2025 EMS Update Class Outline

Instructors: EMS Director Ryan Rosander, EMS Medical Director Dr. Bill Mulkerin, EMS Coordinator Katy Blanton

Introductions of EMSA staff and ALS providers (10 MIN).

Helicopter/Mercy Air 34 update (10 MIN):

- Policy #155 EMS Helicopter Operations

Revised/New Policies

- Policy #100: Continuous Quality Improvement (10 MIN)
- Policy #101: Quality Assurance Program (10 MIN)
- Policy #152: STEMI Triage and Destination (2.5 MIN)
- Policy #153: Trauma Patient Triage and Destination (2.5 MIN)
- Policy #203: Patient Refusal (5MIN)
- Policy #125 Prehospital Determination of Death (5 MIN)
- Policy #158: Ambulance Patient Offload Time (5 MIN)
- Policy #221: Leave Behind Naloxone (5 MIN)
- Policy #341: Emergency Medical Technician Paramedic Accreditation (2.5 MIN)
- Policy #342: Emergency Medical Technician Paramedic Reaccreditation (2.5 MIN)

BREAK (10 MIN)

Revised/New Protocols, Procedures, and Formularies:

- Protocol #601: Universal (2.5 MIN)
- Protocol #619: Shock Hypotension Sepsis (2.5 MIN)
- Protocol #622: Opioid Withdrawal (20 MIN)
- Buprenorphine Formulary (10 MIN)
- Protocol #618: Respiratory Distress-Opioid Overdose (2.5 MIN)
- Naloxone Formulary (2.5 MIN)
- Protocol #613: Behavioral Emergencies (5 MIN)
- Protocol #620: Seizure (5 MIN)
- Midazolam Formulary (2.5 MIN)
- Protocol #611: Allergic Reaction/Anaphylaxis (5 MIN)
- Protocol #616: Respiratory Bronchospasm/Asthma/COPD/Croup (15 MIN)
- Ipratropium Formulary (2.5 MIN)
- Magnesium Sulfate Formulary (2.5 MIN)
- Calcium Chloride Formulary (2.5 MIN)
- Epinephrine Formulary (2.5 MIN)
- Protocol #650: Childbirth (5 MIN)
- Protocol #651: Newborn (5 MIN)

- Protocol #663: Drowning (10 MIN)
- Protocol #645: A-FIB (5 MIN)
- Protocol #642: SVT (2.5 MIN)
- Procedure #718: Supraglottic Airway Device (10 MIN)
- Protocol #602: Airway Management (2.5 MIN)
- Procedure #717: Endotracheal Intubation (2.5 MIN)
- Procedure #704: Needle Cricothyrotomy (2.5 MIN)

BREAK (10 MIN)

AIRWAY SKILLS (30 MIN)

EXAM (25 MIN)

19 questions, 17/19 passing score

COURSE OBJECTIVES:

1. Go over all operational/clinical policy, procedure, and protocol changes that are being implemented 1/1/2026.
2. Ensure ALS providers are competent in the skills being taught in procedures and protocols.
3. Clarify the intent and answer questions regarding system changes with the EMSA Director and Medical Director.

POLICY #155: EMERGENCY MEDICAL SERVICE HELICOPTER OPERATIONS

I. PURPOSE

A. To establish standardized procedures for prehospital utilization and evaluation of Emergency Medical Service (EMS) Helicopters operating in the County of San Luis Obispo (SLO) as a specialized resource providing EMS and prehospital patient transport. The intention of this policy is not to be absolute, but to create guidelines for EMS helicopter operations. MEDCOM, SLU ECC, flight crew, and the discretion of any responding or on-scene first responders will take priority over all guidelines listed herein.

II. SCOPE

A. This policy excludes EMS helicopter operations limited to search and rescue and interfacility transfers.

III. DEFINITIONS

- Emergency Medical Services Aircraft - "Emergency Medical Services Aircraft" or "EMS Aircraft" or "EMS Helicopter" as used in this policy means any aircraft utilized for the purpose of prehospital emergency patient response and transport. EMS aircraft includes air ambulances and all categories of rescue aircraft (Title 22, Division 9, Chapter 8, Article 1, §100279)
- Air Ambulance - An "Air Ambulance" as used in this policy means any aircraft specially constructed, modified or equipped, and used for the primary purpose of responding to emergency calls and transporting critically ill or injured patients whose medical flight crew has, at a minimum, two (2) attendants certified or licensed in advanced life support (Title 22, Division 9, Chapter 8, Article 1, §100280).
- Rescue Aircraft - "Rescue aircraft" as used in this policy means an aircraft whose usual function is not prehospital emergency patient transport, but which may be utilized, in compliance with EMS policies, for prehospital emergency patient transport when use of an air or ground ambulance is inappropriate or unavailable. Rescue aircraft includes ALS rescue aircraft, BLS rescue aircraft and Auxiliary rescue aircraft. (Title 22, Division 9, Chapter 8, Article 1, §100281).
- Advanced Life Support Rescue Aircraft - An "Advanced Life Support Rescue Aircraft" or "ALS Rescue Aircraft" as used in this policy means a rescue aircraft whose medical flight crew has, at a minimum, one attendant certified or licensed in advanced life support (Title 22, Division 9, Chapter 8, Article 1, §100282).
- Basic Life Support Rescue Aircraft - A "Basic Life Support Rescue Aircraft" or "BLS Rescue Aircraft" as used in this policy means a rescue aircraft whose medical flight crew has, at a minimum, one attendant certified as an Emergency Medical Technician-IA (EMT-IA) with at least eight hours of hospital clinical training and whose field/clinical experience specified in Section 100074(c) of Title 22, California Code of Regulations,

is in the aeromedical transport of patients (Title 22, Division 9, Chapter 8, Article 1, §100283).

- Auxiliary Rescue Aircraft - An "Auxiliary Rescue Aircraft" as used in this policy means a rescue aircraft which does not have a medical flight crew, or whose medical flight crew do not meet the minimum requirements established for BLS rescue aircraft (Title 22, Division 9, Chapter 8, Article 1, §100284).
- Expedited Launch Zone: Areas identified as having or greater ground transportation time to a Specialty Care Center with a heliport/helistop, where transportation by EMS helicopter would result in a timesaving of at least ten (10) minutes over the ground transport. SLU ECC and the County of SLO EMS Agency (EMS Agency) retain and regularly update the County of SLO Expedited Launch Zone (Attachment A). The expedited launch zones are guidelines and are not intended to be absolute. An EMS Helicopter may be requested or launched in areas not defined within the expeditated launch zones.
- Heliport/Helistop: An area of land, water, or structure used or intended to be used for the landings and takeoffs of helicopters and includes its buildings and facilities, if any, as approved by the State of California, Department of Transportation, Division of Aeronautics.
- Emergency Landing Zone: the term used to designate an “emergency landing site” of an EMS aircraft by a public safety official.
- Incident Commander (IC): The highest-ranking representative or designee, on scene, of the public safety agency statutorily responsible for incident or scene management.
- SLU ECC: The San Luis Obispo Unit Emergency Command Center which coordinates the response of all EMS helicopters to the scene of all medical and trauma emergencies within the County of SLO where the patient’s location is known, and a nearby emergency landing zone can be reasonably assured.
- Specialty Care Center: A hospital designated and/or approved by the EMS Agency that provides specialized medical services.
- Time and Need: Considerations defined for quality improvement purposes in EMS Agency Policy #100: Continuous Quality Improvement.

IV. POLICY

A. The designated ordering point for all EMS helicopters is SLU ECC.

B. SLU ECC will coordinate EMS helicopter requests and cancellations.

C. EMS helicopters must have the capability to communicate and maintain communications with SLU ECC, EMS providers (responding and on-scene), base hospitals and other appropriate facilities or agencies.

D. Patient transport by EMS helicopter should meet both the “time and need” criteria outlined in this policy, but ultimately, it is SLU ECC, the IC, or the flight crew’s discretion.

E. EMS helicopter service providers must develop and participate in a QI program in cooperation with the EMS Agency and other EMS system participants as outlined in the EMS Agency Policy # 100: Continuous Quality Improvement. This includes active participation in the EMS Agency Quality Improvement Work Group. All 9-1-1 EMS helicopter medical responses will be reviewed both clinically and operationally.

V. PROCEDURE

A. Mode of transport is primarily an operational decision. As such, EMS personnel will comply with operational direction from the IC regarding mode of transport, see SLOEMSA Policy #200: Scene Management.

B. The closest and most appropriate available EMS Helicopter that is fully staffed, fueled, supplied, and prepared to immediately respond to an EMS helicopter request shall be dispatched except in the following circumstances:

1. When there is known or high likelihood for need of an EMS Rescue Helicopter, or when a nearby emergency landing zone cannot be reasonably assured, then an EMS Rescue Helicopter should be dispatched.
2. If more than one EMS Helicopter is located at the same location and the response does not require an EMS Rescue Helicopter, then SLU ECC shall dispatch using the following priority:
    a. Air Ambulance
    b. ALS Rescue Helicopter
    c. BLS Rescue Helicopter
    d. Auxiliary Rescue Helicopter

C. SLU ECC will initiate the dispatch process of EMS helicopters with other EMS responding agencies when an incident is located in the expedited launch zone, or the scene location is difficult or inaccessible by ground transport, which could result in a prolonged response and transport, or in the dispatchers judgement air transport is likely to be 10 minutes faster than ground transport, and there is a credible report of one (1) or more of the following conditions:

1. High-risk motor vehicle accidents.
    a. Major damage to vehicle e.g. head-on/entrapment.
    b. Patient ejection (partial or complete) from an automobile.
    c. Greater than three (3) patients.
    d. Motor vehicle rollover.
    e. Deceased/ 1144 / CPR in progress on the same scene as the patient.
    f. Auto vs. Pedestrian.
    g. Incident involving bus, train, or plane.
    h. Child (age 0–9 years) unrestrained or in unsecured child safety seat.

2. Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.)
3. Pedestrian/bicycle rider thrown, run over, or with significant impact.
4. Fall from height > 10 feet.
5. Gunshot wound (GSW)/Stabbing.
6. Burn patients.
7. Industrial or agricultural accident.
8. Crush injuries.
9. Amputation or vascular compromise in a limb.
10. Active bleeding requiring a tourniquet or wound packing with continuous pressure.
11. Pregnancy complications, including seizures/convulsions.
12. Drowning/submersion.
13. Any injured or ill patients in an area inaccessible to, or with an extended ETA.
14. Unconscious
15. Other situations that are not covered, but the dispatcher believes the condition of the patient is critical or has the potential to become critical.

D. Cancellation request of EMS helicopter response.

1. SLU ECC may request to cancel an EMS helicopter when:
   a. The IC, in consultation with the most medically qualified first responder on scene, determines it is no longer needed.
   b. Once an EMS helicopter has been dispatched, and a second EMS helicopter becomes available that reports an ETA at least five (5) minutes less than the ETA of the first EMS helicopter, SLU ECC may cancel the first EMS helicopter.
2. SLU ECC will notify the transport provider(s) and/or responding personnel of any cancellation request or situational updates.
3. The flight crew, as the highest medically trained pre-hospital personnel operating within the county EMS system, may decide to continue responding and assess the patient at their discretion.

E. Responding or on-scene first responders may request an EMS helicopter when both "time and need" criteria are met, or according to first responder discretion.

1. Time Criteria should meet one (1) or more of the following:
   a. Transport by EMS helicopter would result in savings of at least ten (10) minutes over ground transport. (Destination criteria for Specialty Care Centers should be taken into consideration.)
   b. The scene location is difficult or inaccessible by ground transport, which could result in a prolonged response and transport.

2. Need Criteria should meet one (1) or more of the following:

   a. Patient requires a higher level of care not available by ground ambulance, e.g., blood, pediatric intubation, surgical intervention, medications, or a base physician requesting air transport directly to a higher level of care or specialty care.

   b. Responding first responders may request with a credible report of one (1) or more of the following conditions:

      (1) Conditions as outlined under section V Procedures B, 1-14 above.

      (2) Responding first responders' discretion.

   c. On-scene responder's assessment determines one (1) or more of the following conditions (some conditions may require advanced life support level of training):

      (1) Patient assessment meets the criteria of EMS Agency Policy #153: Trauma Patient Triage and Transport.

      (2) Patient assessment meets the criteria of EMS Agency Policy #152: STEMI Patient Triage and Destination.

      (3) Any hemodynamically compromised pediatric patient.

      (4) Patient assessment identifies any of the following:

         - Altered mental status with no response to prehospital treatment.
         - Severe respiratory compromise or respiratory arrest.
         - Complications of childbirth, e.g., breech, abnormal presentation, massive blood loss, neonatal distress.
         - Signs and symptoms of medical hypotension unresponsive to treatment.

      (5) Patient assessment reveals unilateral weakness/paralysis, facial droop, or any signs/symptoms of CVA. (Time will be measured for flight to nearest hospital.)

      (6) Patient requires code 3 transport to the hospital.

      (7) EMS provider discretion

F. EMS helicopter transportation may not be for patients contaminated by hazardous material.

G. Patient destination should be in accordance with the EMS Agency destination and triage policies, including Policy #151: Destination, Policy #152: STEMI Triage and Destination, and Policy #153: Trauma Patient Triage and Destination; however, it is ultimately the flight crew's discretion to transport the patient to any higher level of care outside the county.

VI. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9
- California Emergency Medical Services Authority Prehospital Emergency Medical Service Aircraft Guidelines #144

VII. ATTACHMENTS

A. Expedited Launch Zones Map.

B. Emergency Landing Zone Selection.

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

POLICY #100: CONTINUOUS QUALITY IMPROVEMENT

I. PURPOSE

A. To establish a system-wide quality improvement program to evaluate the services provided within the County of San Luis Obispo Emergency Medical Services System. Emergency Medical Services System Continuous Quality Improvement Program (CQI Program)—evaluation methods composed of structure, process, and outcome evaluations that focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, correct the process, and recognize excellence in performance and delivery of care.

II. SCOPE

A. This policy applies to all EMS service providers and base hospitals within the County of San Luis Obispo's EMS System.

III. POLICY

A. The County of San Luis Obispo EMS Agency (SLOEMSA) will:

1. Develop and implement a system-wide written CQI Plan in cooperation with other EMS system participants, as defined in Title 22, Division 9. This plan will include indicators that address, but are not limited to, the following:

    a. Personnel

    b. Equipment and Supplies

    c. Documentation

    d. Clinical Care and Patient Outcome

    e. Skills Maintenance/Competency

    f. Transportation/Facilities

    g. Public Education and Prevention

    h. Risk Management

2. Establish and facilitate a system-wide comprehensive quality assessment and improvement program. The program will include, but is not limited to, the following activities:

    a. Regularly scheduled CQI Committee meetings

        (1) The CQI Committee must be multidisciplinary and include representatives from all levels (ALS and BLS) of field prehospital personnel, both public and private, air transport agencies, emergency medical dispatch, base hospitals, specialty care centers, and SLOEMSA staff/personnel.

(2) The Emergency Medical Care Committee (EMCC) Chair will approve a CQI Committee Chairperson. The term of service will be two (2) years.

(3) Patient, provider, and base hospital confidentiality will be strictly maintained at all times during the CQI process. All committee proceedings and records are exempt from discovery (AB2225). All participants will sign a confidentiality agreement at the beginning of each meeting.

b. Ensure each provider and base hospital comply with reporting and other quality assessment requirements specified or determined in Title 22 Division 9 and the SLOEMSA CQI Plan.

c. Ensures each provider and base hospital submits a CQI plan to SLOEMSA for approval.

d. Ensures each provider and base hospital conducts an annual review of their CQI plan and submits any changes to the SLOEMSA for approval.

e. Review provider and base hospital CQI plans every five years

B. EMS Service Providers and Base Hospitals will:

1. Develop and implement, in cooperation with other EMS system participants, a provider/base hospital-specific written CQI program, as defined in Title 22, Division 9, and the SLOEMSA CQI Plan. Such programs must include indicators which address, but are not limited to, the following:

a. Personnel

b. Equipment and Supplies

c. Documentation

d. Clinical Care and Patient Outcome

e. Skills Maintenance/Competency

f. Transportation/Facilities

g. Public Education and Prevention

h. Risk Management

2. Review the provider/base hospital-specific CQI Program annually to ensure its appropriateness for its operation and revise as needed.

3. Participate in the SLOEMSA CQI Program, which may include making available mutually agreed-upon relevant records for program monitoring and evaluation.

4. When the EMS CQI Program identifies a need for improvement, develop an action plan for performance improvement in cooperation with appropriate personnel/agencies/base hospitals. If the area that needs improvement includes system clinical issues, coordination and consultation with the provider/base hospital and SLOEMSA are required.

5. Provide SLOEMSA with an annual update on the provider/base hospital CQI Program from the approval date and annually thereafter. The update must include, but not be limited to, a summary of how the provider's/base hospital's CQI Program addressed the program indicators.

IV. PROCEDURE

A. Just Culture

Just Culture in EMS promotes a fair and balanced approach to accountability, recognizing that most errors result from system issues rather than individual fault. It encourages EMS providers to report mistakes openly, ensuring that learning and improvement take priority over punishment—except in cases of reckless or willful misconduct. By differentiating between human error, risky behavior, and negligence, Just Culture fosters a supportive environment where providers can improve practices, enhance patient safety, and strengthen overall system performance.

B. Review Process

1. The first efforts to resolve conflicts should occur on a peer-to-peer level. The base hospital physician should be consulted if the issue is a timely patient care conflict. If the issue remains unresolved at the peer-to-peer level, a SLOEMSA Provider Case Tracking Form (Attachment A of Policy #101: Quality Assurance Program) should be forwarded to the provider's CQI representative. The CQI representative then refers to and follows Policy #101: Quality Assurance Program.

