

Clinical Advisory Subcommittee of the Emergency Medical Care Committee



Meeting Agenda

10:15 A.M. Thursday, February 20th, 2025

Location: SLOEMSA Conference Room

2995 McMillan Ave, Ste 178

San Luis Obispo, CA 93401

Members

CHAIR: Dr. Stefan Teitge, *County Medical Society*
Dr. Heidi Hutchinson, *ED Physician Adventist*
Dr. Kyle Kelson, *ED Physician Adventist*
Dr. Lucas Karaelias, *ED Physician Dignity*
Diane Burkey, *MICNs*
Rob Jenkins, *Fire Service Paramedics*
Nate Otter, *Ambulance Paramedics*
Paul Quinlan, *Fire Service EMTs*
Lisa Epps, *Air Ambulance*
Jeffrey Hagins, *Air Ambulance*
Arneil Rodriguez, *Ambulance EMTs*
Casey Hidle, *Lead Field Training Officer*
VACANT, *Medical Director Appointee*

Staff

STAFF LIAISON: Ryan Rosander, *EMS Division Director*
Kaitlyn Blanton, *EMS Coordinator*
Dr. William Mulkerin, *Medical Director*
Rachel Oakley, *EMS Coordinator*
Eric Boyd, *EMS Coordinator*
Alyssa Vardas, *EMS Admin Assistant III*

AGENDA	ITEM	LEAD
Call to Order	Introductions	Dr. Teitge
	Public Comment	
Summary Notes	Review of Summary Notes December 19th, 2024	
Discussion	Protocol and Formulary Revisions: <ul style="list-style-type: none">Protocol #616 Respiratory- Bronchospasm Asthma/COPD/CROUPFormulary: Calcium ChlorideFormulary: EpinephrineFormulary: Ipratropium BromideFormulary: Magnesium SulfateProtocol #613 Behavioral EmergenciesProtocol #620 Seizure (Active)Formulary: MidazolamProtocol#618 Respiratory Distress- Opiate OverdoseFormulary: NarcanProtocol #650 ChildbirthProtocol #651 Newborn	Kaitlyn Blanton

	Policy Revisions: <ul style="list-style-type: none"> • Policy #125 Prehospital Determination of Death • Policy #100 Continuous Quality Improvement • Policy #100 Attachment A CQI Review Process • Policy #101 Quality Assurance Program • Policy #101 Attachment A Provider Case Tracking Form 	Ryan Rosander
Adjourn	Declaration of Future Agenda Items <ul style="list-style-type: none"> • Roundtable 	Dr. Teitge
	Next meeting date – April 17th, 2025 1015 hrs – EMSA Conference Room 2995 McMillan Ave. Suite 178 San Luis Obispo, CA 93401	

Clinical Advisory Subcommittee of the Emergency Medical Care Committee

DRAFT Meeting Minutes

10:15 AM December 19th, 2024

2995 McMillan Way, Suite 178

San Luis Obispo, CA 93401



MINUTES

MEMBERS PRESENT:

Dr. Heidi Hutchison, *ED Physician Tenet*
Rob Jenkins, *Fire Service Paramedics*
Nate Otter, *Ambulance Paramedics*
Lisa Epps, *Air Ambulance*
Tim Nurge, *Medical Director Appointee*

MEMBERS ABSENT:

Chair Dr. Stefan Teitge, *County Medical Society*
Dr. Kyle Kelson, *ED Physician Tenet*
Dr. Lucas Karaelias, *ED Physician Dignity*
Diane Burkey, *MICNs*
Paul Quinlan, *Fire Service EMTs*
Jeffrey Hagins, *Air Ambulance*
Arneil Rodriguez, *Ambulance EMTs*
Casey Hidle, *Lead Field Training Officer*

EMS AGENCY STAFF PRESENT:

Alyssa Vardas, *EMS Administrative Assistant*
Ryan Rosander, *EMSA*
Rachel Oakley, *EMSA*
Bill Mulkerin, *EMS Medical Director*
Kaitlyn Blanton, *EMSA*
Eric Boyd, *EMSA*

PUBLIC COMMENTORS:

None

1. CALL TO ORDER

Ryan Rosander called the meeting to order at 10:28 a.m. He led the reviewing of the meeting protocols and meeting agenda.

2. REVIEW AND APPROVAL OF December 19th, 2024, Summary Notes

Action: Nate Otter moved approval of the September 19th, 2024, Clinical Advisory Committee Meeting Minutes. Lisa Epps seconded. Motion carried unanimously with no abstentions.

