g., dyspnea, upper abdominal pain, fatigue)

- **Added:** Signs and symptoms of arrhythmia (e.g., syncope, near syncope, palpitations)

- **External cardiac pacing – Comments**
  - **Removed:**
    - Begin at rate 60/min
    - Dial up until capture occurs, usually between 50 and 100 mA
    - Increase by a small amount, usually about 10%, for ongoing pacing
  - **Added:**
    - Set rate and energy per manufacturer's recommendations
    - Increase energy setting until capture occurs, usually between 50 mA and 100 mA
    - After electrical and mechanical capture achieved, increase energy by 10%
    - If patient remains hypotensive, increase rate in 5 bpm increments (not to exceed 100 bpm) to achieve and maintain adequate perfusion
- **Intubation: ET/Stomal – Contraindication**
  - **Removed:** Able to adequately ventilate with BVM
- **Intubation: ET/Stomal – Comments**
  - **Removed:**
    - Exception to the mandatory use of $EtCO_2$ prior to intubation with ET tube/PAA
    - When the patient presents with intractable vomiting or airway bleeding, initial airway management should be focused on clearing of the airway with positioning of the patient (i.e., logrolling), and suctioning of the mouth and oropharynx.
    - If the airway assessment determines that it is still necessary to intubate the patient after clearing the airway, an ET tube/PAA may be inserted prior to obtaining $EtCO_2$ readings to secure airway.
  - **Added:**
    - If assessment rules out airway obstruction, but $EtCO_2$ remains zero despite effective BVM ventilation (including OPA/NPA placement), a PAA may be placed.
    - For patients with intractable vomiting or airway bleeding, initial management should focus on clearing the airway with patient positioning (i.e., logrolling), and mouth and oropharynx suctioning.
- **Intubation: Perilaryngeal airway adjuncts – Contraindication**
  - **Removed:** Able to adequately ventilate with BVM

- **Intubation: Perilaryngeal airway adjuncts – Comments**
  - **Removed:**
    - Exception to the mandatory use of $EtCO_2$ prior to intubation with ET tube/PAA
    - When the patient presents with intractable vomiting or airway bleeding, initial airway management should be focused on clearing of the airway with positioning of the patient (i.e., logrolling), and suctioning of the mouth and oropharynx.
    - If the airway assessment determines that it is still necessary to intubate the patient after clearing the airway, an ET tube/PAA may be inserted prior to obtaining $EtCO_2$ readings to secure airway.
  - **Added:**
    - If assessment rules out airway obstruction, but $EtCO_2$ remains zero despite effective BVM ventilation (including OPA/NPA placement), a PAA may be placed.
    - For patients with intractable vomiting or airway bleeding, initial management should focus on clearing the airway with patient positioning (i.e., logrolling), and mouth and oropharynx suctioning.
- **Length Based Resuscitation Tape (LBRT)**
  - **Removed:** Children ≥37 kg use adult medication dosages (using pediatric protocols) regardless of age or height.
- **Intraosseous – Comments**
  - **Added:** AEMT: Authorized to establish and maintain Io access in a pediatric patient only.

P-115 Medication list

- **Revision:** Format updated to have each medication listed on a single page with the following information: class, mechanism of action, indications, contraindications, dose, adverse effects, and notes.

P-117 ALS Pediatric Drug Chart

- **Grey / Pink**
  - **Previous:** NG tube size: 5 Fr
  - **Revision:** NG tube size: 5-8 Fr

- **Atropine (Organophosphate) IV/IO – Concentration**
  - **Previous:** 8 mg/10 mL
  - **Revision:** 8 mg/20 mL

Section III – Adult Treatment Protocols

S-123 Altered Neurologic Function (Non-Traumatic)

- **ALS**
  - **Previous:** Symptomatic hyperglycemia with diabetic history
  - **Revision:** Symptomatic hyperglycemia

S-124 Burns

- **Previous:**
  Burn center criteria
  - Circumferential burn or injury to face, hands, feet, or perineum
  - Electrical injury due to high voltage (>120 volts)
- **Revision:**
  Burn center criteria
  - Circumferential burn or burn to face, hands, feet, or perineum
  - Electrical injury due to high voltage (≥1,000 volts)

S-126 Discomfort / Pain of Suspected Cardiac Origin

- **ALS**
  - **If SBP >100 mmHg**
    - **Previous:** Treat pain per Pain Management Protocol (S-141)
    - **Revision:** Treat pain with opioids per Pain Management Protocol (S-141)