C. Counseling and Remediation

1. Counseling and remediation are an essential aspect of the quality improvement process and include, but are not limited to:

   a. Recognition, reward, and reinforcement

   b. Case review and counseling on specific issues with focused QI review to monitor for recurrence over a specified period

   c. Didactic courses

   d. Supervised clinical time with a written outcome summary

   e. Didactic remediation with case scenario

   f. Topic-oriented research

   g. Development of in-service or written paper on a specific topic with supervised review

   h. Patient Care Record (PCR) and/or medical dispatch record review with a supervised written summary

   i. Focused quality improvement review of ongoing care, including but not limited to PCR review, field observation, and tape review

2. Recurrence of issues at any level may require increased counseling, monitoring, and/or remediation.

   a. A written remediation agreement with the involved individual(s) may include, but not be limited to:

      (1) Identification of the specific opportunity to improve

      (2) Identification of specific written future expectations, including the expected time frames for successful completion

(3) Consequences of failure to comply

(4) Signature of personnel involved on the written agreement

(5) Timelines for resolution and conclusion

3. System-wide issues may be referred to the appropriate SLOEMSA committee(s) for assistance in resolving the issue.

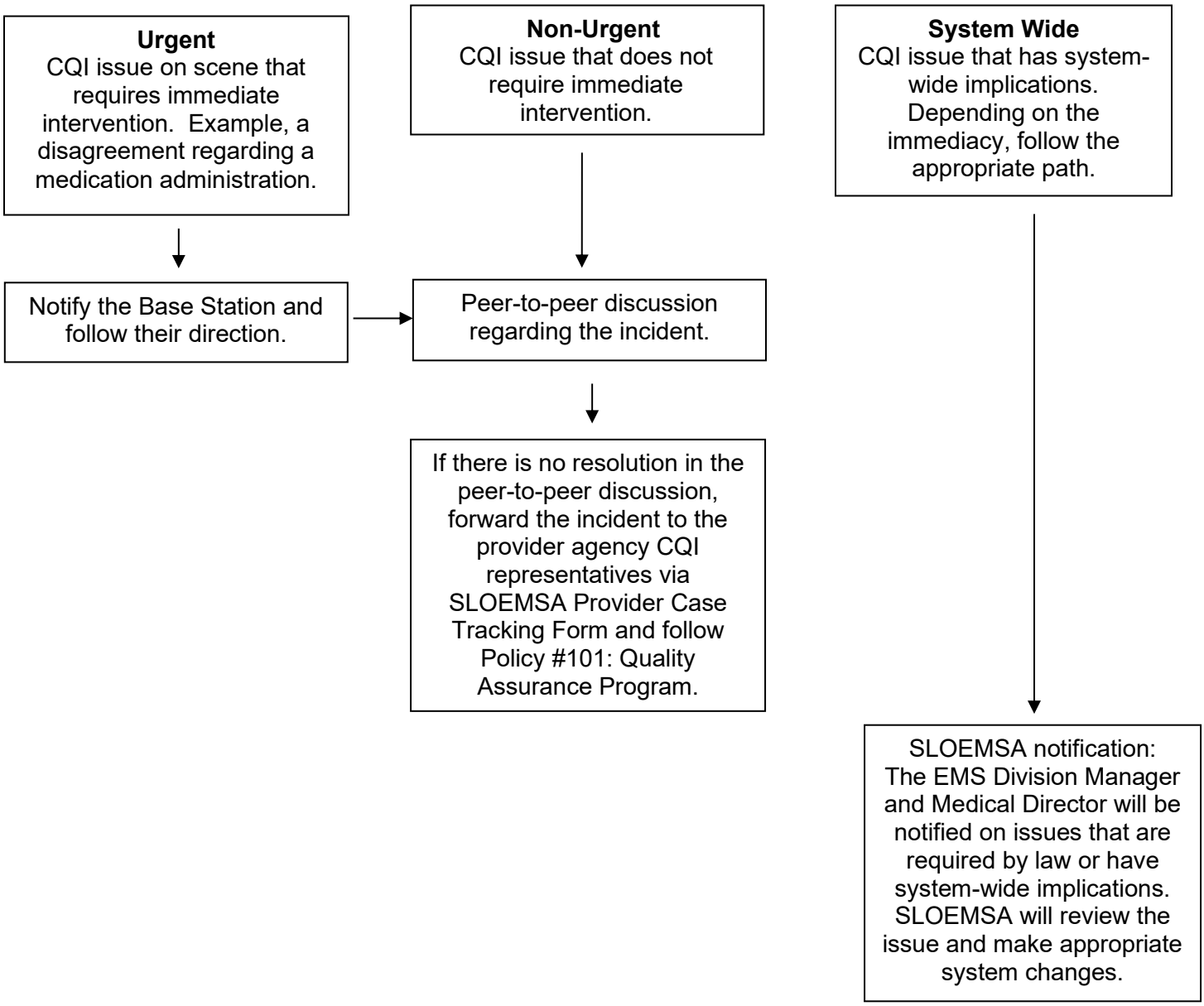
V. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9

VI. ATTACHMENTS

A. CQI Review Process – Flow Chart

CQI Review Process:



- Depending on the issue, the CQI representative(s) may contact the EMS Agency as soon as necessary.

POLICY #101: QUALITY ASSURANCE PROGRAM

I. PURPOSE

A. The purpose of this policy is to describe the Quality Assurance Program (QAP), the responsibilities of the County of San Luis Obispo Emergency Medical Services Agency (SLOEMSA), the responsibilities of each emergency medical services (EMS) provider agency, and the incident review process. The primary goal of the SLOEMSA Quality Assurance Program (QAP) is to ensure continued high-quality patient care.

II. LEGAL BASIS:

A. EMT Personnel:

1. An employer of an emergency medical technician (EMT) may conduct investigations as necessary and take disciplinary action against an EMT who is employed by that employer for conduct alleging or indicating the possibility of a threat to public health and safety as listed in Division 2.5 of the Health and Safety Code, §1798.200. The employer shall notify the SLOEMSA medical director within (3) three working days when an allegation has been validated as a potential violation of one or more items listed under Division 2.5 of the Health and Safety Code (H&S), §1798.200.

2. An employer of an EMT employee shall notify the SLOEMSA medical director when a violation of one or more of the items listed under Division 2.5 of the H&S §1798.200 within (3) three working days after the EMT is terminated or suspended for a disciplinary cause, the EMT resigns following notification of an impending investigation based upon evidence that would indicate the existence of a disciplinary cause, or the EMT is removed from EMT-related duties for a disciplinary cause after the completion of the employer's investigation.

3. At the conclusion of an investigation, the employer of an EMT may develop and implement, in accordance with the guidelines for Model Disciplinary Orders (MDO), temporary suspensions and conditions of probation adopted pursuant to H&S §1797.184, a disciplinary plan for the EMT. Upon adoption of the disciplinary plan, the employer shall submit that plan to SLOEMSA within (3) three working days. The employer’s disciplinary plan may include a recommendation that the SLOEMSA medical director consider taking action against the holder’s certificate.

B. Paramedic Personnel:

1. When information comes to the attention of the SLOEMSA medical director that a paramedic license holder has committed any act or omission that appears to constitute grounds for disciplinary action under Division 2.5 of the H&S, §1798.200, the SLOEMSA medical director may evaluate the information to determine if there is reason to believe that disciplinary action may be necessary, the SLOEMSA medical director will then notify the paramedic’s Agency.

2. If the medical director refers the matter to the California Emergency Medical Services Authority (EMSA) for further investigation and/or discipline of the paramedic license holder, the recommendation shall include all documentary evidence that was collected by the medical director while evaluating whether or not to make that referral. The recommendation and accompanying evidence shall be deemed in the nature of an investigative communication and be protected by §6254 of the Government Code. In deciding what level of disciplinary action is appropriate in the case, EMSA shall consult with the SLOEMSA medical director.

III. REPORTABLE INCIDENTS:

Issues that contributed to a negative patient outcome and/or issues involving grossly inappropriate behavior by any personnel involved. Additionally, issues that may potentially be a threat to public health and safety but did not necessarily contribute to a negative patient outcome. Listed below are examples of potential incidents:

A. Sentinel Events – A sentinel event is an unexpected occurrence involving death, serious physical or psychological injury, or the risk thereof. The phrase "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Such events are called "sentinel" because they signal the need for immediate investigation and response.

B. Breach of the standard of care (i.e., failure to assess/act, patient abandonment).

C. Medication errors – errors in drug choice, dosage, and route.

D. Treatment errors – procedural errors (e.g., unrecognized esophageal intubation) or errors in assessment/application of treatment guidelines that lead to treatment errors (e.g., medication given or procedure done when not warranted).

E. Key equipment failure on a call directly related to the care of the patient.

F. Care beyond the appropriate scope of practice.

G. Failure to follow SLOEMSA policy or protocol.

H. Suspected violations of Division 2.5 H&S §1798.200.

I. Any alleged or known injury to a patient as a result of actions by EMS personnel.

IV. INCIDENT REVIEW

A. Any individual or organization/agency may refer an incident for QA review.

B. Responsible organization/agency must review each referred incident through their QA program as directed by the organization/agency’s QA Policy and implement a Performance Improvement Plan (PIP) when indicated by review.

C. At the end of the QA review, the organization/agency responsible must provide feedback to the referring party and involved individual(s).

D. At the end of the QA review, regardless of level, the organization/agency responsible must send the completed SLOEMSA Provider Case Tracking Form to SLOEMSA.

E. Disposition of QA review by Level:

1. **Level 1**

a) Maintain records within the organization/agency's QIP Program

2. **Level 2**

a) Maintain records within the organization/agency's QIP Program.

3. **Level 3:** (When they occur, SLOEMSA waits to see the provider's outcome)

a) Maintain records within the organization/agency's QIP Program

b) Notify SLOEMSA within (3) three working days of the alleged violation

c) Submit a completed review and recommendation to SLOEMSA for review and approval

4. **Level 4**: (when they occur and SLOEMSA is notified and is involved with the investigation).

a) Maintain records within the organization/agency's QIP Program

b) Follow employer review and action, with notification and involvement of SLOEMSA and the SLOEMSA Medical Director, as indicated by H&S §1798 et al.

c) Any patient care which may have occurred during the incident must also undergo QA/QI review and be reported to SLOEMSA.

V. DEFINITIONS OF INCIDENT LEVELS (SLOEMSA CAN UPGRADE OR DOWNGRADE):

1. Level 1

a) Policy compliance or system issues that do not directly impact patient care

b) Disrupted communication with treatment in compliance with protocol

Examples include, but not limited to:

- Communication or transport issues between responding agencies
- Documentation issues with a single or multiple responding medics

2. Level 2

a) Recurrent (more than 2) Level 1 incidents

b) Non-compliance with treatment protocols or policies with minimal potential for patient harm

Examples include, but not limited to:

- Failure to administer Aspirin (ASA) for chest pain
- Failure to take a right-sided 12 lead for inferior infarct.

3. Level 3

a) Recurrent (more than 2) Level 2 incidents

b) Non-compliance with treatment protocols or policies with potential for patient harm

c) Care rendered or ordered outside scope of practice as defined by SLOEMSA policies and procedures:

Examples include, but not limited to:

- Failure to take STEMI or Trauma patient to the appropriate designated hospital
- Giving incorrect medication or incorrect dose of medication
- Failure to apply SMR when indicated by protocol

d) If a provider places an individual on a PIP for level 3 medical errors or above, notification to SLOEMSA shall occur.

4. Level 4

a) Any incident which qualifies for review under H&S §1798 et al.

VI. POLICY

A. Prehospital Personnel Responsibilities:

1. Immediately report the above-defined incidents to an on-duty provider agency supervisor.
2. Immediately notify the RN or physician staff at the receiving facility if an error impacts or has a potential to impact patient health and well-being.
3. Immediately notify the base hospital MICN and/or physician who directed the call regarding errors involving base/modified base hospital contact issues.
4. Within 24 hours of the incident, submit a written incident report to the provider agency supervisory personnel describing the details of the alleged incident.
5. Reasonably cooperate with the investigation of the alleged incident.

B. Prehospital Provider Agency Responsibilities:

1. If the prehospital provider agency is the reporting entity, the following procedures shall be followed:

a) Provide a written report of the incident and any other incident-related materials (PCR, voice recordings, etc.) to the appropriate allied agency or hospital within (3) three working days of becoming aware of a reportable incident.

b) Provide reasonable and appropriate information to the investigating agency to assist them in completing their investigation.

2. If the prehospital provider agency receives notification of a reportable incident from another entity, the following procedures shall be followed:

   a) Acknowledge receipt of the incident to the reporting party within 24 hours. In cases where an agency's CQI representative is off duty, the 24 hours will begin upon arrival on duty.

   b) Conduct a thorough incident investigation.

   c) Determine what action, if any, should be taken as a result of the findings of the investigative process. Such actions may include one or more of the following:

   - No action is necessary.
   - Remedial education.
   - Provider disciplinary action.
   - Referral to SLOEMSA and/or the California EMS Authority for potential certification/licensure action.
   - Referral to SLOEMSA for possible case review and/or policy/protocol revision.

   d) Prehospital providers shall document the tracking and resolution of reportable incidents using the SLOEMSA Provider Case Review Form. The SLOEMSA Provider Case Review Tracking Form shall be made available to SLOEMSA for any incident that requires referral to SLOEMSA for additional review/action.

   e) Notification of resolution shall be provided to the reporting organization/agency/person(s). This notification shall be in compliance with current employment and confidentiality laws and, at a minimum, will advise that the incident has been investigated, resolved, and closed.

C. Base/Receiving Hospital Responsibilities:

1. If the base/receiving hospital is the reporting entity, the following procedures shall be followed:

   a) Provide a written report of the incident and any other incident-related materials (patient outcome information, voice recordings, etc.) to the appropriate prehospital provider agency within (3) three working days of becoming aware of a reportable incident.

   b) Provide reasonable and appropriate information to the investigating agency to assist them in completing their investigation.

2. If the base/receiving hospital receives a concern/complaint from a prehospital provider that involves the EMS system, the following procedures shall be followed:

   a) Conduct a thorough incident investigation.

b) Determine what action, if any, should be taken as a result of the findings of the investigative process. Such actions may include one or more of the following:

- No action is necessary.
- Remedial education.
- Provider disciplinary action.
- Referral to SLOEMSA for possible case review and/or policy/protocol revision.

c) Notification of resolution shall be provided to the reporting organization/agency/person(s). This notification shall be in compliance with current employment and confidentiality laws and, at a minimum, will advise that the incident has been investigated, resolved, and closed.

D. Prehospital provider agencies and base hospitals shall report to SLOEMSA within (3) three working days if the reporting entity is not satisfied with the provider's investigation and/or resolution of the incident.

VII. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9

VIII. ATTACHMENTS

A. SLOEMSA Provider Case Tracking Form

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

POLICY #152: STEMI TRIAGE AND DESTINATION

I. PURPOSE

A. To establish guidelines for Emergency Medical Services (EMS) personnel to identify and transport patients with acute ST-segment Elevation Myocardial Infarction (STEMI) who could benefit from the rapid response and specialized services of a STEMI Receiving Center (SRC).

II. SCOPE

A. This policy applies to adult patients with chest pain or other symptoms indicative of Acute Coronary Syndrome (ACS) with a 12-lead ECG demonstrating elevated ST-segments indicating a specific type of myocardial infarction.

III. DEFINITIONS/GLOSSARY

- Percutaneous Coronary Intervention (PCI): A broad group of percutaneous techniques utilized for the diagnosis and treatment of patients with STEMI.
- Return of Spontaneous Circulation (ROSC): The return of a palpable pulse after cardiac arrest.
- STEMI: An acute myocardial infarction that generates a specific type of ST-segment elevation on a 12-lead ECG.
- "STEMI Alert": A report from EMS personnel that notifies a STEMI Receiving Center as early as possible that a patient has a specific computer-interpreted prehospital 12-lead ECG indicating a STEMI, allowing the SRC to initiate the internal procedures to provide appropriate and rapid treatment interventions.
- "12-Lead Consultation" – Contact SLO County STEMI Receiving Hospital (French Hospital Medical Center) when the patient does not meet a STEMI ALERT Criteria and transmitting the 12-lead ECG would benefit the consultation.
- STEMI Receiving Center (SRC): A facility licensed for cardiac catheterization laboratory and recognized as an SRC by the County of San Luis Obispo Emergency Medical Services Agency (EMS Agency).
- STEMI Referral Hospital (SRH): An acute care hospital in the County of San Luis Obispo (SLO) that is not designated as a STEMI Receiving Center.
- SLO STEMI Receiving Center (SLO SRC) – refers to the STEMI Receiving Center in San Luis Obispo County (French Hospital Medical Center) to be used for medical direction and or destination decisions.

IV. POLICY

A. Determine if patient condition meets STEMI Patient Triage Criteria.

B. "STEMI Alert" notifications - contact the nearest SRC (French or Marian) as soon as possible, including for any ALS agencies that are first on scene. During the 12-lead

transmittal to the closest SRC, a "STEMI Alert" should be made simultaneously, regardless of whether transport personnel are on scene. After departing scene, an updated "STEMI ALERT" should be called as soon as possible.

C. The target off-scene time should be 10 minutes or less for transport personnel.

D. "12- Lead ECG Consultations" and/or "Destination" consultations - contact the SLO SRC (French)

V. PROCEDURE

A. Determine if patient condition meets STEMI Patient Triage criteria:

1. Patients meeting EMS Agency Protocol Adult Chest Pain #640: or with indications for 12-lead ECG per EMS Agency 12-lead ECG Policy #707 with computerized interpretation of an accurately performed pre-hospital 12-lead ECG indicating ***STEMI*** (or equivalent computerized interpretation).

B. Destination and Notification

1. Transport to nearest SRC (French or Marian) or as directed by a SLO SRC (French).

a. Patients meeting the STEMI Patient Triage Criteria are considered a "STEMI Alert" and must be transported to the nearest SRC.

b. Patients with ROSC regardless of 12-lead ECG reading

c. The SRC Emergency Department must be notified as early as possible of the incoming "STEMI Alert" and /or ROSC to activate the SRC's internal STEMI/PCI system.

d. The closest SRC for patients being transported within San Luis Obispo County will be defined as follows:

1. A unit on scene of a call that is located within San Luis Obispo County south of El Campo Rd should proceed to Marian Regional Medical Center.

2. A unit on scene of a call that is located within San Luis Obispo County north of El Campo Rd should proceed to French Hospital Medical Center.

3. In any other area west or east of El Campo Rd, crews should exercise discretion in determining which SRC is closest or fastest for patient transport.

4. Discretion in all cases should include abnormal traffic patterns, congestion, or other travel factors affecting transport to the closest and fastest SRC.