Revised Protocols #601 Universal, 611 Allergic Reaction/Anaphylaxis, Revised Policy #152 STEMI Triage, 153 TRAUMA Triage, 219 Assisting Patients with their Emergency Medications:

Ryan Rosander, EMSA Division Manager, provided the Director's Report:

- Universal Protocol: With SLOEMSA's 2024 EMS Update Class currently underway, numerous paramedics have mentioned that they would like to see a 500mL fluid bolus (with repeat) within the Universal Protocol. This would eliminate the need for paramedics to call a base hospital for orders to administer fluids.

Discussion

- H. Hutchison mentions how it should be made more clear that this isn't for pediatrics.
 - N. Otter asks if there is a particular patient that this is appropriate for.
 - H. Hutchison asks if it should say consider normal saline?
 - R. Jenkins says to define that this is adults and peds is different.
 - T. Nurge asks if we should add a note in there to use caution with specific patients.
- Anaphylaxis Protocol: During our last CAC, an MD mentioned that they are seeing an increase in anaphylaxis patients being brought into the ED without EPI administered. This was discussed, and a possibility might be the lack of language clarity surrounding an "unstable" patient within the protocol. This has been addressed within the revision.

Discussion

- H. Hutchison says I've seen cases of patients who were having anaphylaxis and didn't receive epi-Was trying to capture that. There was stable and unstable but that's not really how we see anaphylaxis. Patients with skin signs only don't need it. I wanted to keep the notes.
 - T. Nurge asks in theory my EMT can draw up EPI for me.
 - R. Jenkins says they can give Auto-Injector but not administer draw-up EPI.
 - H. Hutchison says she supports eliminating stable/Unstable and just putting anaphylaxis.
 - B. Mulkerin says that he thinks we should shorten the notes and that definitions should go first.
 - K. Blanton says pulling up protocol is easier to have dosing first and notes at the end.
 - R. Oakley says the new Q1/QA form can be filled out at the hospital level, so if we see too much of a trend it can be talked about.
- STEMI and TRAUMA Triage: Over the past year, several stakeholders have approached SLOEMSA with a request to incorporate catchment areas into the

STEMI and Trauma destination policies. Currently, the field operates without a defined boundary or cutoff for decisions on transporting STEMI or trauma-alert patients to SVRMC/FHMC (SLO County) or MPMC (SB County). The proposed policy revision will help operations by providing clear boundaries.

Discussion

- B. Mulkerin asks if at the top of the policy do we need to call it telemetry.
- R. Jenkins mentions there is nothing about this in the STEMI protocol. If we put something about calling in it will help.
- R. Rosander asks if we want to put that in TRAUMA as well.
- Assisting with Emergency Medications: Several Congenital Adrenal Hyperplasia advocacy groups have reached out to SLOEMSA proposing a policy that addresses the need for paramedics to assist patients with their emergency medications, especially for patients in adrenal crisis. This policy will allow paramedics to receive base hospital orders to assist the parents or caregivers in drawing up and administering medications such as Solu-Cortef. It covers not only patients with Congenital Adrenal Hyperplasia but also any patient who needs assistance from a paramedic with their physician-prescribed emergency medications.

Discussion

- R. Jenkins mentions that it is base hospital for assisting with meds, maybe have a list of basic medications that are normally assisted with that don't require base contact.
- R. Jenkins says that EMTs can still help with auto-injectors.
- R. Oakley asks about scope.
- R. Jenkins says I think if it says paramedic that makes EMTs and PSFA providers Unable to help.
- H. Hutchison says to add a statement that says in addition to standard BLS, they can help with...
- R. Jenkins says BLS providers can assist with patient- provided medications that fall within their scope.
- H. Hutchison mentions specifying that this is for medications not within standard scope.

Public Comment

There was no public comment.

3. ITEMS FOR NEXT AGENDA

Working on the AMA Protocol.

4. PUBLIC COMMENT

None

5. ADJOURNMENT

Action: Nate Otter moved to move the protocols and policies forward to EMCC. Rob Jenkins seconded. Motion carried unanimously.

Ryan Rosander adjourned the meeting at 11:23 am.