S-127 CPR / Arrhythmias

- **Unstable Bradycardia**
  - **External cardiac pacing**
    - **Removed:**
      - Begin at rate 60/min
      - Dial up until capture occurs, usually between 50 and 100 mA

        - Increase by a small amount, usually about 10%, for ongoing pacing
    - **Added:**
        - Set rate and energy per manufacturer's recommendations
        - Increase energy setting until capture occurs, usually between 50 mA and 100 mA
        - After electrical and mechanical capture achieved, increase energy by 10%
        - If patient remains hypotensive, increase rate in 5 bpm increments (not to exceed 100 bpm) to achieve and maintain adequate perfusion
- **Ventricular Tachycardia**
    - **Previous:** Lidocaine 1.5 mg/kg IV/IO, MR at 0.5 mg/kg IV/IO q8-10 min to max 3 mg/kg
    - **Revision:** Lidocaine 1.5 mg/kg IV/IO, MR at 0.5 mg/kg IV/IO q5 min to max 3 mg/kg
- **Ventricular Fibrillation / Pulseless VT**
    - **Previous:** Epinephrine 1:10,000 1 mg IV/IO q3-5 min
    - **Revision:** Epinephrine 1:10,000 1 mg IV/IO q3-5 min, begin after second defibrillation
- **Pulseless Electrical Activity**
    - **Previous:** $CaCl_2$ 500 mg IV/IO, MR x1 in 5 min for continued EKG findings consistent with hyperkalemia
    - **Revision:** $CaCl_2$ 1 gm IV/IO
- **Adjunct Cardiac Devices**
    - **Previous:** Lidocaine 1.5 mg/kg IV/IO, MR at 0.5 mg/kg IV/IO q8-10 min to max 3 mg/kg
    - **Revision:** Lidocaine 1.5 mg/kg IV/IO, MR at 0.5 mg/kg IV/IO q5 min to max 3 mg/kg

S-131 Hemodialysis Patient

- **ALS**
    - **Previous:** Suspected hyperkalemia (widened QRS complex or peaked T-waves)
    - **Revision:** Suspected hyperkalemia (e.g., peaked T-waves or widened QRS complex)
    - **Previous:** If widened QRS complex, immediately administer $CaCl_2$ 500 mg IV/IO
    - **Revision:** If widened QRS complex, immediately administer $CaCl_2$ 1 gm IV/IO

- **Added:**
  For patients not on hemodialysis with suspected hyperkalemia
  - Obtain 12-lead ECG
  - If findings consistent with hyperkalemia (e.g., peaked T-waves or widened QRS complex), contact base hospital

S-134 Poisoning / Overdose

- **ALS**
  - **Suspected calcium channel blocker OD (SBP <90 mmHg)**
    - **Previous:** $CaCl_2$ IV/IO 20 mg/kg, MR x1 in 10 min
    - **Revision:** $CaCl_2$ 1 gm IV/IO

S-135 Existing Devices and Medications

- **ALS**
  - **Assist with administration of physician-prescribed self-administered emergency medication**
    - **Previous:** Paramedics may assist patient/family to draw up and administer emergency medication with BHO
    - **Revision:** Paramedics may assist patient/surrogate with the administration of emergency medications prescribed for self-administration BHO

S-136 Respiratory Distress

- **ALS**
  - **Added:**
    Unable to tolerate CPAP
    - Midazolam 0.5-1 mg IM/IN/IV
  - **Added:**
    Intubated patients with agitation and potential for airway compromise
    - Midazolam 2-5 mg IM/IN/IV/IO, MR x1 in 5-10 min

S-139 Trauma

- **BLS**
  - **Removed:**
    Blunt traumatic arrest
    - Consider request for pronouncement at scene BHPO per Prehospital Determination of Death Protocol (S-402)
  - **Removed:**
    Penetrating traumatic arrest
    - Rapid transport
      - Consider pronouncement at scene BHPO
- **ALS**
  - **Crush injury requiring extrication with compression of extremity or torso ≥2 hours**
    - **Previous:** $CaCl_2$ 500 mg IV/IO over 30 sec, MR x1 in 5 min for continued EKG findings consistent with hyperkalemia
    - **Revision:** $CaCl_2$ 1 gm IV/IO over 30
  - **Added:**
    For nausea and vomiting
    - Ondansetron 4 mg IV/IM/ODT, MR x1 in 10 min
  - **Added:**
    For traumatic cardiac arrest
    - 1,000 mL fluid bolus IV/IO Ⓐ
    - Do not administer epinephrine
- **Added:** "Adult Traumatic Cardiac Arrest" flowchart