2. An Emergency Department physician at the SLO SRC (French) must be consulted to determine patient destination in the following:

a. "STEMI Alert":

(1) The patient is unstable with a SBP<90mmHg and transport time to the SRC would add more than 30 minutes to the transport time to a STEMI Referral Hospital (SRH).

(2) Patient is uncooperative with the procedure and/or expresses a personal preference for destination other than the SRC; see EMS Agency Policy #203: Patient Refusal of Treatment or Transport.

b. Questionable 12-Lead ECG

c. Patients who, while enroute, develop unmanageable airway or cardiac arrest without ROSC must be transported to the closest hospital, with the transporting provider notifying the intended SRC of the change in destination.

d. When a patient is diverted to another hospital the SLO SRC (French) shall notify the receiving hospital and provide information regarding the destination decision.

C. Contact the nearest SRC as soon as possible with "STEMI Alert" Notification

1. For patients with identified STEMI, destination must be promptly determined after the prehospital 12-lead ECG is completed and read. The SRC must be notified as soon as possible.

2. The "STEMI Alert" notification must contain the following information:

a. Call identified as a "STEMI Alert".

b. ETA, if available/when en route to the SRC.

c. Patient age and gender.

d. Confirmation of ECG reading and whether it appears to be free of significant artifact.

e. Confirmation that the appropriate treatment protocol is being followed.

f. Results of any medications given.

g. Additional information if required:

(1) Any confusion regarding chief complaint or treatment.

(2) Destination decision assistance.

3. ECG Transmission:

a. With a STEMI Alert or ROSC and the equipment is available, the ALS provider shall transmit a 12-lead ECG to a SRC (French or Marian);

(1) Notify the SRC that you are capable of 12-lead ECG transmission and that you have transmitted or are about to transmit the 12-lead ECG previously obtained.

(2) Include on the transmitted 12-lead ECG the patient age and sex required for the ECG monitor to accomplish its interpretation and be used as an identifier for the SRC.

(3) Do not include the name of the patient with the transmission of the 12-lead ECG.

b. When "Consulting" with a SLO SRC (French) and transmitting the 12-lead ECG would benefit the consultation:

(1) Notify the SLO SRC (French) that you are capable of 12-lead ECG transmission and that you have transmitted or are about to transmit the 12-lead ECG.

(2) Include on the transmitted 12-lead ECG the patient age and sex required for the ECG monitor to accomplish its interpretation and be used as an identifier for the SRC

(3) Do not include the name of the patient with the transmission of the 12-lead ECG.

4. Documentation

a. Findings of prehospital 12-lead ECGs, the time of the "STEMI Alert," and patient identification must be documented on the 12-lead ECG and the prehospital PCR.

b. Two copies of the prehospital 12-lead ECG (multiple if performed) must be made, with one delivered to the receiving hospital responsible for the continued care of the patient, and one included with the prehospital PCR.

VI. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9

POLICY #153: TRAUMA PATIENT TRIAGE AND DESTINATION

I. PURPOSE

A. To establish guidelines for EMS personnel to identify and transport "significantly injured" patients who could benefit from the rapid response and specialized services of a trauma center.

II. SCOPE

A. This policy applies to both adult and pediatric injured patients, unless stated otherwise.

III. PROCEDURE

A. Trauma Activation Criteria

1. "STEP 1 or STEP 2 TRAUMA ALERT" - Patient meeting any one of the Physiologic (Step 1) and/or Anatomic criteria (Step 2) following a traumatic event shall be designated a "TRAUMA ALERT" and transported to the closest trauma center. The target off-scene time should be 10 minutes or less for transport personnel.

2. "STEP 3 TRAUMA CONSULTATION" - Patient meeting (Step 3) Mechanism of Injury - contact with the County of San Luis Obispo (SLO) Trauma Center for patient destination. The target off-scene time should be 10 minutes or less for transport personnel.

3. "STEP 4 TRAUMA CONSULTATION"- Shall be made with the SLO Trauma Center to determine destination when the paramedic identifies a significantly injured patient that DOES NOT meet the Step 1 (Physiologic), Step 2 (Anatomic) or Step 3 (Mechanism of Injury) criteria but meets one or more of the special patient or system considerations.

B. Trauma Patient Criteria

Patients meeting any one of the Physiologic and/or Anatomic criteria following a traumatic event shall be a "TRAUMA ALERT" and transported to the closest trauma center. Patient meeting Mechanism of Injury and/or Special Patient/System Considerations shall be a TRAUMA CONSULT and contact the County of San Luis Obispo (SLO) Trauma Center for patient destination.

C. Closest Trauma Center

1. The closest Trauma Center for patients being transported within San Luis Obispo County will be defined as follows:

a. A unit on scene of a call that is located within San Luis Obispo County south of El Campo Rd should proceed to Marian Regional Medical Center.

b. A unit on scene of a call that is located within San Luis Obispo County north of El Campo Rd should proceed to Sierra Vista Regional Medical Center.

c. In any other area west or east of El Campo Rd, crews should exercise discretion in determining which trauma center is closest or fastest for patient transport.
d. Discretion in all cases should include abnormal traffic patterns, congestion, or other travel factors affecting transport to the closest and fastest Trauma Center.

1. **STEP 1 (Physiologic Criteria)**

The target off-scene time should be 10 minutes or less for transport personnel

a. *Adult* injured patients meeting any one of the following criteria:
    1. Glasgow Coma Scale ≤13 (based on patient history and attributed to injury)
    2. Systolic blood pressure <90 mmHg
    3. Respiratory rate <10 or >29 breaths per minute

b. *Pediatric* injured patients (≤ 34 Kg) meeting any one of the following criteria:
    1. Glasgow Coma Scale ≤13 (based on patient history and attributed to injury)
    2. Evidence of poor perfusion – color, temperature, etc.
    3. Respiratory rate
        - >60 breaths per minute or respiratory distress
        - <20 breaths per minute in infants <1year
    4. Heart rate
        - ≤5 years (<22Kg) heart rate <80 beats per minute or >180 beats per minute
        - ≥6 years (23-34Kg) heart rate <60 beats per minute or >160 beats per minute
    5. Blood pressure
        - Newborn (<1 month) systolic blood pressure <60mmHg
        - Infant (1 month -1 year) systolic blood pressure <70mmHg
        - Child (1 year-10 years) systolic blood pressure <70mmHg + 2X age in years
        - Child (11-14 years) systolic blood pressure <90mmHg

2. **STEP 2 (Anatomic Criteria)**

The target off-scene time should be 10 minutes or less for transport personnel

Injured patients meeting any one of the following criteria:

a. All significant penetrating injuries to head, neck, torso and extremities proximal to knee or elbow

b. Chest wall instability or deformity (e.g. flail chest)

c. Two proximal long bone fractures (above the elbows and or knees)

d. Mangled, degloved or pulseless extremity

e. Open or depressed skull fracture

f. Paralysis

g. Pelvic injury with high-risk mechanism of injury (motor vehicle collisions, auto vs. pedestrian accidents, motorcycle collisions, falls from heights)

3. **STEP 3 (Mechanism of Injury Criteria)**

The target off-scene time should be 10 minutes or less for transport personnel

Injured patients meeting any one of the following criteria:

a. Falls

    1. Adults: >20 feet (one story is equal to 10 feet)
    2. Pediatric (≤ 34kg) : >10 feet or ≥ two times the height of the child

b. High-risk auto crash:

    1. Passenger Space Intrusion (PSI) of space: >12 inches occupant patient site; or >18 inches anywhere within the passenger space
    2. Ejection (partial or complete) from automobile
    3. Death in same passenger compartment

c. Auto vs. pedestrian/bicyclist thrown, run over, or with significant impact (>20 mph)

d. Motorcycle or unenclosed transport vehicle crash (>20 mph)

4. **STEP 4 (Special Patient or System Considerations)**

Age and co-morbid considerations.

a. EMS provider judgment

b. Age greater than 65

    1. SBP <110 mmHg may represent shock

c. Pediatric (≤ 34kg)

d. Pregnancy > 20 weeks

e. Anticoagulation therapy (excluding aspirin) or other bleeding disorders with head injury (excluding minor injuries)

f. Burns with trauma mechanism

Note:

A TRAUMA CONSULT is not required for ground level/low impact falls with GCS ≥ 14 or when the GCS is normal for patient

C. Contact the Trauma Center

Contact the receiving trauma center early and immediately upon determining the patient meets trauma patient triage criteria with a "TRAUMA ALERT" or "TRAUMA CONSULTATION"

1. "TRAUMA ALERT"

A "TRAUMA ALERT" is initiated when an injured patient meets any one of the Step 1 (Physiologic) or Step 2 (Anatomic) Criteria. Consider early notification to the intended receiving Trauma Center, from the scene when possible

a. EMS personnel should provide a "TRAUMA ALERT" early and from the scene when possible to assist in early activation of the trauma team and determination of patient destination.

b. ALS personnel must contact the trauma center with the TRAUMA ALERT.

c. A "TRAUMA ALERT" report should include the following:

1. "TRAUMA ALERT" meeting trauma triage step criteria "x"
2. Unit and medic #
3. ETA to trauma center
4. Report on individual patient (MIVT format):

- Age and sex
- Mechanism of injury
- Injury and complaints
- Vital signs including GCS
- Treatment
- Include specific triage findings or considerations that identify the patient as meeting TRAUMA ALERT criteria.

2. "TRAUMA CONSULTATION"

"TRAUMA CONSULTATION" with a SLO trauma center should be obtained to determine trauma patient destination when Step 3 (mechanism(s) of injury) criteria or Step 4 (special considerations) are present and Step 1 (physiologic) and Step 2 (anatomic) criteria are NOT met.

a. Only ALS personnel may request a "TRAUMA CONSULTATION" for patient destination

b. A "TRAUMA CONSULTATION" report should include the following:

1. "TRAUMA CONSULTATION" meeting trauma triage step criteria "x"

2. Unit and medic #

3. ETA to trauma center and ETA to closest ED (When the trauma center is the closest facility include in the radio contact information notifying them they are the closest receiving facility)

4. Report on the individual patient: (MIVT format)

- Patient age and sex
- Mechanism of injury and scene
- Injury and complaints
- Vital signs including GCS
- Treatment and response
- Include <u>specific</u> findings or considerations that identify the patient as meeting TRAUMA CONSULTATION criteria

c. Paramedic Concerns

3. The Trauma center, when not receiving the patient, shall notify the receiving hospital of the incoming patient and provide that hospital with the prehospital care patient information.

4. When practical, a brief updated report should be given to the trauma center Hospital and include any significant changes in route in vital signs, GCS, physical findings, symptoms or treatments.

D. Exceptions to Direct Transport to a Trauma Center

Trauma patients will be transported to the closest ED in the following situations:

1. Patient condition necessitates transport to the closest ED, such as the following:

a. Unmanageable airway (intubation attempts are unsuccessful and an adequate airway cannot be maintained with BVM or other device)

b. Uncontrollable bleeding with rapidly deteriorating vital signs

c. Traumatic cardiac arrest – see EMS Agency Prehospital Determination of Death/Do Not Resuscitate (DNR) End of Life Care Policy #125.

2. SLO Trauma Center destination order

3. Patient refusal - see EMS Agency Patient Refusal of Treatment and/or Transport Policy #203.

4. Trauma center is on complete diversion – see EMS Agency Hospital Diversion Policy #154: Hospital Diversion.

~~E.~~ The utilization of EMS helicopter for the response and transport of trauma patients must be in accordance with ~~EMS Agency~~ Policy #155: EMS Helicopter Operations. ~~EMS Helicopter Policy #155 transport should be considered when ground transport is greater than 30 minutes from the trauma center and air transport would be more expeditious than ground transport.~~

IV. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9

V. ATTACHMENTS

A. Trauma Triage Matrix

Trauma Triage Decision Scheme

Patients meeting one or more criteria activates

1

Criteria Adult Physiologic – TARGET DEPART SCENE ≤ 10 MIN

- Glasgow Coma Scale ≤ 13
- Systolic blood pressure <90 mmHg
- Respiratory rate <10 or > 29 breathe per minute

Pediatric Physiologic Criteria

- Glasgow Coma Scale≤ 13
- Evidence of poor perfusion – color, temperature, etc.
- Respiratory Rate
  - > 60/min or respiratory distress/apnea
  - < 20/min in infants < 1 yr
- Heart Rate
  - ≤ 5 yrs (<22 kg) < 80 or > 180/min
  - ≥ 6 yrs (23-34 kg) < 60 or > 160/min
- Blood Pressure
  - Newborn (<1 month) SBP < 60mmHg
  - Infant (1mo to 1 yr) SBP <70 mmHg
  - Child (1yr to 10 yrs) SBP < 70mmHg + 2X age in yrs
  - Child (11 to 14 yrs) SBP < 90 mmHg

→ **TRAUMA ALERT** Transport to closest TC

NO

Assess for anatomic injury

2

Anatomic Criteria – TARGET DEPART SCENE ≤ 10 MIN

- All penetrating injuries to head, neck ,torso, and extremities proximal to the elbow or knee
- Chest wall instability or deformity (i.e. flail chest)
- Two long bone fractures – proximal to elbow or knee
- Mangled, degloved or pulseless extremity
- Open or depressed skull fracture
- Paralysis
- Pelvic injury with high-risk mechanism of injury

→ **TRAUMA ALERT** Transport to closest TC

NO

Assess for mechanism

3

Mechanism of Injury – TARGET DEPART SCENE ≤ 10 MIN

- Falls
  - Adults - > 20 feet (one story equals 10 feet)
  - Children - > 10 feet or two times their height
- High risk auto crash
  - Intrusion of passenger compartment space > 12 inches occupant site or > 18 inches any site including the roof/floor
  - Ejection (partial or complete) from automobile
  - Death in the same vehicle
- Auto vs pedestrian/bicycle thrown, run over, or with significant impact (> 20 mph)
- Motorcycle or unenclosed transport vehicle crash > 20 mph

→ **CONSULT TC** for destination

NO

Assess for special considerations

4

Special Patient and System Considerations (*)

- EMS provider judgement
- Age > 65 yrs or < 14 yrs
- Anticoagulants therapy (excluding ASA) or other bleeding disorders with head injury (excluding minor injuries)
- Pregnancy > 20 weeks
- Burns with traumatic mechanism

(*) Trauma Consult is not required for ground level/low impact falls with a GCS ≥ 14 (or GCS is normal for patient) – follow SLO County Destination Policy # 151

→ **CONSULT TC** for destination

NO

Follow SLO County Destination Policy #151

Contact TC and transport to closest ED with

- **Unmanageable airway**
- **Uncontrolled bleeding**
- **Traumatic arrest**

POLICY #203: PATIENT REFUSAL

I. PURPOSE

A. To establish policy and procedure for the County of San Luis Obispo (SLO) Emergency Medical Services (EMS) personnel to utilize for a refusal of EMS assessment, treatment, and/or transportation, or to recognize and initiate treatment and/or transportation without explicit consent.

II. DEFINITIONS

- Designated Decision Maker (DDM): An individual whom a patient has legally given or implied the authority to make medical decisions concerning the patient's health care.
    - Parent and legal guardian of a minor, and "attorney-in-fact" through a Durable Power of Attorney for Health Care, or an "agent" through an Advance Health Care Directive.
- Implied Consent: When the agreement of EMS assessment, treatment, and/or transportation is inferred rather than explicitly obtained.
- Medical Decision Making Capacity: An individual's ability to understand, retain, and use information to make informed decisions about their medical care. It encompasses the cognitive abilities necessary to understand the situation and relevant information, appreciate the consequences of potential decisions, and communicate their choice effectively.
- Patient: Any person for whom the EMS system has been activated and who meets any of the following criteria:
    - Has a chief complaint or suspected illness or injury.
    - Requires or requests assessment, treatment, or transportation.
    - Is a minor who is not accompanied by a DDM and is or appears to be ill or injured.
    - Is not oriented to person, place, time, or event.
- Refusal: The refusal of assessment, treatment, and/or transport by a patient or his/her designated decision maker. This includes patient refusal to be transported to the closest or designated receiving hospital.
- Welfare and Institutions (W&I) 5150 Hold: Holding a patient against his/her will for evaluation under the authority of W&I Code, Section 5150, because the patient is a danger to him/herself, a danger to others, and/or is gravely disabled, e.g., unable to care for self. A law enforcement officer, County Mental Health worker, or an attending staff member at a designated facility can initiate a written order.
    - Pediatric holds are under the W&I Code, Section 5585. The same criteria and response apply to pediatric patients.

III. POLICY

A. All patients will be offered treatment and/or transportation following a complete EMS assessment.

B. Adult Patients who can make decisions for themselves have the right to refuse medical assessment, treatment, and/or transportation.

C. An unaccompanied minor who has an illness/injury requiring immediate EMS treatment and/or transportation may not refuse and shall be treated and/or transported by EMS personnel without DDM consent.

1. This also includes minors that fall under the criteria for a W&I 5585 hold.

D. Except for parents and legal guardians of minors, DDMs will only be used if the patient lacks medical decision making capacity.

E. Decisions made by a DDM shall be treated as though the patient was making the decisions for him/herself.

IV. PROCEDURE

A. When a refusal exists, complete the following steps:

1. EMS personnel should first determine if there is a patient.

a. If there is no patient at the scene, there is no refusal. EMS personnel should document why it was determined that there isn't a patient.

2. Next, EMS personnel should determine and document that the patient has medical decision making capacity to refuse services by following these steps:

a. Ask the patient to explain their understanding of the situation, the options, and their decision.

b. Observe the patient's demeanor, engagement, and ability to communicate their choice.

c. Evaluate the patient's understanding: Does the patient comprehend the information provided to them regarding their condition, treatment options, risks, benefits, and alternatives?

d. Evaluate the patient's appreciation: Does the patient appreciate how the information applies to their specific situation? This means they should understand the implications of their decision, including the potential impact on their quality of life and well-being.

e. Evaluate the patient's reasoning: Is the patient able to weigh the risks and benefits of different options and make a reasoned decision based on their values and preferences?

f. Evaluate the patient's communication: Is the patient able to express their choice clearly and consistently?

g. If the answer is no for questions in c.-f., the patient may lack medical decision making capacity to refuse services. Follow section E. below.

h. A patient's medical decision making capacity can change, so it's important to reassess as needed.

3. If the patient has a medical condition requiring medical attention, ensure the patient understands that they need to make personal arrangements to seek medical care at a hospital, urgent care, or private physician's office.