COUNTY OF SAN LUIS OBISPO HEALTH AGENCY
PUBLIC HEALTH DEPARTMENT

Nicholas Drews *Health Agency Director*

Penny Borenstein, MD, MPH *Health Officer/Public Health Director*

MEETING DATE	February 20 th , 2025
STAFF CONTACT	Kaitlyn Blanton, EMS Coordinator 805.788.2513 kblanton@co.slo.ca.us
SUBJECT	Addition of Magnesium Sulfate and Ipratropium Bromide formularies for respiratory distress bronchospasms; increased naloxone dosing for opiate overdose; increased midazolam (Versed) dosing for active seizures and behavioral emergency patients. Expansion of pre-term delivery protocol to include fetal viability and termination criteria for pre-term births in the field.
SUMMARY	<p>The Respiratory Distress Bronchospasm Protocol #616 currently operates with standing orders for Albuterol and Epinephrine 1;1000. Based on feedback from field paramedics, a revision and broadening of the standing orders within Protocol #616 is requested for committee review. The option to include Ipratropium Bromide and Magnesium Sulfate as possible treatments for moderate and severe distress patients was added for review based on consultation with Dr. Mulkerin</p> <p>Updates to dosing and formularies for Calcium Chloride and Epi 1;1000 are included, as well as the introduction of new formularies for Ipratropium Bromide and Magnesium Sulfate.</p> <p>In addition to Magnesium Sulfate, the updated formulary for Calcium Chloride is included since Calcium Chloride is the accepted reversal for hyporeflexia in extreme cases of Magnesium overdose. Keeping Calcium Chloride as a base order medication remains the same.</p> <p>Increased dosing to operate in line with the current standard of practice is the revision of Naloxone dosing from 1mg IV for adults to 2 mg IV, as well as increased Pediatric dosing under protocol #618.</p> <p>Additionally, increased dosing of midazolam (Versed) is proposed for adults and pediatric patients under Active Seizure protocol #620, and Behavioral Emergencies protocol #613 only. Dosing remains the same for sedation pre-cardioversion.</p> <p>Lastly, due to recent conversations with field medics about a handful of unfortunate scene calls within the last few months involving pre-term deliveries as well as traumatic births, a need to expand protocol #650 Childbirth, #651 Newborn and policy #125 Prehospital Determination of Death, to include fetal viability was discussed with Dr.</p>

Emergency Medical Services

2995 McMillan Ave Ste 178 | San Luis Obispo, CA 93401 | (P) 805-781-2519

www.slocounty.gov/emsa

	Mulkerin. This expansion was drafted in the hopes to better guide and support crews in their resuscitation efforts on these challenging calls.
REVIEWED BY	Dr. William Mulkerin, SLOEMSA Staff
RECOMMENDED ACTION(S)	Listed attachments are recommended for CAC approval and to move forward to EMCC.
ATTACHMENT(S)	<p>Protocol #613 Behavioral Emergencies, Protocol #616 Respiratory Distress-Bronchospasm, Protocol #618 Respiratory Distress – Opiate OD, Protocol #620 Seizure Active, Ipratropium Bromide/Atrovent formulary, Magnesium Sulfate formulary, Midazolam formulary, Naloxone formulary, Calcium Chloride formulary</p> <p>Protocol #650 Childbirth, Protocol #651 Newborn, Policy #125 Prehospital determination of Death</p>