S-141 Pain Management

- **ALS**
  - **Removed:**
    BHPO required for treatment if patient presents with
    - Isolated head injury
    - Acute onset severe headache
    - Drug/ETOH intoxication
    - Suspected active labor
  - **Fentanyl (IN dosing)**
    - **Previous:** 3rd dose fentanyl up to 50 mcg IN BHO
    - **Revision:** 3rd dose fentanyl up to 50 mcg IN
  - **Morphine (IV dosing)**
    - **Previous:** MR in additional 5 min at half initial IV dose BHO

        - **Revision:** MR in additional 5 min at half initial IV dose
    - **Morphine (IM dosing)**
        - **Previous:** MR in additional 15 min at half initial IM dose BHO
        - **Revision:** MR in additional 15 min at half initial IM dose
    - **Ketamine (IV dosing)**
        - **Previous:** 0.3 mg/kg in 100 mL of NS slow IV drip over at least 10 min. Maximum for any IV dose is 30 mg.
        - **Revision:** 0.3 mg/kg in 100 mL of NS over 10 min IV. Maximum for any IV dose is 30 mg.

S-150 Nerve Agent Exposure and Auto-Injector Use

- **Revision:** Updated to be more comprehensive and accurate with CHEMPACK cache inventory and dosing.

Section IV – Pediatric Treatment Protocols

S-163 CPR / Arrhythmias

- **Ventricular Fibrillation / Pulseless VT**
    - **Previous:** Epinephrine 1:10,000 per drug chart IV/IO q3-5 min
    - **Revision:** Epinephrine 1:10,000 per drug chart IV/IO q3-5 min, begin after second defibrillation

S-167 Respiratory Distress

- **ALS**
    - **Respiratory distress with stridor at rest**
        - **Previous:** Epinephrine 1:1,000 per drug chart (combined with 3 mL normal saline) via nebulizer, MR x1
        - **Revision:** Epinephrine 1:1,000 per drug chart (combined with 3 mL normal saline) via nebulizer, MR x1 Ⓐ

S-169 Trauma

- **BLS**
    - **Removed:**
      Traumatic cardiac arrest
        - Rapid transport

        - For blunt trauma, may consider pronouncement at scene BHPO

- **ALS**
    - **Added:**
      For nausea and vomiting
      ≥6 months
        - Ondansetron IV/IM/ODT per drug chart
    - **Added:**
      For traumatic cardiac arrest
        - IV/IO fluid bolus per drug chart Ⓐ
        - Do not administer epinephrine
- **Added:** "Pediatric Traumatic Cardiac Arrest" flowchart

S-170 Burns

- **Previous:**
  Burn center criteria
    - Circumferential burn or injury to face, hands, feet, or perineum
    - Electrical injury due to high voltage (>120 volts)
- **Revision:**
  Burn center criteria
    - Circumferential burn or burn to face, hands, feet, or perineum
    - Electrical injury due to high voltage (≥1,000 volts)

S-172 BRUE (Brief, Resolved, Unexplained Event)

- **BLS**
    - **Removed:**
      BLS transport for currently asymptomatic patient with history of 1 or more of the following
        - Absent, decreased, or irregular breathing
        - Color change (cyanosis, pallor)
        - Marked change in muscle tone (hypertonia or hypotonia)
        - Altered level of responsiveness
- **ALS**
    - **Removed:** ALS transport for symptomatic patient

S-173 Pain Management

- **ALS**
  - **Removed:**
    BHPO required for treatment if patient presents with
    - Isolated head injury
    - Acute onset severe headache
    - Drug/ETOH intoxication
    - Suspected active labor
    - Major trauma with GCS <15
  - **For moderate pain (score 4-6) or severe pain (score 7-10)**
    - **Revision:** Format updated to be consistent with the adult pain management protocol
    - **Previous:**
      - <10 kg, fentanyl IV/IN per drug chart, MR BHO
      - ≥10 kg, fentanyl IV/IN per drug chart, MR
      - If fentanyl unavailable, morphine IV/IM per drug chart
    - **Revision:**
      <u>Fentanyl (IV dosing)</u>
      - <10 kg, fentanyl IV per drug chart
      - MR at half initial IV dose BHO
      - ≥10 kg, fentanyl IV per drug chart
      - MR at half initial IV dose

      <u>Fentanyl (IN dosing)</u>
      - <10 kg, fentanyl IN per drug chart
      - MR at initial IN dose BHO
      - ≥10 kg, fentanyl IN per drug chart
      - MR at initial IN dose
- **Added:** If patient refuses or has contraindications to acetaminophen, may treat as moderate pain (*footnote*)