4. EMS personnel shall advise the patient of the risks and consequences that may result from refusal of treatment and/or transportation including the possible risk of death or disability from any undiagnosed condition being untreated.

5. If the patient still refuses, EMS personnel must attempt to obtain the patient's signature on the EMS provider's refusal form.

6. The signature should be witnessed, preferably by a family member.

7. If the patient refuses to sign the EMS provider's refusal form, prehospital personnel must note "patient refused" in the signature line and initial. Include in the narrative that the patient refused to sign the form. EMS personnel or other witnesses present should sign the form.

8. The patient and caregivers shall be advised to seek medical care immediately or call 911 if the patient develops adverse symptoms at any time.

B. Consultation with the Base Hospital or Specialty Care Base physician or MICN will be made for:

1. Refusal cases where ALS interventions are performed or indicated, and the patient is refusing assessment, treatment, and/or transport, which includes transport to the appropriate receiving hospital.

2. Unstable patients, as defined in Universal Protocol # 601, who refuse transport to the nearest appropriate receiving hospital.

C. When Base Hospital physician consultation is indicated, ALS personnel shall advise the physician of all the circumstances while on scene, including indicated care or transportation, reasons for refusal, medical decision making capacity, and the patient's plan for follow-up care with his/her own private physician or provider.

D. Consultation with the Base Hospital physician or MICN is not required for isolated injury without potential for significant airway, hemodynamic, orthopedic, or neurological compromise.

E. Implied consent can be inferred when based on the professional judgment of the EMS personnel, a patient lacks medical decision making capacity to refuse services, and a reasonable person would consent to assessment, treatment, and/or transport.

F. If EMS or Base Hospital personnel determine that a patient with an emergency condition lacks medical decision making capacity to refuse assessment, treatment, and/or transportation, the following alternatives exist:

1. The patient should be transported to a hospital under implied consent.

2. A Base Hospital physician may determine that it is necessary to transport the patient against his/her will. If the patient resists, or if EMS personnel believe

the patient will resist, assistance from law enforcement or County Mental Health shall be requested to assist in the transportation of the patient.

3. Law enforcement or County Mental Health may consider the placement of a W&I 5150 hold on the patient, but this is not required for transport.
4. If EMS personnel believe a DDM of the patient may not be acting in the best interest of the patient in refusing indicated immediate treatment and/or transportation, assistance from law enforcement personnel shall be requested.
5. EMS personnel should never put themselves in danger by attempting to treat and/or transport a patient who refuses. EMS personnel should use good judgment and request appropriate assistance, as needed.

G. A PCR and an EMS provider's patient refusal form shall be completed for each incident of refusal of EMS assessment, treatment, and/or transportation, including transport to the appropriate receiving hospital.

1. Patient information is not required for individuals that did not present with any complaint or illness/injury and advised EMS personnel upon initial contact that they did not want further assessment or evaluation.
2. Refusal documentation in the narrative should include:
   a. Who activated 9-1-1 and the reason for the call, if known.
   b. A complete patient history and assessment.
   c. All circumstances pertaining to consent issues during the patient encounter.
   d. An assessment that indicates the patient's medical decision making capacity.
   e. The presence or absence of any impairment, such as by alcohol or drugs.
   f. The reason that the patient is refusing an assessment, treatment, and/or transportation.
   g. A statement that the patient understands the risks and consequences of refusing medical treatment and/or transportation to the appropriate receiving hospital that was offered.
   h. All alternatives presented to the patient.
   i. That the patient has been informed that they may re-access 9-1-1 as necessary.
   j. Base Hospital and/or Base physician contacted if applicable.
   k. Signature of patient and EMS personnel on the refusal form.

V. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Welfare and Institutions Code 5150 and 5585
- Title 22, California Code of Regulations, Division 9

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

BREAK

POLICY #125: PREHOSPITAL DETERMINATION OF DEATH / DO NOT RESUSCITATE (DNR) / END OF LIFE CARE

I. PURPOSE

A. To establish criteria for the determination of death and/or the termination of resuscitative measures and outline the procedure to be followed by EMS personnel in the County of San Luis Obispo (SLO).

II. DEFINITIONS

- Resuscitation: medical interventions whose purpose is to restore cardiac or respiratory activity at the scene of an emergency, which includes chest compressions (CPR), assisted ventilation (breathing), endotracheal intubation, defibrillation, and cardiotonic drugs (heart stimulating drugs).
  - Such measures do **not** affect the provision of life sustaining measures of artificial nutrition or hydration or the provisions of other emergency medical care, including treatment for pain, difficulty breathing, major bleeding, or other medical conditions.

III. POLICY

A. EMS Personnel may withhold or terminate resuscitation, determine that a patient is dead, and leave the body in custody of medical or law enforcement personnel, according to the procedures outlined in this policy.

B. The following Do Not Resuscitate (DNR) orders are considered operative to withhold resuscitative measures from patients in accordance with their wishes and the procedures outlined in this policy:

1. California Durable Power of Attorney for Health Care (DPAHC): As defined in California Civil Code, Sections 2410-2444 and a health care agent designated therein is present, and that agent requests that resuscitation not be done.
2. Physician Order for Life-Sustaining Treatment (POLST) – Section A “Do not attempt resuscitation/DNR (Allow Natural Death)”
3. A fully executed Natural Death Act Declaration.
4. DNR Medallion: A metal or permanently imprinted insignia, worn by a patient, that has been manufactured and distributed by an organization approved by the California State Emergency Medical Services Authority. The insignia must be imprinted with the words “Do Not Resuscitate, EMS,” “Do Not Resuscitate, or “POLST”.
5. A written document in the patient’s permanent medical record for patients who are in a licensed health care facility, or who are being transferred between licensed health care facilities containing the statement “Do Not Resuscitate”, “No Code”, or “No CPR” **has been read and reviewed** on scene by EMS personnel,

and whose authenticity has been verbally documented by a witness from the health care facility.

C. Nothing in this policy will prevent peace officers from acting within the scope and course of their official duties and pronouncing death as permitted by the policies of their agencies.

IV. PROCEDURE

A. General Guidelines:

1. All patients require rapid and immediate medical evaluation.
2. The highest medical authority on scene shall determine death in the field.
    a. If BLS responders have any questions or uncertainty regarding determination of death, then BLS measures shall be instituted until arrival of ALS personnel.
    b. If ALS responders have questions or uncertainty regarding determination of death, ALS measures shall be instituted until base hospital contact is made and orders are received.
3. EMS Personnel who arrive on scene after the patient is determined to be dead shall not re-evaluate the patient.
4. The Coroner must be contacted when resuscitation has been withheld or terminated:
    a. Deceased patients should not be moved unless directed by the Coroner, to access other patients requiring medical care or assessment, for the safety of First Responders, or for other extraordinary circumstances.
    b. All IV lines, airways, etc., must be left in place whenever resuscitation is terminated in the field.
5. Pre-term deliveries or spontaneous abortions with a gestation ≤20 weeks without signs of life (pulseless, not breathing) are considered non-viable. A first responder may withhold resuscitation on scene.
    c. If uncertain as to gestational age begin resuscitation and establish base hospital contact.
    d. Initiation of resuscitation efforts may be also made based on provider judgement of scene itself.
6. References to “signs of life” in the following sections are based on results from assessment procedures described in Table 1.

Table 1. Assessment procedures for determining absence of signs of life.

CATEGORY	ASSESSMENT PROCEDURES	ABSENT SIGNS OF LIFE
Respiratory	Open the patient's airway. Auscultate lungs or feel for breaths while observing the chest for movement for a minimum of 30 seconds	No spontaneous breathing. No breath sounds on auscultation
Cardiac	Palpate the carotid artery (brachial for infant) for a minimum of 3020 seconds. Auscultate for heart sounds for minimum of 3020 seconds. OR ALS ONLY- Monitor the patient's cardiac rhythm for minimum of 1 minute. Obtain a 6-second strip to be retained with the EMS provider's documentation.	No Pulse No heart sounds. Asystole in 2 leads
Neurological	Check for pupil response to light. Check for response to painful stimuli.	No pupillary response No response to painful stimuli

B. Upon assessment, if the patient is found to be **obviously dead,** based on any of the following conditions, then no further assessment or treatment shall be started, and base hospital contact is not required:

- Decapitation
- Incineration
- Evisceration of heart or brain
- Decomposition

C. Upon assessment, resuscitation may be withheld without the need for base hospital contact if the patient is absent signs of life **AND** any of the following criteria are met:

1. Rigor mortis and/or dependent lividity is present:
    a. Rigor is determined to be present when found in the jaw **and** at one more joint(s).
    b. Dependent lividity is determined by checking dependent areas of the body for purplish-red discoloration.
2. Traumatic arrest and absent signs of life upon EMS arrival.
3. Reliable history of cardiac arrest with no CPR rendered for more than 20 minutes.
4. Severe or multiple injuries clearly incompatible with life.
5. EMS personnel are presented with an operative Do Not Resuscitate (DNR) order.

D. Consultation with Base Hospital is required prior for withholding or terminating resuscitation efforts under the following circumstances:

1. Consultation with the STEMI Base Hospital (French Hospital) physician or MICN:
    a. Termination of resuscitative measures for medical arrest of cardiac origin > 34 kg unresponsive to ALS procedures after 20 min of resuscitation (include a capnography reading if available).
    b. Mechanical ventricular device is present.
2. Consultation with the SLO Trauma Center (SVRMC) physician or MICN:
    a. Traumatic Arrest **with** signs of life upon EMS arrival, unresponsive to ALS procedures and more than 20 minutes estimated time for transport to Trauma Center or closest hospital (refer to protocol #661).
3. Consultation with the closest SLO base hospital physician or MICN:
    a. All other termination orders: e.g. medical arrest of pediatrics <34kg, atraumatic arrests due to non-cardiac origin (refer to protocol #641).

E. An operative **DNR is presented for patient with a pulse and or respiratory effort**:

1. Provide care and treatment within paramedic scope of practice, unless clearly excluded by the documents.
2. POLST - follow the directions noted in Section A - cardiopulmonary resuscitation (CPR) and Section B - medical intervention.
3. Other advanced directives - follow any supportive care and interventions as noted.
4. Consult the Base Hospital if situation or legitimacy of the DNR is unclear.

F. During a **Mass Casualty Incident (MCI)**, determination of death procedures are modified as follows:

1. Utilize START Adult Triage Algorithm and JumpSTART Pediatric Triage Algorithm for the assessment of patients.
2. Base contact is **NOT** necessary for withholding resuscitation efforts or determination of death during an MCI.
3. A triage tag denoting “black” with the time of the initial evaluation and findings must be applied to the patient.

V. DOCUMENTATION

A. The circumstances under which resuscitation was not initiated or was terminated, including results of physical exam, and/or any additional findings such as a lack of heart and lung sounds, fixed and dilated pupils, skin color, ECG tracing and capnography if available.

B. The resuscitation measures performed, if any, and the results thereof.

C. The name of the EMS personnel terminating resuscitative measures or the name of the Base Hospital physician who pronounced the patient.

D. The time of termination or non-initiation of resuscitation.

E. When DNR is present:

1. Name of physician on the DNR.
2. Date the DNR order was signed.
3. Type of DNR - attach copy when possible.
4. Name of the person that confirmed patient identity.
5. Name and certification # of the person and the agency name if determination or resuscitative measures were made by other than the transporting agency.

VI. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9
- California Probate Code Sections 4780-4785.

VII. REFERENCES

- POLST California
- START Adult Triage Algorithm - CHEMM
- JumpSTART Pediatric Triage Algorithm - CHEMM

POLICY #158 AMBULANCE PATIENT OFFLOAD TIME (APOT) MONITORING:

I. PURPOSE

A. To establish standardized methodologies for collecting and reporting Ambulance Patient Offload Time (APOT) data to the County of San Luis Obispo Emergency Medical Services Agency (SLOEMSA). APOT functions as a crucial metric for evaluating the efficiency of patient care transitions from pre-hospital to hospital settings, ensuring that pre-hospital resources can transfer care effectively and allowing them to return to service.

II. DEFINITIONS

- Ambulance Arrival at ED: The time the ambulance wheels stop at the designated hospital ED offload location.
- Ambulance Patient Offload Time (APOT): The interval between the arrival of an ambulance patient at an emergency department (ED) and the time when the patient is transferred to an ED gurney, bed, chair, or other suitable location, at which point the ED assumes responsibility for the patient's care.
- Ambulance Patient Offload Delay (APOD): Any delay in ambulance patient offload time that exceeds the local standard for ambulance patient offload time, which is 20 minutes. This is synonymous with “non-standard patient offload time” in the Health and Safety Code.

III. POLICY

A. EMS field personnel are obligated to continue delivering and documenting patient care until the patient is transferred (off EMS gurney and transfer signature obtained) to the hospital's Emergency Department (ED) medical personnel. The medical control and management of the EMS system, including EMS field personnel, remain under the jurisdiction of the EMS Agency medical director. All patient care provided must adhere strictly to the treatment protocols and policies outlined by SLOEMSA.

B. Ambulance Patient Offload Times should be kept to a minimum to ensure the efficient transfer of patient care from pre-hospital to hospital settings. APOTs exceeding 20-minutes will be considered an Ambulance Patient Off Delay (APOD).

C. Hospitals and EMS field personnel shall follow the APOD Mitigation Procedures detailed in Section IV of this policy when an APOD event occurs.

IV. PROCEDURE

A. Direction of EMS Field Personnel

1. Ambulance Patient Offload Time (APOT) Monitoring

a. If the transfer of care and patient offloading from the ambulance gurney exceeds the 20-minute standard, it will be documented and tracked as an APOD.

b. The transporting EMS field personnel are not responsible for continuing to monitor the patient or provide care within the hospital setting after the patient's care has been transferred to ED medical personnel.

2. APOD Mitigation Procedures

a. Hospitals are responsible for ensuring policies and processes facilitate the rapid and appropriate transfer of patient care from EMS field personnel to ED medical personnel.

b. If APOD does occur, the hospital should make every attempt to:

i. Provide a safe area in the ED within direct sight of ED medical personnel where the ambulance crew can temporarily wait while the hospital's patient remains on the ambulance gurney.

ii. Inform the attending paramedic or EMT of the anticipated time for the offload of the patient.

iii. Provide information to the EMS Field Supervisor regarding the steps the hospital is taking to resolve APOD.

c. If requested, hospitals will provide written details to SLOEMSA of policies and procedures that have been implemented to mitigate APOD and assure effective communication with affected partners:

i. Processes for the immediate notification of the following hospital staff through their internal escalation process of the occurrence of APOD, including but not limited to:

- ED Attending Physician
- ED Nurse Manager/Director or Designee (i.e. Charge Nurse) House Supervisor
  Administrator on-call

ii. Processes for ED medical personnel to immediately respond to and provide care for the patient if the attending EMS field personnel alert the ED medical personnel of a decline in the condition of a patient being temporarily held on the ambulance gurney.

iii. EMS field personnel are directed to do the following to prevent APOD:

- Notify the hospital ED as soon as possible (call-in) that a patient is being transported to their facility.
- Contact the EMS Field Supervisor for direction if the ED medical personnel do not offload the patient within the 20-minute ambulance patient offload time standard.
- Work cooperatively with the hospital staff to transition patient care within the timeframes established in this policy.

V. AUTHORITY

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Division 9

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

POLICY #221 LEAVE BEHIND NALOXONE:

I. PURPOSE

A. To establish guidelines and procedures for Emergency Medical Services personnel to leave behind intranasal naloxone kits with at-risk individuals, family members, or other bystanders at the scene of a suspected opioid overdose or in situations where opioid overdose risk is identified.

II. POLICY

EMS personnel may utilize this policy while following any SLOEMSA treatment protocols and may leave behind naloxone kits when any of the following occur:

A. Scene of suspected opioid overdose with patient revived or refusing transport;

B. High-risk individuals identified (e.g., known opioid users, with paraphernalia present);

C. Upon request by patient, family, or bystander;

D. Regardless of overdose involvement, if EMS personnel assess risk in others present.

III. PROCEDURE

A. Assessment and Education

1. Confirm opioid involvement or risk factors.
2. Provide brief training on:
    - Signs/symptoms of opioid overdose
    - Proper intranasal naloxone administration
    - Importance of dialing 911
    - Good Samaritan protections

B. Distribution

1. Provide a SLOEMSA-approved naloxone kit (typically two doses of 4mg intranasal naloxone, naloxone instruction, resource handout, and fentanyl test strips).

C. Documentation

Document in the ePCR:

- Indication for leave behind
- Number of kits left

- Recipient's relationship to patient (if applicable)
- Verbal consent and understanding of use
- If there is no PCR generated (e.g., a cancel, no patient found, or no medical complaint), but EMS personnel believe a leave behind Naloxone kit would be beneficial, they may leave the kit without documentation.

D. Resupply

Participating agencies are responsible for procuring and supplies through the California DHCS Naloxone Distribution Project or the County of San Luis Obispo's Opioid Safety Coalition.

IV. AUTHORITY

- California Health and Safety Code, Division 2.5,
- Title 22, California Code of Regulations, Division 9
- California Civil Code § 1714.22

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

POLICY #341: EMERGENCY MEDICAL TECHNICIAN PARAMEDIC ACCREDITATION

I. PURPOSE

A. To establish criteria as defined by Title 22 of the California Code of Regulations (CCR), for the local accreditation of emergency medical technician paramedics (paramedics) in the County of San Luis Obispo (SLO).

II. SCOPE

A. This policy applies to all current California state licensed paramedics employed by approved County of SLO advanced life support (ALS) providers, wishing to provide ALS patient care in SLO.

III. POLICY

A. Changes in State paramedic regulations will supersede information in this policy upon codification.

B. A current and valid California paramedic license and local accreditation are required to practice as a paramedic in SLO.

C. A paramedic with an expired license may not provide ALS or basic life support (BLS), patient care in the State of California.

D. A paramedic with an expired accreditation may not provide ALS patient care in SLO.

E. Only paramedics with a current license in the State of California may represent themselves as a paramedic. Individuals not currently licensed as a paramedic who represent themselves as such may be subject to disciplinary action and criminal penalties.

F. An individual with an expired paramedic license will be required to apply for license renewal through the State Emergency Medical Services (EMS) Authority prior to applying for local accreditation.

G. Candidates for initial accreditation must apply to SLO Emergency Medical Services Agency (SLOEMSA) and pay the non-refundable accreditation application fee.

H. Candidates whose checks return for insufficient funds may be subject to disciplinary action as outlined in EMS Agency Policy #101: Fee Collection.

I. Each ALS provider shall have a Paramedic Liaison that will be responsible for the coordination of the application and accreditation process for each of the ALS provider's employees.

J. All information on the SLOEMSA accreditation application is subject to verification. Candidates who supply information found to be fraudulent may be subject to disciplinary action for fraudulent procurement of accreditation per Title 22 1798.200 (c)(1).

K. The SLOEMSA Medical Director will evaluate any candidate who fails to complete the field evaluation. The SLOEMSA Medical Director may recommend further evaluation or training as required or take other license review action deemed necessary.

L. If the individual fails to complete remediation recommended by the SLOEMSA Medical Director, the accreditation may be denied for a minimum of one (1) year and up to two (2) years.

M. As a condition of continued accreditation, individuals must attend and pass all mandated training as required by SLOEMSA.

N. Candidates must have sufficient time to accredit. SLOEMSA may require up to thirty (30) calendar days to process a complete application. If a request is made to expedite a completed application within ~~ten~~ five (~~10~~5) business days of the request, a rush fee will apply.

1. Candidates need to allow five (5) business days to be approved to begin the accreditation field evaluation. If the anticipated field evaluation start date is within five (5) business days, a rush fee will apply.

O. Accredited paramedics must follow all laws, regulations, and local policies, procedures, and protocols. Failure to do so may result in disciplinary action.

~~O.~~P. It is the responsibility of the accredited paramedic to notify SLOEMSA within seven (7) days of any arrest or change in their eligibility status. Failure to report such actions may result in disciplinary action.

~~P.~~Q. The SLOEMSA Medical Director must approve exceptions to any accreditation requirement.

IV. PROCEDURE

A. Candidates must complete the SLOEMSA Paramedic Application for County Accreditation – Attachment A and supply documentation establishing eligibility for accreditation as follows:

1. Current government-issued photo identification.
2. Current and valid paramedic license issued by the California EMS Authority.
3. Possess current certification as a Cardiopulmonary Resuscitation (CPR) Provider according to the American Heart Association guidelines for BLS Healthcare Providers or other course approved by the SLOEMSA Medical Director.
4. Proof of current ACLS provider certification issued by the American Heart Association or other course approved by the SLOEMSA Medical Director.

5. Proof of current PALS provider certification issued by the American Heart Association or other course approved by the SLOEMSA Medical Director.

6. Paramedic Field Evaluation Completion Form – Attachment B, is due upon completion of accreditation process and includes:

   a. Orientation to SLO EMS system policies, procedures, and protocols that emphasize the local optional scope of practice.

   b. Ten (10) ALS patient care contacts if the paramedic has been licensed for less than one year, or

   c. Between five (5) and ten (10) ALS patient contacts if the paramedic has a current license and has been licensed for more than one year.

   d. Successfully pass the Accreditation Test with a score of at least 80 percent. Two (2) attempts will be offered. Consult the Medical Director for next steps if accreditee fails both attempts.

   e. The field evaluation will be waived if the candidate successfully completed a paramedic training program internship with SLOEMSA within the previous six (6) months (refer to Policy #340, Paramedic Student Internships, for more information).

7. Provide a letter of employment from a SLO ALS provider indicating employment as a paramedic.

8. Provide the name of the FTO assigned to lead the accreditation process, and the tentative field evaluation start date.

9. Pay the established local non-refundable accreditation fee.

B. Confirmation of application receipt and approval for an accreditation start date will be communicated by email to the applicant and the Paramedic Liaison.

C. Accreditation will be for a maximum of two (2) years, or such time as specified in the current state regulations.

1. The effective date of accreditation will be the date the candidate meets all local requirements and will be communicated by letter of approval.

2. The accreditation will expire on the same date as:

   a. The paramedic license issued by the California EMS Authority, or

   b. The paramedic is no longer employed as a paramedic by a SLO ALS provider, or

   c. The paramedic does not meet accreditation requirements.

D. If the expiration date of the paramedic license is less than two years, the prorated reaccreditation requirements outlined in Policy #342, Emergency Medical Technician Paramedic Reaccreditation, will be communicated upon initial accreditation approval.

V. AUTHORITY

- State of California Code of Regulations, Title 22
- California Health and Safety code, Division 2.5

VI. ATTACHMENTS

A. Paramedic Application for County Accreditation

B. Paramedic Field Evaluation Completion Form

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

POLICY #342: EMERGENCY MEDICAL TECHNICIAN PARAMEDIC REACCREDITATION

I. PURPOSE

A. To establish criteria as defined by Title 22 of the California Code of Regulations (CCR), for the local reaccreditation of emergency medical technician paramedics (paramedics) in the County of San Luis Obispo (SLO).

II. SCOPE

A. This policy applies to all current California state licensed paramedics employed by approved County of SLO advanced life support (ALS) providers, wishing to provide ALS patient care in SLO.

III. DEFINITIONS

- Lapse in Accreditation: A period of time that a paramedic's accreditation is expired.
- Leave of Absence (LOA): A period of time when a paramedic is temporarily excused from work, while maintaining their employment status. This includes medical leave, worker's compensation leave, military leave, personal leave, or a leave for disciplinary reasons.
- Reinstatement: The process whereby a paramedic is restored to active accreditation following a lapse in accreditation.
- Return to Work: The process whereby a paramedic is approved to return to work following a LOA.

IV. POLICY

A. Changes in State paramedic regulations will supersede information in this policy upon codification.

B. A current and valid California paramedic license and local accreditation are required to practice as a paramedic in SLO.

C. A paramedic with an expired license may not provide ALS or basic life support (BLS) patient care in the State of California.

D. A paramedic with an expired accreditation may not provide ALS patient care in SLO.

E. Only paramedics with a current license in the State of California may represent themselves as a paramedic. Individuals not currently licensed as a paramedic and represent themselves as such may be subject to disciplinary action and criminal penalties.

F. An individual with an expired paramedic license will be required to apply for license renewal through the State Emergency Medical Services (EMS) Authority prior to applying for local accreditation.

G. Candidates for reaccreditation must apply to SLO Emergency Medical Services Agency (SLOEMSA) and if applicable, pay the non-refundable reaccreditation application fee.

H. Candidates whose checks return for insufficient funds may be subject to disciplinary action as outlined in EMS Agency Policy #101: Fee Collection.

I. Each ALS provider shall have a Paramedic Liaison that will be responsible for the coordination of the application and accreditation process for each of the ALS provider's paramedic employees.

J. All information on the SLOEMSA accreditation application is subject to verification. Candidates who supply information found to be fraudulent may be subject to disciplinary action for fraudulent procurement of accreditation per Title 22 1798.200 (c)(1).

K. If there is a change in employment ~~status for any reason,~~ function, resulting in an employee no longer acting in the capacity of paramedic, including employees on a LOA, ~~medical leave, workers comp leave, or leave for disciplinary reasons~~, the employer must send SLOEMSA a written notification of the change in function or LOA and expected return date as soon as practical.

L. If a paramedic is no longer employed, the employer must send a written notification to SLOEMSA within three (3) business days after separation of the employee.

M. A paramedic's accreditation is considered expired or lapsed when:

1. They are not currently employed by an ALS provider in SLO.
2. Failure to maintain a California paramedic license.
3. Failure to meet SLO reaccreditation requirements.

N. Once accreditation has lapsed, or in the situation of an employee returning to work after a LOA, the employer must submit to SLOEMSA a written request for employee reinstatement of accreditation or return to work. The written request shall include a plan for any training, skills evaluations, or field training officer (FTO) led observations that the employer deems necessary. The plan will be reviewed and approved by the SLOEMSA Medical Director. This section applies to all LOAs and lapses in accreditation up to one (1) year.

O. All reaccreditation candidates returning to SLO following a lapse or LOA of one year or more must comply with section N of this policy ~~the requirements for initial accreditation as outlined in SLOEMSA Policy #341: Emergency Medical Technician Paramedic Accreditation~~and complete all EMS Update Course materials that were covered during the lapse or LOA.

P. Lapsed reaccreditation requirements due to LOAs may be prorated for a period not to exceed six (6) months. The prorated relief may include a reduction in the number of required advanced skills verifications and base station meetings and will be communicated with the Paramedic Liaison as part of the reinstatement and return to work plan with the employer. All remaining requirements of reaccreditation outlined in the reaccreditation procedures will remain in effect.

Q. If advanced skills verifications and base station meeting reaccreditation requirements are prorated upon initial or reaccreditation approval, the requirements that were communicated by SLOEMSA at the time of initial or reaccreditation approval will be due when applying for reaccreditation. All remaining requirements of reaccreditation outlined in the reaccreditation procedures will remain in effect.

R. The SLOEMSA Medical Director will evaluate any candidate who fails to meet reaccreditation requirements. The SLOEMSA Medical Director will recommend further evaluation or training as required or take other license review action deemed necessary.

S. Accreditation lapses for failure to meet reaccreditation requirements, for reasons other than a change in employment, will result in suspension of accreditation until such time as the requirements have been met.

~~a. This includes but is not limited to failure to successfully complete any of the advanced skill verifications and failure to maintain required certifications during the two (2) year accreditation cycle.~~

T. Based on the continuous quality improvement and assurance process, the employer or SLOEMSA Medical Director may determine that a paramedic needs additional training, observation, or testing. The employer, the SLOEMSA Medical Director or his/her designee, may create a specific and targeted program of remediation based upon the identified need of the paramedic. If there is disagreement between the paramedic, the employer, and/or the SLOEMSA Medical Director, the decision of the SLOEMSA Medical Director will prevail.

U. If the individual fails to complete this targeted program of remediation the SLOEMSA Medical Director may suspend or revoke the accreditation for a minimum of one (1) year and up to two (2) years.

V. As a condition of continued accreditation, individuals must attend and pass all mandated training as required by SLOEMSA and meet all requirements listed under reaccreditation procedures.

W. Candidates must have sufficient time to reaccredit. SLOEMSA may require up to thirty (30) calendar days to process a complete application. If a request is made to expedite a completed application within ~~ten~~ five (~~10~~5) business days of the request, a rush fee will apply.

X. Accredited paramedics must follow all laws, regulations, and local policies, procedures, and protocols. Failure to do so may result in disciplinary action.

~~X.~~Y. It is the responsibility of the accredited paramedic to notify SLOEMSA within seven (7) days of any arrest or change in their eligibility status. Failure to report such actions may result in disciplinary action.

~~Y.~~Z. The SLOEMSA Medical Director must approve exceptions to any reaccreditation requirement.

V. PROCEDURE

A. Candidates for paramedic reaccreditation must complete the SLOEMSA Paramedic Application for County Accreditation – Attachment A and supply documentation establishing eligibility for reaccreditation as follows:

1. Current government-issued photo identification.

2. Current and valid paramedic license issued by the California EMS Authority.

3. Possess current certification as a Cardiopulmonary Resuscitation (CPR) Provider according to the American Heart Association guidelines for BLS Healthcare Providers or other course approved by the SLOEMSA Medical Director.

4. Proof of completion of the SLOEMSA EMS Update course from each year of the preceding two (2) year accreditation period.

5. Completion of two (2) Paramedic Skills Annual Verification Tracking Sheet-Attachment B. One (1) sheet of low use / high risk skills shall be completed every 12 months of accreditation either in the field during patient care or under the observation of a FTO or other EMS Agency approved evaluator, using the Skills Verification Checklists-Attachment C.

   a. One (1) adult and one (1) pediatric cardiac arrest management skill shall be verified every six (6) months for a total of four (4) each during the two (2) year accreditation period.

   b. ~~One~~ When possible, one (1) intubation skill should~~all~~ be verified every three (3) months, however two (2) intubations are required every six (6) months, for a total of eight (8) during the two (2) year accreditation period. Intubation requirements exclude supraglottic airway adjunct (SGA) use.

6. A letter of employment from a SLO ALS provider indicating employment as a paramedic.

7. Proof of attendance at four (4) base station meetings in the preceding two (2) year accreditation period.

8. For all lapses in accreditation, pay the established local non-refundable accreditation fee.

B. Reaccreditation will be for a maximum of two (2) years.

1. The effective date of reaccreditation will be the date the candidate meets all local requirements.

2. The reaccreditation will expire on the same date as:

   a. The paramedic license issued by the California EMS Authority, or

b. The paramedic is no longer employed as a paramedic by a SLO ALS provider, or

c. The paramedic does not meet accreditation requirements.

VI. AUTHORITY

- State of California Code of Regulations, Title 22
- California Health and Safety code, Division 2.5

VII. ATTACHMENTS

A. Paramedic Application for County Accreditation

B. Paramedic Skills Annual Verification Tracking Sheet

C. Skills Verification Checklists

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

BREAK

UNIVERSAL

MEDICAL	TRAUMA
BLS	

• Evaluate Scene Safety/Personal Protective Equipment
• Assess, establish and maintain airway
  - Suction as needed
• Pulse Oximetry
  - O_2 administration per Airway Management Protocol #602
• Evaluate breathing and circulation
• Assess chief complaint
• Focused physical exam and vital signs:
  - Pulse
  - Blood pressure
  - Respiratory rate
  - Lung sounds
  - Skin signs
• BLS treatment protocols
	• Evaluate Scene Safety/Personal Protective Equipment
	• Assess, establish and maintain airway
	  - Suction as needed
	• Pulse Oximetry
	  - O_2 administration per Airway Management Protocol #602
	• Evaluate breathing and circulation
	• Control life-threatening bleeding
	• Remove patient's clothing to expose and identify injuries
	• Ensure patient warmth – cover patient after clothing removal to maintain core body temperature
	• Spinal motion restriction (SMR) if indicated per Spinal Motion Restriction Procedure # 702
	• BLS treatment protocols

BLS Elective Skills	
Obtain Blood Glucose Level if indicated by: • Policy #612 ALOC • Policy #620 Seizures • Policy #621 CVA/TIA • As directed by ALS provider	
ALS	

• Vascular access – Procedure #710
• Consider 12-lead ECG early
• Capnography (if available/applicable)
• Blood Glucose Measurement
• Transport Determination
• ALS Treatment Protocols
Adult
• Consider Normal Saline up to 500mL IV/IO
  - May repeat x1 for persistent hypotension.
  - May repeat x1 based on ALS provider discretion for normotensive patients.
Pediatric
• Consider Normal Saline up to 10mL/kg IV/IO, not to exceed 500 mL
  - May repeat x1 for persistent hypotension.
	• Trauma Triage and Destination
	• ALS Treatment Protocols

- May repeat x 1 based on ALS provider discretion for normotensive patients.	
Base Hospital Orders Only	
• Determined on patient needs • If applicable, see Policy #219: Assisting Patients with Their Emergency Medications	• Determined on patient needs
Notes	
• Use Pediatric Policies for patients ≤34 kg and consider use of Broselow tape or equivalent • Rapid transport for Specialty Care patients (Trauma, STEMI, CVA-TIA). Target scene departure ≤ 10 minutes for transport personnel. • Consider Policy #220: Leave Behind Naloxone	

SHOCK (MEDICAL) - HYPOTENSION/SEPSIS

ADULT	PEDIATRIC (≤34 KG)
BLS	
• **Universal Protocol #601** • Pulse Oximetry - O2 administration per Airway Management Protocol #602 • Place in supine position if tolerated	Same As Adult
ALS	

SBP < 100 mmHg or other signs of hypotension
• Normal Saline 500 mL IV/IO
  - Repeat x1 if hypotension persists
• Consider establishing secondary IV access
• Consider 12-lead ECG
• If shock is due to trauma refer to General Trauma Protocol #660
Persistent Hypotension
• Push-Dose Epinephrine 10mcg/mL 1 mL IV/IO every 1-3 minutes
  - Repeat as needed, titrated to SBP >90mmHg
  - See notes for mixing instructions
OR
• Epinephrine Drip starting at 10mcg/min IV/IO infusion
  - Consider for extended transport
  - See formulary for mixing instructions
SBP > 100 mmHg
• Consider Normal Saline 500 mL IV/IO
  - May repeat x1 based on ALS provider discretion.
	Signs of hypotension specific to age - see Universal Protocol #601 Attachment A
	• Normal Saline 20 mL/kg IV/IO not to exceed 500 mL
	  - Repeat x1 if hypotension persists
	• Consider establishing secondary IV access
	• If shock is due to trauma refer to General Trauma Protocol #660
	Normotensive specific to age - see Universal Protocol #601 Attachment A
	• Consider Normal Saline 20 mL/kg IV/IO, not to exceed 500 mL
	  - May repeat x1 based on ALS provider discretion

Base Hospital Orders Only	
• As needed	• As needed
Notes	
• **Mixing Push-Dose Epinephrine 10 mcg/mL (1:100,000): Mix 9mL of Normal Saline with 1mL of Epinephrine 1:10,000, mix well** • Fluids should always be given prior to initiating Push-Dose Epinephrine • Consider the underlying causes of shock	

- Use caution with fluid challenges if signs of CHF of liver, or renal failure
- Keep the patient warm
- Treatable/Reversible considerations:
    - Hypoxemia
    - Tachycardia/Bradycardia
    - Hyper/Hypothermia
    - Hypovolemia
    - Altered Mental Status
    - Fractures/Bleeding/Tension Pneumothorax
    - Anaphylaxis
    - Chest pain
    - Overdose

OPIOID WITHDRAWAL

ADULT	PEDIATRIC (≤34 KG)
BLS Procedures	
• **Universal Algorithm #601** • Pulse Oximetry - O_2 Administration per Airway Management Protocol #602	• Universal Algorithm
ALS Procedures	
• If suspected opioid withdrawals, use "COWS" score to determine if patient meets criteria to receive Buprenorphine - "COWS" ≥ 8 to qualify - Patient must be agreeable to treatment with goal of seeking resources and counseling • If believed that patient will benefit from Buprenorphine with no contraindications – contact nearest Base Hospital for orders	• Buprenorphine is not permitted in pediatric patients under 16 • For patients 16 and above, same as adult
Base Hospital Orders Only	
• **Buprenorphine** 16mg SL film/tablets (two strips/tablets) – reassess after 10 minutes - Call for secondary 8mg SL dose for persistent or worsening symptoms after 10 minutes - Give water to moisten mucus membranes prior to SL administration	• As needed

Notes

- **SEE PAGE 2 FOR COWS SCORE ASSESSMENT TOOL**
- If Buprenorphine is administered repeat "COWS" score assessment 10 minutes after initial dose and secondary dose if applicable
- Patients should have history of any one of the following:
  - Recent opioid use
  - Chronic opioid use
  - Evidence of illicit drug use (paraphernalia, needles etc)
  - Prescription narcotics in household or on patient
- Consider Policy #221: Leave Behind Naloxone

Clinical Opioid Withdrawal Scale (COWS)

ANXIETY OR IRRATIBILITY *Visually observed during assessment* **0** None **1** Reports increasing irritability or anxiousness **2** Visually irritable or anxious **4** Too irritable to participate or affecting participation	RESTING HEART RATE *Measured after sitting for one (1) minute* **0** ≤80 bpm **1** 81 to 100 bpm **2** 101 to 120 bpm **4** >120 bpm
BONE OR JOINT ACHES *Only new pain attributed to withdrawal is scored* **0** Not present **1** Mild, diffuse discomfort **2** Reports severe, diffuse aching of joints/muscles **4** Patient rubbing joints/muscles and unable to be still	RESTLESSNESS *Visually observed during assessment* **0** Able to be still **1** Report difficulty being still, but able to do so **3** Frequent shifting or extraneous movement of legs/arms **5** Unable to be still for more than a few seconds
SKIN SIGNS *Visually or physically observed during assessment* **0** Skin is smooth **3** Piloerection of skin – can be felt or visible arm hairs standing up **5** Prominent piloerection – "Gooseflesh Skin"	TREMOR *Observation of outstretched hands* **0** No tremors **1** Tremor can be felt but not observed **2** Slight tremor observed **4** Gross tremor or muscle twitching
GATROINTESTINAL UPSET *Within past 30 minutes* **0** No GI symptoms **1** Stomach cramps **2** Nausea or loose stool **3** Vomiting or diarrhea **5** Multiple episodes of diarrhea or vomiting	SWEATING *Over past 30 min – **not** from environment or activity* **0** No reports of chills or flushing **1** Subjective report of chills or flushing **2** Flushed or observable moistness to face **3** Beads of sweat on brow or face **4** Sweat streaming off of face
PUPIL SIZE *Visually observed during assessment* **0** Pupil pinned or normal size for ambient light **1** Pupils possibly larger than normal for ambient light **2** Pupils moderately dilated **5** Pupils very dilated	YAWNING *Visually observed during assessment* **0** No Yawning **1** Yawning once or twice during assessment **2** Yawning three or more times during assessment **4** Yawning several times per minute
RUNNY NOSE OR TEARING *Not accounted for by cold symptoms or allergies* **0** Not present **1** Nasal stuffiness or unusually moist eyes **2** Runny nose or tearing **4** Nose constantly running or tears streaming down face	**TOTAL COWS SCORING** **5 - 12** Mild Withdrawal **13 - 24** Moderate Withdrawal **25 - 36** Moderately Severe Withdrawal **>36** Severe Withdrawal

Buprenorphine
(Base Hospital Order Only)

Classification: Narcotic analgesic (Class III)

Actions:

1. Buprenorphine; partial mu-receptor opioid agonist

Indications:

1. Management of opioid withdrawal in adults with moderate to severe opioid drug dependence

Contraindications:

1. **Recent methadone use (within 10 days)**
2. **No signs of Opioid withdrawal or COWS ≤ 8**
3. **Altered mental status – unable to give consent**
4. **Severe medical illness – sepsis, respiratory distress, hypoglycemia etc**

Adverse Effects (Precautions, Side Effects and Notes)

1. Headache
2. Nausea/Vomiting
3. Respiratory Depression

Administration:

ADULT DOSE – Base Hospital Order Only

1. **Buprenorphine –** 16 mg SL film, reassess after 10 minutes
   a. 8 mg SL film secondary dose if ordered by Base Hospital after 10 minute reassessment

PEDIATRIC DOSE

2. **None - Contraindicated in patients under 16 years of age**

Onset: 10 – 40 minutes
Peak effect 3-4 hours

Duration: 24+ hours

RESPIRATORY DISTRESS – OPIOID OVERDOSE

ADULT	PEDIATRIC (≤34 KG)
BLS	
• **Universal Protocol #601** • Pulse Oximetry - O_2 administration per Airway Management Protocol #602 • May assist with administration of patient's prescribed medication	Same as Adult
BLS Elective Skills	
Suspected Opiate Overdose with inadequate respirations (O_2 Sat < 94%, rate ≤ 8 bpm) • **Narcan** 4 mg IN in one nare – assess for adequate respirations - may repeat in alternate nare if no improvement after 2 min, max total of 2 doses	
ALS	
Suspected Opiate Overdose with inadequate respirations (O_2 Sat < 94% or $ETCO_2$ > 45 mmHg) • **Narcan** up to 1 mg IV/IM - Repeat as needed • Up to 2 mg IN (split between nares) – assess for adequate respirations - Repeat as needed	**Suspected Opiate Overdose with inadequate respirations** (O_2 Sat < 94% or $ETCO_2$ > 45 mmHg) • **Narcan** 0.1 mg/kg IV/IM/IN (split between nares) up to 1 mg – assess for adequate respirations - Repeat as needed
Base Hospital Orders Only	
• As needed	• As needed
Notes	
• IV is preferred route for Narcan administration • Inadequate airway, and respirations should be supported with BLS adjuncts and ventilations prior to Narcan administration • Poly-mixed drugs may require additional doses of Narcan titrated to maintain respirations • Alternate Narcan dosing for BLS Elective Skills may be added with approval of the EMS Agency Medical Director • Consider Policy #220: Leave Behind Naloxone	

NARCAN (Naloxone®)

Classification: Narcotic antagonist

Actions:

1. Displaces narcotics from opiate receptor sites
2. Reverses respiratory depression, sedation, and pupillary effects of narcotics.

Indications: Respiratory depression and/or altered LOC associated with suspected narcotic overdose

Contraindications: None

Adverse Effects:

Cardiovascular
Tachycardia
Hypertension

Neurological
Pupillary dilation

Gastrointestinal
Nausea/vomiting

Administration:

ADULT DOSE

1. Titrate 1 mg IV/IM
    a. Repeat as needed
2. Up to 2 mg IN (split dose between nares) – repeat to maintain adequate respirations (IV preferred route)
    a. Repeat as needed
3. ~~Extremis 0.5 mg SL - repeat to maintain adequate respirations~~

PEDIATRIC DOSE

1. Titrate 0.1 mg/kg IV/IM/IN (split dose between nares) - to a maximum dose of 1 mg - may repeat to maintain adequate respirations
2. ~~Extremis 0.5 mg SL - repeat to maintain adequate respirations~~

Onset: 1-2 minutes

Duration: 45 minutes

Notes:

- Administer Narcan prior to intubation in a patient with severe respiratory depression when narcotic induced coma is suspected.
- If there is no response to IV Narcan after 1-2 minutes, the etiology of the altered level of consciousness should be questioned (5 minutes for IM).
- IM administration is with 1 1½ " needle in anterior/lateral thigh or deltoid.
- ~~SL injection is with a small 25 gauge ¼" TB syringe.~~

BEHAVIORAL EMERGENCIES

ADULT	PEDIATRIC (≤34 KG)
BLS	
• Universal Protocol #601 • Pulse Oximetry - O_2 administration per Airway Management Protocol #602 • Assess for reversible causes such as: hypoxia, shock, hypoglycemia • **Restraints per** Use of Restraints Procedure #711 • Additional/Optional skills as approved by SLOEMSA	
ALS Standing Orders	
• Obtain a blood glucose as possible/safe • **Midazolam** - Up to ~~2 mg~~ 5mg slow IV OR - 5 mg IM/IN (split between nares) - May repeat once after 5 minutes - for significant agitation / threat to self or others	• Obtain blood glucose as possible/safe • **Midazolam** - ~~0.1 mg/kg~~ up to 0.2 mg/kg slow IV not to exceed 5 mg OR - ~~0.1 mg/kg~~ up to 0.2 mg/kg IM/IN (split between nares) not to exceed 5 mg - Total max dose 5mg
Base Hospital Orders Only	
• As needed	• Repeat doses of **Midazolam** • As needed
Notes	
• <u>Behavioral Emergencies</u> – severely agitated or aggressive patients that interfere with patient care or patient/crew safety • IV or IM administration of Midazolam are the preferred routes • Consider law enforcement support for violent or threatening patients • "Tasered" patients – EMS personnel not to remove barbs, law enforcement may remove • Pediatric maximum **volume** of one (1) mL per nostril per atomization (0.2-0.3 mL per nostril is ideal) ○ volumes > 1 mL are more likely to saturate the mucosal surface causing medication runoff into the proximal pharynx	

SEIZURE (ACTIVE)

ADULT	PEDIATRIC (≤34KG)
BLS	
• Universal Protocol #601 • Pulse Oximetry - O_2 administration per Airway Management Protocol #602 • Prevent patient from injuring themselves – Do not restrain • Additional/optional skills as approved by SLOEMSA	Same as Adults
ALS Standing Orders	
• **Midazolam** - ~~2 mg~~ 5 mg slow IV or - 5 mg IM/IN (split between nares) - May repeat once after 5 min - for patients with persistent or recurrent seizure • Obtain blood sugar level	• **Midazolam** - ~~0.1 mg/kg~~ 0.2 mg/kg slow IV not to exceed ~~2 mg~~ 5 mg - ~~0.1 mg/kg~~ 0.2mg/kg IM/IN (split between nares) not to exceed 5 mg • Obtain blood sugar level
Base Hospital Orders Only	
• As needed • For patients who are pregnant and seizing (concerns for eclampsia) – consult Base Physician for possible Magnesium Sulfate administration and dosing	• Repeat doses of **Midazolam** • As needed
Notes	
• Pediatric maximum **volume** of one (1) mL per nostril per atomization (0.2-0.3 mL per nostril is ideal) ○ volumes > 1 mL are more likely to saturate the mucosal surface causing medication runoff into the proximal pharynx	

MIDAZOLAM (Versed®)

Classification: Benzodiazepine

Actions:

1. Hypnotic, amnesiac, sedative, anticonvulsant
2. Potent but short-acting, 3-4 times more potent than diazepam
3. Has NO effect on pain

Indications:

1. Active, continuous seizure
2. Status epilepticus
3. Sedation prior to cardioversion
4. Acute behavior disorder (agitated patient danger to self or others)
5. Severe muscle spasms (base physician order only)

Contraindications (Relative):

1. **History of hypersensitivity to benzodiazepines**
2. **Shock with depressed vital signs**
3. **ALOC of unknown etiology / polypharmacy ingestion**
4. **Narrow-angle glaucoma**
5. **Eclampsia (base physician order only)**

Adverse Effects (Precautions, Side Effects and Notes):

Midazolam may cause respiratory depression and/or hypotension especially if administered rapidly. Monitor patient closely.

1. Common side effects include drowsiness, hypotension, respiratory depression and apnea. These are more likely to occur in the very young and the very elderly. Rarely, patients may experience paradoxical agitation.
2. Respiratory depression is more likely in patients who have taken other CNS depressant drugs such as opioids, alcohol, other benzodiazepines or barbiturates, or when given rapidly.
3. Midazolam is metabolized in the liver and excreted by the kidneys. **Doses should be adjusted accordingly in patients with underlying hepatic or renal diseases or cardiac diseases with low flow states such as CHF.**
4. GI effects include nausea, vomiting, hiccough/hiccup
5. Pain at injection site (IV/IM), intranasal irritation if given IN

Administration:

ADULT DOSE

1. **Seizure**:
   - ~~1-2 mg~~ 5 mg SLOW IV or
   - 5 mg IM or IN ~~(2.5 mg each nostril)~~ (split dose between nares)
   - **May repeat once after 5 minutes**

MIDAZOLAM (Versed®) - continued

2. **Pre-cardioversion sedation**:
   - 1-2 mg SLOW IV
   - 5 mg IN (intranasal) ~~(split dose: 2.5 mg each nostril)~~ (split dose between nares)
   - **May repeat once after 10 minutes**

3. **Agitated patient sedation** (danger to self or others):
   - ~~1-2 mg~~ Up to 5 mg SLOW IV
   - 5 mg IM or IN (intranasal) ~~(split dose: 2.5 mg in each nostril)~~ (split dose between nares)
   - **May repeat once after 5 minutes**

*****EKG, Pulse oximetry, and ETCO2 (when equipment is available) monitoring will be used at all times.**

PEDIATRIC DOSE

1. **Seizure/Agitated Patient Sedation**:
   - ~~0.1 mg/kg~~ 0.2 mg/kg SLOW IV not to exceed 5 mg
   - ~~0.1 mg/kg~~ 0.2 mg/kg IM/IN not to exceed 5 mg
   - Total max dose 5 mg

   (IN **volume** for pediatric patient up to ~~0.3ml~~ 1ml per nostril)
   Pediatric maximum **volume** of one (1) mL per nostril per atomization (0.2-0.3 mL per nostril is ideal)

   - volumes > 1 mL are more likely to saturate the mucosal surface causing medication runoff into the proximal pharynx

2. **Pre-cardioversion:**
   - 0.1 mg / kg IN or SLOW IV.
   - Max 2mg

*****EKG, Pulse oximetry, and ETCO2 (when equipment is available) monitoring will be used at all times.**

Onset: 1.5 - 5 minutes IV
2 - 6 minutes IN
15 minutes IM

Duration: 2 - 6 hours for IV/IN/IM

BREAK

ALLERGIC REACTION/ANAPHYLAXIS

One or more of the following should increase suspicion for anaphylaxis:

- Respiratory symptoms (throat tightness, hoarse voice, wheezing/stridor, cough, SOB)
- Cardiovascular symptoms: fainting, dizziness, tachycardia, hypotension
- GI symptoms: nausea, vomiting, abdominal cramping
- Angioedema of eyelids, lips, tongue, face

ADULT	PEDIATRIC (≤34 KG)
BLS	
• Universal Protocol #601 • Pulse Oximetry - O_2 administration per Airway Management Protocol #602 • May assist with the administration of patient's prescribed medication (i.e. Epi Auto-injector, inhaler, etc.)	Same as Adult
BLS Additional/Optional Skills as Approved by SLOEMSA	
~~**Unstable**~~ ~~(Dyspnea/Wheezing/Shock)~~ **Suspected anaphylaxis (e.g. respiratory, cardiovascular, GI, and/or angioedema symptoms)** • **Adult 0.3 mg Epinephrine Auto-Injector** administered in anterolateral thigh • May repeat, if indicated, every 5 min, max 3 doses OR • **Adult Epinephrine 1:1000 0.3 mg IM** - May repeat, if indicated, every 5 min, max 3 doses	~~**Unstable**~~ ~~(Dyspnea/Wheezing/Shock)~~ **Suspected anaphylaxis (e.g. respiratory, cardiovascular, GI, and/or angioedema symptoms)** • **Pediatric (≥15 kg) 0.15 mg Epinephrine Auto-Injector** administered in anterolateral thigh • May repeat, if indicated, every 5 min, max 3 doses OR • **Pediatric (≥15 kg), Epinephrine 1:1000 0.15 mg IM anterolateral thigh** - May repeat, if indicated, every 5 min , max 3 doses
ALS Standing Orders	
~~**Stable**~~ **Skin signs only (e.g. Itching/rash/hives/flushing)** • **Diphenhydramine** 50 mg IV/IM ~~**Unstable**~~ ~~(Dyspnea/Wheezing/Shock)~~	~~**Stable**~~ **Skin signs only (e.g. Itching/rash/hives/flushing)** • **Diphenhydramine** 2 mg/kg IV/IM – not to exceed 50 mg ~~**Unstable**~~ ~~(Dyspnea/Wheezing/Shock)~~

Suspected anaphylaxis (e.g. respiratory, cardiovascular, GI, and/or angioedema symptoms)
 	
• **Epinephrine 1:1,000** 0.01 mg/kg IM – not to exceed 0.5 mg
  - may repeat every 5 min, max 3 doses
• **Diphenhydramine** 50 mg IV/IM
 	
• If respiratory involvement add:
  - **Albuterol** 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct, over 5-10 min
  - repeat as needed
 	
~~**Extremis**~~
• ~~**Epinephrine 1:1,000** 0.01 mg/kg SL – not to exceed 0.5 mg~~
  - ~~may repeat every 5 min, max 3 doses~~
	Suspected anaphylaxis (e.g. respiratory, cardiovascular, GI, and/or angioedema symptoms)
	
	• **Epinephrine 1:1,000** 0.01 mg/kg IM – not to exceed 0.3 mg
	  - may repeat every 5 min, max 3 doses
	• **Diphenhydramine** 2 mg/kg IV/IM – not to exceed 50 mg
	
	• If respiratory involvement add:
	  - **Albuterol** 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct, over 5-10 min
	  - repeat as needed
	
	~~**Extremis**~~
	• ~~**Epinephrine 1:1,000** 0.01 mg/kg SL – not to exceed 0.3 mg~~
	  - ~~may repeat every 5 min, max 3 doses~~

Base Hospital Orders Only	
Unresponsive to previous therapy • **Epinephrine 1:10,000** 0.01 mg/kg slow IV titrated – not to exceed 0.5 mg • As needed	Unresponsive to previous therapy • **Epinephrine 1:10,000** 0.01 mg/kg slow IV titrated – not to exceed 0.3 mg • As needed
Notes	
• If unsure between allergic reaction and anaphylaxis, treat as suspected anaphylaxis and give Epinephrine **early** • Auto-injector injection site should be exposed and cleansed with aseptic technique prior to injection. • Follow manufacturer's instructions when using Epinephrine auto-injector.	

RESPIRATORY – BRONCHOSPASM
ASTHMA/COPD/CROUP

ADULT	PEDIATRIC (≤34 KG)
BLS	
• Universal Protocol #601 • Pulse Oximetry - O_2 administration per Airway Management Protocol #602 • CPAP per Airway Management Protocol #602 • May assist with patient's prescribed medication, inhaler, etc. • Additional/optional skills as approved by SLOEMSA	• Same as adult
BLS Optional Skills	
ASTHMA ~~Unstable/Extremis~~ **Moderate to Severe Distress** • **Epinephrine 1:1,000** 0.3 mg IM - No repeat	**ASTHMA** ~~Unstable/Extremis~~ **Moderate to Severe Distress** **(≥15 kg)** • **Epinephrine 1:1,000** 0.15 mg IM – anterolateral thigh - No repeat
ALS Standing Orders	
BRONCHOSPASM/ASTHMA/COPD ~~Stable~~ **Mild** • **Albuterol** 2.5-5 mg via HHN/Mask over 5-10 min - repeat as needed ~~Unstable~~ **Moderate** • **Albuterol** 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min <u>Combined with:</u> • **Ipratropium Bromide** 500 mcg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min - Repeat once after 20 minutes ~~• **Epinephrine 1:1,000** 0.01 mg/kg IM – not to exceed 0.5 mg~~ ~~- may repeat every 5 min, max 3 doses~~ ~~Extremis~~ **Severe distress** • <u>In addition to previous therapies:</u> • **Epinephrine 1:1,000** 0.01 mg/kg IM – not to exceed 0.3 mg - Additional doses – base order only - Age less than 70 - History of Asthma or COPD	**BRONCHOSPASM/ASTHMA** ~~Stable~~ **Mild** • **Albuterol** 2.5-5 mg via HHN/Mask over 5-10 min - repeat as needed ~~Unstable~~ **Moderate** • **Albuterol** 2.5-5 mg via HHN/Mask/BVM with adjunct over 5-10 min <u>Combined with:</u> • **Ipratropium Bromide** 250 mcg via HHN/Mask/BVM with adjunct over 5-10 min - Repeat once after 20 minutes ~~Extremis~~ **Severe distress** • <u>In addition to previous therapies:</u> • **Epinephrine 1:1,000** 0.01 mg/kg IM – not to exceed 0.3 mg - Additional doses – Base order only **Severe distress – unresponsive to previous therapy** • **Magnesium sulfate** IV 50 mg/kg max of 2 Gm (over 20 minutes) - Additional doses – base order only

- No signs or symptoms suggestive of MI/STEMI
- No history of angina, CVA, MI

Severe distress – unresponsive to previous therapy

- **Magnesium Sulfate** IV 2 Gm (over 20 minutes)
  - May repeat once
  - See notes or formulary for mixing instructions
- ~~**Epinephrine 1:1,000** 0.01 mg/kg SL – not to exceed 0.5 mg~~
  - ~~may repeat every 5 min, max 3 doses~~

~~**COPD/BRONCHOSPASM**~~

Stable

- ~~**Albuterol** 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min~~
  ~~repeat as needed~~
  - See notes or formulary for mixing instructions
- ~~**Epinephrine 1:1,000** 0.01 mg/kg SL – not to exceed 0.3 mg~~
  - ~~may repeat every 5 min, max 3 doses~~

CROUP

Stable

- **Humidified oxygen** via HHN/Mask or blow-by

Base Hospital Orders Only

Unresponsive to previous therapy

- **Epinephrine 1:1,000** 0.01 mg/kg IM – subsequent doses
- **Epinephrine 1:10,000** 0.01 mg/kg (0.1 mL/kg) slow IV titrated – not to exceed 0.5 mg
- If Magnesium Sulfate toxicity is suspected, contact base for Calcium Chloride orders
  - **Indications:**
  - Hyporeflexia
  - Respiratory Depression
  - New onset altered mental status
  - New onset cardiac rate and rhythm changes
- As needed

Unresponsive to previous therapy

- **Epinephrine 1:10,000** 0.01 mg/kg (0.1 mL/kg) slow IV titrated – not to exceed 0.3 mg
- If Magnesium Sulfate toxicity is suspected, contact base for Calcium Chloride orders
  - **Indications:**
  - Hyporeflexia
  - Respiratory Depression
  - New onset altered mental status
  - New onset cardiac rate and rhythm changes

CROUP

- **Albuterol** 2.5-5 mg via HHN/Mask/BVM over 5-10 min
  - repeat per base order
- As needed

Notes

BRONCHOSPASM – narrowing of lower airways, may be associated with: wheezes, cough, and chest tightness

- Can be caused by: respiratory infections, exposures (toxins, allergens, fire/smoke), exercise, stress, cold dry air
- Evaluate history of: chronic lung disease, prescribed medications, allergies, chronic infections (TB, Coccidioidomycosis)

Magnesium Sulfate Mixing Instruction – 1 Gm IV in 100cc normal saline over 10 minutes, immediately repeated once for a total dose of 2 Gm IV.

Ipratropium Bromide (Atrovent®)

Classification: Anticholinergic Bronchodilator

Actions:

1. Blocks interaction of acetylcholine (antagonist) at muscarinic cholinergic receptors and bronchial smooth muscle receptor sites
2. Reduced mucus production
3. Decreased level of cyclic guanosine monophosphate

Indications:

1. Respiratory distress with wheezes/bronchospasm
2. SOB due to COPD exacerbation or asthma
3. Persistent bronchospasms

Contraindications: **Known hypersensitivity to Ipratropium or Atropine**

Adverse Effects:

Mydriasis	Headache
Tachycardia	Anxiety
Blurred Vision	Skin Flushing
Nausea/Vomiting	Paradoxical Bronchospasm

Administration:

ADULT DOSE

500 mcg via HHN/Mask/CPAP/BVM with adjunct over 5-10 minutes

- Repeat once after 20 minutes

PEDIATRIC DOSE

250 mcg via HHN/Mask/BVM with adjunct over 5-10 minutes

- Repeat once after 20 minutes

Onset: <15 minutes

Duration: 2-4 hours

Notes:

- Ipratropium Bromide should be administered with oxygen, be sure to closely monitor the patient's vital signs and cardiac status
- Ipratropium Bromide is to be utilized in combination with Albuterol
- Ipratropium Bromide aerosols can cause paradoxical bronchospasms which usually happen upon initial use of medication. If this occurs, Ipratropium Bromide should immediately be discontinued
- Avoid contact with eyes

Magnesium Sulfate (xxxxxxxx®)

Classification: Electrolyte, Anticonvulsant, CNS Depressant

Actions:

1. Blocks peripheral neuromuscular transmission by reduction of acetylcholine release
2. Reduces striated muscle contraction

Indications:

1. Status asthmaticus unresponsive to beta-antagonists or anticholinergics
2. SOB due to COPD exacerbation or asthma

Contraindications:

Heart blocks

MI / History of MI

Hypotension

Hypermagnesemia

Precautions: Renal Insufficiency

Adverse Effects:

Hyporeflexia (decreased reflexes)	Diaphoresis
AV Block/Complete Heart Block	Itching/Rash
Bradycardia	Drowsiness
Respiratory Depression	Facial Flushing

Administration:

ADULT DOSE

Refractory in Severe Respiratory Distress and Bronchospasm:

2Gm in 250cc Normal Saline over 20 minutes

- May repeat once after 5 minutes

PEDIATRIC DOSE

Refractory in Severe Respiratory Distress and Bronchospasm:

50mg/kg max of 2Gm in 250cc Normal Saline over 20 minutes

- Repeat doses – base order only

Onset: IV - immediate

Duration: IV - 30-60 minutes

Notes:

- If patient presents with hyporeflexia, discontinue Magnesium Sulfate immediately
- If overdose is suspected consult with base immediately to give calcium chloride to reverse effects
- Magnesium Sulfate Overdose Indications:
  - New onset altered mental status

- New onset of cardiac rhythm and rate changes
- Respiratory depression
- Hyporeflexia - Decreased deep tendon reflexes

CALCIUM CHLORIDE (CaCl2)
(Base Hospital Order Only)

Classification: Electrolyte

Actions:

1. Acts as an activator in transmission of nerve impulses and contraction of cardiac, skeletal, and smooth muscles.
2. Maintains cell membrane and capillary permeability.

Indications:

1. Cardiac arrest or significant instability associated with hyperkalemia (suspect in renal failure) or Ca channel blocker toxicity.
2. Overdose on Calcium Channel Blocker medications.
3. Signs of Magnesium toxicity:
   - Hyporeflexia (indicated by decreased deep tendon reflexes)
   - Respiratory Depression
   - New onset altered mental status
   - New onset of cardiac rate and rhythm changes

Contraindications: **Hypercalcemia**

Adverse Effects:

Cardiovascular	**Metabolic**
Cardiac arrest	Hypercalcemia

Administration:

ADULT DOSE
1 Gm slow IVP/IO

PEDIATRIC DOSE
20 mg/kg slow IVP/IO not to exceed 500 mg per dose

Onset: Immediate

Duration: 30 minutes - 2 hours

Notes:

- Calcium Chloride will precipitate if in a solution with Sodium Bicarbonate.

EPINEPHRINE 1:1,000 (Adrenalin®)

Classification: Sympathomimetic agent (catecholamine)

Actions:

1. Increases cardiac output due to increased inotropy, chronotropy, dromotropy, and AV conduction (*b*1 effect)
2. Relaxes smooth muscles of the respiratory tract (*b*2 effect)
3. Increases systolic blood pressure due to increased cardiac output (*b*1effect) and vasoconstriction (*a* effect)
4. Increases coronary perfusion during CPR by increasing aortic diastolic pressure

Indications:

1. Cardiopulmonary arrest
2. Anaphylaxis
3. Respiratory distress with wheezing
4. Pediatric symptomatic bradycardia
5. Neonatal resuscitation
6. Suspected croup or epiglottitis

Contraindications:

1. **Use with caution in pregnancy.**
2. **Consider base physician consultation if possible if the patient has signs or history suggestive of MI, angina or hypertension**
3. **Age greater than 70 in cases of Respiratory Distress/Bronchospasm**

Adverse Effects:

Cardiovascular
Tachycardia
Hypertension
Chest pain
Palpitations
Ventricular fibrillation

Neurological
Anxiety
Dizziness
Headache
Tremors
Seizures

Gastrointestinal
Nausea/vomiting

Administration: **ADULT DOSE**

1) ~~Asthma~~ **Severe Bronchospasm/Asthma/COPD:** 0.01 mg/kg IM, not to exceed 0.3mg ~~0.5 mg, may repeat every 5 minutes, not to exceed 3 doses~~, additional doses – base order only

a) **BLS Optional Skill (approved providers only):** 0.3 mg IM – no repeat

2) **Allergic reaction/anaphylaxis:** 0.01 mg/kg **IM**, not to exceed 0.5 mg, may repeat every 5 minutes, not to exceed 3 Additional doses – base order only

EPINEPHRINE 1:1,000 (Adrenalin®) CONTINUED

PEDIATRIC DOSE

~~1)~~ **Bronchospasm/Asthma:** 0.01 mg/kg, IM, not to exceed 0.3 mg, additional doses – base order only ~~may repeat every 5 minutes, not to exceed 3 doses~~ 0.01 mg/kg

a) **BLS Optional Skill (approved providers only):** 0.15 mg IM – no repeat

2) **Allergic reaction/anaphylaxis:** 0.01 mg/kg, **IM**, not to exceed 0.3 mg, may repeat every 5 minutes, not to exceed 3 doses

3) **Bradycardia:** The first line drug in pediatric bradycardia is epinephrine 1:10,000

Notes:

- IM administration is with 1-1½" needle in anterior/lateral thigh or deltoid.
- Tachycardia is not a contraindication to Epinephrine.

CHILDBIRTH

NORMAL

BLS

- Universal Protocol #601
- Pulse Oximetry
  - 02 administration per Airway Management Protocol #602

Delivery

- Patient assessment with visual exam of perineum for crowning
- Control head and speed of delivery
- Check for cord around neck
- Deliver upper, then lower shoulder
- Dry, stimulate, and wrap baby
- Suction airway as needed
- Cut and clamp cord 6" from newborn's umbilicus
- Healthy infant to mother's breast
- Prepare for delivery of placenta

Postpartum Hemorrhage Control

- Perform visual exam to determine site of bleeding
- For perineal tear, apply direct pressure
- Firmly massage fundus

ALS Standing Orders

- Refer to appropriate protocol based on patient's presentation

Base Hospital Orders Only

- As needed

Notes

COMPLICATIONS

BLS

- Universal Protocol #601
- Pulse Oximetry
  - 02 administration per Airway Management Protocol #602

Initiate Transport Early

- Hypertension BP > 180/110 mmHg
- Seizures — follow Seizure Protocol #620
- Vaginal bleeding in last trimester not associated with labor may indicate Placenta Previa/Abruptio
- Breech/Limb presentation
- Prolapsed cord – Place mother in knee-chest position. Feel cord for pulse. With gloved hand, push baby into vagina slightly to take pressure off cord. Maintain this position. Do not attempt to push cord back

Newborn Viability

- Gestation ≤20 weeks without signs of life (pulseless, not breathing) are not considered viable. Resuscitation may be withheld by first responder
  - If gestational age is uncertain – initiate resuscitation and contact nearest Base hospital
  - Provider judgement of scene may also warrant initiation of resuscitation efforts in gestation of ≤ 20 week newborn
  - If resuscitation initiated - contact nearest Base Hospital

ALS Standing Orders

- Refer to appropriate protocol based on patient's presentation

Base Hospital Orders Only

- As needed

Notes

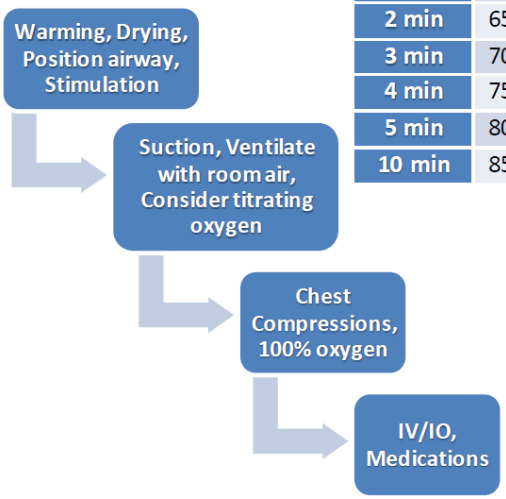
- Knee-chest position for prolapse cord presentation (above)
- General guideline transport in left lateral position Obtain Para/Gravida
- Refer to policy #125 for withholding resuscitation on pre-term fetal delivery ≤ 20 weeks gestation.
- If delivery of neonate with gestational age ≤20 weeks without resuscitation efforts, transport of post-partum patient is still encouraged. Use OB-kit swaddle/blanket for transport of neonate with mother.
- If resuscitation of gestational age ≤ 20 weeks is initiated, continue with newborn resuscitation per protocol #641 with early base hospital notification and rapid transport.

NEWBORN CARE

STABLE	UNSTABLE
BLS	
• Universal Protocol #601 • Pulse Oximetry - O_2 administration per Airway Management Protocol #602 • Assess vital signs then dry thoroughly and cover head and body to maintain body heat • Position infant on back and suction as needed • Stimulate infant by vigorously rubbing the back or flicking the soles of the feet	• Universal Protocol #601 • Respiratory distress – assist with BVM using room air (RA) • HR < 100 BPM – assist with BVM RA 40-60/min • HR < 60 BPM – BVM 100% O_2, provide chest compressions X 1 minute and reassess **Newborn Viability** • Gestation ≤20 weeks without signs of life (pulseless, not breathing) are not considered viable. Resuscitation may be withheld by first responder - If gestational age is uncertain – initiate resuscitation and contact nearest Base hospital - Provider judgement of scene may also warrant initiation of resuscitation efforts in gestation of ≤ 20 week newborn - If resuscitation initiated - contact nearest Base Hospital
ALS Standing Orders	
• None indicated	• ALS resuscitation measures if indicated • Monitor EKG, and pulse oximetry in right upper extremity (preductal O_2 Sat) • Consider oxygen titrated to preductal O_2 Sat • With APGAR < 7 at 5 min check blood sugar level (treat if <40 mg/dL)
Base Hospital Orders Only	
• As needed	• As needed
Notes	

- Asphyxiation/respiratory distress is most common cause of neonatal arrest
- Prompt warming, airway management and ventilations are the key to a successful resuscitation
- A 3:1 compression-to-ventilation ratio is used for neonatal resuscitation where compromise of gas exchange is nearly always the primary cause of cardiovascular collapse
- High-concentrations of oxygen may result in adverse outcomes, particularly in preterm infants
- Meconium-stained infants – Routine intubation for tracheal suction is not approved. Suction oropharynx with bulb syringe and provide BLS airway management
- Use proper sized equipment based on Broselow tape or equivalent
- Determine **APGAR at 1 minute**, **5 minutes**, and after any intervention

APGAR	0 Points	1 Point	2 Point
Activity (muscle tone)	Absent	Arms and legs flexed	Active movement
Pulse	Absent	Below 100	Over 100
Grimace (reflex excitability)	Does not react	Makes a grimace	Screams, coughs, or sneezes
Appearance (skin color)	Pale, blue	Pink trunk with blue extremities	Pink skin
Respiratory Effort	Absent	Irregular, slow, or weak cry	Vigorous cry
0-3 Severely depressed 4-6 Moderately depressed 7-10 Excellent condition			



Normal Preductal O2 Sat After Birth	
1 min	60%-65%
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%
5 min	80%-85%
10 min	85%-95%

- Refer to policy #125 for withholding resuscitation on pre-term fetal delivery ≤ 20 weeks gestation.
- If delivery of neonate with gestational age ≤20 weeks without resuscitation efforts, transport of post-partum patient is still encouraged. Use OB-kit swaddle/blanket for transport of neonate with mother.
- If resuscitation of gestational age ≤ 20 weeks is initiated, continue with newborn resuscitation per protocol #641 with early base hospital notification and rapid transport.

BREAK

DROWNING

ADULT	PEDIATRIC (≤34 KG)
BLS	
Consider scene safety and additional resources for victims requiring active rescue from aquatic environment • **In-Water Resuscitation:** Trained rescuers may initiate rescue breaths during extrication/rescue process, only if safe and effective, without delaying rapid removal from environment. (No chest compressions) • Obtain accurate time last known well/downtime - Universal Protocol #601 - O2 administration per Airway Management protocol #602 - **Prioritize the immediate reversal of hypoxia** • **ALS Assessment required** for persistent signs and symptoms of cough, abnormal lung sounds, altered mental status, hypoxia, hypotension, or dyspnea • **Apnea or cardiac arrest** - **5 initial rescue breaths prior to ventilation or compressions** - **Minimize interruptions in oxygenation and ventilation.** - PEEP valve with BVM when available - Expect vomiting, have suction ready - May ventilate through “foam” surfactant. • Consider hypothermia and warming measures • For an alert patient with SOB, apply CPAP Procedure #703	**Same as Adult**
ALS	
• **Persistent symptoms: cough, abnormal lung sounds, altered mental status, hypoxia, hypotension, dyspnea**	**Same as Adult**

- CPAP Procedure #703 as indicated - Monitor ETCO2 - Encourage transport and continued monitoring • **Apnea, or Cardiac Arrest** - Team to emphasize early high-quality ventilation, mask seal, and oxygenation techniques on scene - Cardiac Arrest Protocol #641 as indicated - **Early initiation** of ETI Procedure #717 or SGA Procedure #718 as indicated. - If non-shockable rhythms, may forego vector change (minimize ventilation interruptions) • **If high suspicion of trauma,** SMR Procedure #702. Avoid interruptions or delay in ventilation oxygenation during procedure and patient movement.	
Base Hospital Orders Only	
• Consult appropriate base station per EMS Base Station Report policy #121 as needed for patient presentation, downtime, trauma, airway concerns, prolonged resuscitation with PEA and Asystole, cold water immersion.	**Same as Adult**

Notes

- **Definition of drowning:** Respiratory impairment from submersion or immersion in a liquid.
- **Duration of submersion is the most important predictor of outcome.**
- **Hypoxia is the primary reversible cause of morbidity and mortality in drowning.**
- **Signs and symptoms include: cough, abnormal lung sounds, altered mental status, hypoxia, hypotension, dyspnea**
- Encourage transport of all symptomatic patients due to potential worsening over the next 6 hours.
- Early, effective ventilation and initiation of CPR are the most critical for improving survivability and neurologic outcomes.
- Surfactant is fluid from the lungs, usually “foam-like” and may be copious, DO NOT waste time attempting to suction. Ventilate with BVM through foam (suction water and vomit only when present.) Use judgement for need to suction copious fluids versus interrupting ventilation/oxygenation.
- PEA and Asystole Cardiac Arrest may benefit from prolonged resuscitation and/or transport in the presence of drowning/hypoxia. Use provider judgement and consult base as needed.
- Utilize bystanders, lifeguards, or other witnesses for accurate scene report and downtime.
- C-Spine immobilization not recommended except with strong evidence/report of traumatic mechanism.
- AHA guidelines 2024 show in-water rescue breaths leading to increased survival. Rescue phase

breaths should NOT be performed if the rescue agency does not train and/or practice this technique. Should not delay extrication to a controlled and safe working environment.

- Regardless of water temperature – resuscitate all patients with known submersion time of ≤ 25 minutes.
- SCUBA Diving emergencies, collect dive plan/dive computer data if available. Consider pertinent info for hospital or operational hyperbaric chamber.
- Drowning is a global issue with poor documentation and data, documentation should reflect current definitions and guidelines based on patient presentation and terminology.
- Document: witness statements, submersion time, type of water/temperature, initial presentation and neurological status, bystander interventions.
- DO NOT use terminology: “near drowning,” “dry drowning,” “delayed drowning,” “secondary drowning,” “wet drowning” with patients or with documentation as it is not physiologically relevant.

ATRIAL FIBRILLATION

ADULT	PEDIATRIC (≤34 KG)
BLS	
• **Universal Protocol #601** • Pulse Oximetry - O2 administration per Airway Management Protocol #602	Same as Adult
ALS	
Stable • Observe and monitor the patient **Unstable (See Notes)** • Consult the Base Hospital **Extremis (See Notes)** • Consider Midazolam up to 2mg slow IV or 5 mg IN (split into two doses 2.5 mg each nostril) to pre-medicate • Synchronized/Unsynchronized cardioversion sequences (see notes) • Synchronized cardioversion **200 J**. • Use manufacturer-recommended energy settings if different from above	None
Base Hospital Orders Only	
• Unstable pt	• As needed

Notes

- Obtain 12-lead ECG before and after conversion, if possible.
- Vascular access may be omitted prior to cardioversion if unstable.
- Consider and treat underlying causes in unstable patients with atrial fibrillation and atrial flutter, i.e., sepsis, dehydration/hypovolemia, med errors, etc.
- Synchronized/Unsynchronized Sequences
  (If synchronized mode is unable to capture, use unsynchronized cardioversion.)
- Unstable is defined as a pt in A-FIB RVR presenting with signs/symptoms of hemodynamic instability:
  - SBP < 100 mmHg
  - Evidence of poor perfusion – capillary refill, color, temp, etc.
  - Altered Mental Status
  - Shortness of breath
  - Pulmonary edema
- Extremis is defined as a pt in A-FIB RVR, and imminent death is likely

SUPRAVENTRICULAR TACHYCARDIA

ADULT	PEDIATRIC (≤ 34Kg)
BLS	
• **Universal Protocol #601** • Pulse Oximetry - O_2 administration per Airway Management Protocol #602	Same as Adult
ALS	
Stable • Attempt vagal maneuvers • **Adenosine** 6 mg IV followed by 20 mL NS bolus • **Adenosine** 12 mg followed by 20 mL NS bolus o May repeat once **Unstable** • Synchronized cardioversion (see notes) • **Midazolam** up to 2 mg slow IV or 5 mg IN (split into two doses 2.5 mg each nostril) to pre-medicate prior to cardioversion	**Stable** • Attempt vagal maneuvers • **Adenosine** 0.1 mg/kg IV followed by 20 mL NS bolus • **Adenosine** 0.2 mg/kg IV followed by 20 mL NS bolus **Unstable** • Synchronized cardioversion (see notes) • **Midazolam** 0.1 mg/kg slow IV/IN, not to exceed 2 mg to pre-medicate prior to cardioversion
Base Hospital Orders Only	
• ~~Cardioversion of unstable Atrial Fibrillation with RVR~~ • As needed	• ~~As needed~~

Notes

- Obtain 12-lead ECG before and after conversion if possible
- Preferred IV site for Adenosine administration is in a proximal vein with a large bore catheter
- Vascular access may be omitted prior to cardioversion if in extremis
- Typical SVT in adults is a QRS < 0.12 seconds
- Typical SVT in pediatric patients is a QRS < 0.09 seconds with rates >180 for children and >220 in infants
- Avoid Adenosine in atrial fibrillation and atrial flutter
- ~~Consider and treat underlying causes in unstable patients with atrial fibrillation and atrial flutter, i.e. sepsis, dehydration/hypovolemia, medication errors, etc.~~
- Synchronized/Unsynchronized Sequences
  (if synchronized mode is unable to capture use unsynchronized cardioversion)
- Use manufacturer recommended energy settings if different from below

ADULT	PEDIATRIC
50 J	1 J/kg
70/75 J	2 J/kg
100 J	2 J/kg
120 J	
150 J	
200 J	

~~(start at 120J in adult patient with unstable Atrial Fibrillation with RVR)~~

Supraglottic Airway Device

BLS

Universal Protocol #601

Pulse Oximetry – O_2 administration per Airway Management Protocol #602

- Optional skills as approved by SLOEMSA

ALS

- Patients who meet indications for **Endotracheal Intubation Procedure #717**
- ALS provider judgement.
- ~~SGA use is not approved for pediatric use. SGA shall only be used for patients >34kg~~.

I-GEL

- Monitor End-tidal capnography throughout use.
- Select appropriate tube size.

Description	Size	Weight Range	Colour
I-Gel supraglottic airway, large adult	5	90+ kg	Orange
I-Gel supraglottic airway, medium adult	4	50 - 90 kg	Green
I-Gel supraglottic airway, small adult	3	30 - 60 kg	Yellow
I-Gel supraglottic airway, large paediatric	2.5	25 - 35 kg	White
I-Gel supraglottic airway, small paediatric	2	10 - 25 kg	Grey
I-Gel supraglottic airway, infant	1.5	5 - 12 kg	Light Blue
I-Gel supraglottic airway, neonate	1	2 - 5 kg	Pink

- While preparing tube, have assistive personnel open the airway, and clear of any foreign objects. Pre-oxygenate with 100% oxygen via BLS airway and BVM.
- Apply water soluble lubricant to the distal tip and posterior aspect (only) of the tube, taking care to avoid introduction of the lubricant into or near the ventilatory openings.
- Grasp the lubricated i-Gel firmly along the integral bite block. Position the device so that the i-Gel cuff outlet is facing towards the chin of the patient.
- Position patient into “sniffing position” with head extended and neck flexed. The chin should be gently pressed down before proceeding to insert the i-Gel.
- For pediatrics consider padding under the shoulders.
- Introduce the leading soft tip into the mouth of the patient in the direction towards the hard palate.
- Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.
- At this point the tip of the airway should be located into the upper esophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite-block.
- Attach a BVM. While gently bagging the patient to assess ventilation, carefully withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).
- Confirm proper position by auscultation, chest movement and verification of ETCO2 by waveform capnography.
- The i-Gel should be secured down per manufacturer recommendation.

- Patients who have an advanced airway established shall have that airway secured with tape or a commercial device. Devices and tape should be applied in a manner that avoids compression of the front and sides of the neck, which may impair venous return from the brain.
- Ensure proper documentation of placement of the i-Gel placement including verification methods.

Base Hospital Orders Only

As needed

Notes

Contraindications

•Gag reflex. •Caustic ingestion. •Known esophageal disease (e.g., cancer, varices, or stricture).

- SGA during cardiac arrest is indicated.
- Once an SGA has been placed, it should not be removed for an ETI.
- If the provider cannot accomplish an ALS airway, they should document in the PCR why an ALS airway wasn't accomplished.
- To verify patency and placement of the SGA Device, providers shall verify placement of the i-Gel device by waveform capnography and a minimum of one additional method. This additional method can be any of the following:
  - Auscultation of lung sounds
  - Colorimetric CO2 Detector Device
  - Esophageal Bulb Detection Device
- During placement of an SGA, apneic oxygenation is recommended to be utilized when available. If appropriate, providers shall place a nasal cannula onto the patient prior to i-Gel placement and continue use of the nasal cannula during placement in order to assist in oxygenation.

AIRWAY MANAGEMENT

ADULT	PEDIATRIC (≤34 kg)
BLS	
• Universal Protocol #601 • Administer O_2 as clinical symptoms indicate (see notes below) • Pulse oximetry • Patients with O_2 Sat ≥ 94% without signs or symptoms of hypoxia or respiratory compromise should not receive O_2 • When applying O_2 use the simplest method to maintain O_2 Sat ≥ 94% • Do not withhold O_2 if patient is in respiratory distress • **Foreign Body/Airway Obstruction** - Use current BLS choking procedures - Basic airway adjuncts and suctioning as indicated and tolerated • Supraglottic Airway – as indicated to control airway– Procedure #718 • Optional skills as approved by SLOEMSA	Same as Adult (except for newborns) • Newborn (< 1 day) follow AHA guidelines – Newborn Protocol #651 • Optional skills as approved by SLOEMSA
ALS	
• **Foreign Body/Airway Obstruction** If obstruction not relieved with BLS maneuvers - Visualize and remove obstruction with Magill forceps - If obstruction persists, consider – Needle Cricothyrotomy Procedure #704 - Upon securing airway monitor O_2 Sat and $ETCO_2$ – Capnography Procedure #701 • Endotracheal Intubation – as indicated to control airway – Procedure #717 • Supraglottic Airway – as indicated to control airway– Procedure #718 • Needle thoracostomy with symptoms of tension pneumothorax or traumatic arrest with suspicion of chest trauma– Needle Thoracostomy Procedure #705 & Traumatic Cardiac Arrest Protocol #661	• **Foreign Body/Airway Obstruction** If obstruction not relieved with BLS maneuvers - Visualize and remove obstruction with Magill forceps - If obstruction persists, consider – Needle Cricothyrotomy Procedure #704 - Upon securing airway monitor O_2 Sat and $ETCO_2$ – Capnography Procedure #701 • Needle thoracostomy with symptoms of tension pneumothorax – Needle Thoracostomy Procedure #705 & Traumatic Cardiac Arrest Protocol #661 • Supraglottic Airway – as indicated to control airway– Procedure #718
Base Hospital Orders Only	
• **Symptomatic Esophageal Obstruction**	• **Symptomatic Esophageal Obstruction**

- **Glucagon** 1mg IV followed by rapid flush. Give oral <u>fluid</u> challenge 60 sec after admin - check a blood sugar prior • As needed	- **Glucagon** 0.1mg/kg IV not to exceed 1mg followed by rapid flush. - Give oral <u>fluid</u> challenge 60 sec after admin - check a blood sugar prior • As needed

Notes

- Oxygen Delivery
  - Mild distress – 0.5-6 L/min nasal cannula
  - Severe respiratory distress – 15 L/min via non-rebreather mask
  - Moderate to severe distress – CPAP 3-15 cm H2O
  - Assisted respirations with BVM – 15 L/min
- Patients requiring an advanced airway, providers shall decide which ALS airway to utilize based on discretion.
- After placement of any advanced airway, providers shall verify placement of the advanced airway by waveform capnography and a minimum of one additional method. This additional method can be any of the following:
  - Auscultation of lung and stomach sounds.
  - Colorimetric CO2 Detector Device.
  - Esophageal Bulb Detection Device.

Endotracheal Intubation

FOR USE IN PATIENTS >34 KG

BLS

Universal Protocol #601

Pulse Oximetry – O_2 administration per Airway Management Protocol #602

Supraglottic Airway – as indicated to control airway– Procedure #718

- Optional skills as approved by SLOEMSA

ALS

Indications:

- Patients with a respiratory compromise.
- Patients requiring airway stabilization, including cardiac arrest and ROSC.

Contraindications:

- Intact gag reflex

Policy:

- Prepare, position, and oxygenate the patient with 100% Oxygen. Ideal positioning is keeping the ears in line with the sternal notch.
- Consider use of video laryngoscopy when available.
- Select appropriate size ET tube and consider the need for endotracheal introducer (Bougie); have suction ready.
- Using the laryngoscope, visualize vocal cords.
- Determine how accessible the patient's airway is. If the patient has a complex airway (unable to visualize the vocal cords due to surrounding anatomy) which would be difficult and time consuming to intubate, consider the use of a supraglottic airway device Procedure # 718.
- Visualization of vocal cords will take no longer than 10 seconds.
- Visualize tube/bougie passing through vocal cords.
- Inflate the cuff with 3-10mL of air.
- Apply waveform capnography (reference Policy #701).
- Auscultate for bilaterally equal breath sounds and absence of sounds over the epigastrium.
- If ET intubation efforts are unsuccessful after the 1st attempt, oxygenate and re-evaluate the airway positioning before the 2nd attempt. After first failed attempt, consider use of Supraglottic Airways (reference Procedure #718).
- If ET intubation efforts are unsuccessful after the 2nd attempt, oxygenate and provider shall then proceed to Supraglottic Airway Procedure #718.
- Patients who have an advanced airway established shall have that airway secured with tape or a commercial device. Devices and tape should be applied in a manner that avoids compression of the front and sides of the neck, which may impair venous return from the brain.

- If the patient has a suspected spinal injury:

- Open the airway using a jaw-thrust without head extension.
- If airway cannot be maintained with jaw thrust, use a head-tilt/chin-lift maneuver.
- Manually stabilize the head and neck rather than using an immobilization device during CPR.

- Following placement of the Endotracheal Tube, if the patient is noted to have an ETCO2 less than 10, the ALS Provider shall extubate the patient and oxygenate prior to an additional attempt.

Base Hospital Orders Only

As needed

Notes

- Respiratory compromise is defined as any condition that prevents the movement of oxygenated air into and out of the lungs. This includes cardiac arrests.
- ETI during cardiac arrest is indicated if the ALS provider can accomplish intubation without interruption in HPCPR. With ALS provider judgement, determines ETI cannot be accomplished, provider shall proceed to Supraglottic Airway Procedure #718.
- Once an SGA has been placed, it should not be removed for an ETI.
- If the provider cannot accomplish an ALS airway, they should document in the PCR why an ALS airway wasn't accomplished.
- After placement of the Endotracheal Tube, providers shall verify placement of the ETI by waveform capnography and a minimum of one additional method. This additional method can be any of the following:
  - Auscultation of lung and stomach sounds
  - Colorimetric CO2 Detector Device
  - Esophageal Bulb Detection Device
- During placement of an ETI, apneic oxygenation is recommended to be utilized when available. If appropriate, providers shall place a nasal cannula onto the patient prior to the intubation attempt and continue use of the nasal cannula during placement to assist in oxygenation.

NEEDLE CRICOTHYROTOMY

ADULT	PEDIATRIC (≤34KG)

BLS

- **Universal Protocol #601**
- Attempt BLS maneuvers for airway obstruction
- Pulse Oximetry
  - O_2 administration per Airway Management Protocol #602

ALS

- Position patient supine
- Identify and clean cricothyroid membrane between thyroid cartilage and cricoid cartilage with povidone-iodine and alcohol
- With finger marking cricothyroid membrane, stabilize the trachea
- Insert large bore IV catheter (maximum 10 Ga.) with a syringe attached at a 45° angle towards the patients feet through the membrane while aspirating. Aspiration of air indicates entry into the trachea
- Withdraw the needle, attach a cut 3 mm endotracheal tube and ventilate with BVM
- Secure tube and manually stabilize through transport
- Assess and reassess lung sounds
- For agencies utilizing commercially available devices:
  - Refer to the manufacturer guidelines and follow specific directions

Base Hospital Orders Only

As needed

Notes

- Indications - upper airway obstruction resulting in severe respiratory distress not relieved by conventional airway maneuvers in accordance to Airway Management Protocol #602
  - Epiglottitis
  - Fractured larynx
  - Facial burns with upper airway involvement
  - Laryngeal edema or spasm
  - Massive facial trauma
- Equipment
  - Large IV catheter (10-12 Ga.) with a syringe
  - 3mm ET tube – cut distal end to make tube approx. 2”
  - Antiseptic products, povidone-iodine/alcohol swabs
- Rapid transport with early notification
- In the event of complications – remove and repeat procedure
- Commercially available devices are allowed for use by County ALS agencies. For agencies utilizing commercially available devices, the SLOEMSA Medical Director shall be contacted in writing with the make/model prior to placing devices in units.

BREAK

SKILLS

EXAM