RESPIRATORY – BRONCHOSPASM ASTHMA/COPD/CROUP	
ADULT	PEDIATRIC (≤34 KG)
BLS	
<ul style="list-style-type: none"> Universal Protocol #601 Pulse Oximetry <ul style="list-style-type: none"> O₂ administration per Airway Management Protocol #602 May assist with patient's prescribed medication, inhaler, etc. 	
BLS Elective Skills (Approved Providers Only)	
<ul style="list-style-type: none"> CPAP per Airway Management Protocol #602 	<ul style="list-style-type: none"> None
BLS Optional Scope Skill (Approved Providers Only)	
<p>ASTHMA</p> <p>Unstable/Extremis Moderate to Severe Distress</p> <ul style="list-style-type: none"> Epinephrine 1:1,000 0.3 mg IM <ul style="list-style-type: none"> No repeat 	<p>ASTHMA</p> <p>Unstable/Extremis Moderate to Severe Distress (≥15 kg)</p> <ul style="list-style-type: none"> Epinephrine 1:1,000 0.15 mg IM – anterolateral thigh <ul style="list-style-type: none"> No repeat
ALS Standing Orders	
<p>BRONCHOSPASM/ASTHMA/COPD</p> <p>Stable-Mild</p> <ul style="list-style-type: none"> Albuterol 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min <ul style="list-style-type: none"> repeat as needed <p>Unstable-Moderate</p> <ul style="list-style-type: none"> Albuterol 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min <p>Combined with:</p> <ul style="list-style-type: none"> Ipratropium Bromide 500 mcg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min <ul style="list-style-type: none"> Repeat once after 20 minutes <p>Epinephrine 1:1,000 0.01 mg/kg IM – not to exceed 0.5 mg may repeat every 5 min, max 3 doses</p> <p>Extremis-Severe distress</p> <ul style="list-style-type: none"> In addition to previous therapies: Epinephrine 1:1,000 0.01 mg/kg IM – not to exceed 0.3 mg <ul style="list-style-type: none"> Additional doses – base order only <p>Severe distress – unresponsive to previous therapy</p> <ul style="list-style-type: none"> Magnesium Sulfate IV 2Gms in 250cc normal saline (over 20 minutes) 	<p>BRONCHOSPASM/ASTHMA</p> <p>Stable-Mild</p> <ul style="list-style-type: none"> Albuterol 2.5-5 mg via HHN/Mask/BVM with adjunct over 5-10 min <ul style="list-style-type: none"> repeat as needed <p>Unstable-Moderate</p> <ul style="list-style-type: none"> Albuterol 2.5-5 mg via HHN/Mask/BVM with adjunct over 5-10 min <p>Combined with:</p> <ul style="list-style-type: none"> Ipratropium Bromide 250 mcg via HHN/Mask/BVM with adjunct over 5-10 min <ul style="list-style-type: none"> Repeat once after 20 minutes <p>Extremis-Severe distress</p> <ul style="list-style-type: none"> In addition to previous therapies: Epinephrine 1:1,000 0.01 mg/kg IM – not to exceed 0.3 mg <ul style="list-style-type: none"> Additional doses – Base order only <p>Severe distress – unresponsive to previous therapy</p> <ul style="list-style-type: none"> Magnesium sulfate IV 50 mg/kg max of 2 Gm in 250cc normal saline (over 20 minutes) <ul style="list-style-type: none"> Additional doses – base order only <p>Epinephrine 1:1,000 0.01 mg/kg SL – not to exceed 0.3 mg may repeat every 5 min, max 3 doses</p>
CROUP	
<p>Stable</p> <ul style="list-style-type: none"> Humidified oxygen via HHN/Mask or blow-by 	

<ul style="list-style-type: none"> ○ May repeat once after 5 minutes <p>• Epinephrine 1:1,000 0.01 mg/kg SL – not to exceed 0.5 mg</p> <p>○ may repeat every 5 min, max 3 doses</p> <hr/> <p>COPD/BRONCHOSPASM</p> <p><u>Stable</u></p> <p>• Albuterol 2.5-5 mg via HHN/Mask/CPAP/BVM with adjunct over 5-10 min</p> <p>repeat as needed</p>	
Base Hospital Orders Only	
<p>Unresponsive to previous therapy</p> <ul style="list-style-type: none"> • 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 overdose is suspected (indicated by decreased deep tendon reflexes) consult for orders for Calcium Chloride • As needed 	<p>Unresponsive to previous therapy</p> <ul style="list-style-type: none"> • Epinephrine 1:10,000 0.01 mg/kg (0.1 mL/kg) slow IV titrated – not to exceed 0.3 mg • If Magnesium Sulfate overdose is suspected (indicated by decreased deep tendon reflexes) consult for orders for Calcium Chloride <p>CROUP</p> <ul style="list-style-type: none"> • Albuterol 2.5-5 mg via HHN/Mask/BVM over 5-10 min <ul style="list-style-type: none"> ○ repeat per base order • As needed
Notes	
<p>BRONCHOSPASM – narrowing of lower airways, may be associated with: wheezes, cough, and chest tightness</p> <ul style="list-style-type: none"> • 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) 	

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 overdose such as hyporeflexia (indicated by decreased deep tendon reflexes)

Contraindications: **Hypercalcemia**

Adverse Effects:

Cardiovascular
Cardiac arrest

Metabolic
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 (*b1* effect)
2. Relaxes smooth muscles of the respiratory tract (*b2* effect)
3. Increases systolic blood pressure due to increased cardiac output (*b1* effect) 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

4. **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
5. **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~~
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.

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 (xxxxxxx®)

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 (indicated by decreased deep tendon reflexes) consult with base immediately to give calcium chloride to reverse effects

BEHAVIORAL EMERGENCIES	
ADULT	PEDIATRIC (≤34 KG)
BLS	
<ul style="list-style-type: none"> • Universal Protocol #601 • Pulse Oximetry <ul style="list-style-type: none"> ○ O₂ administration per Airway Management Protocol #602 • Assess for reversible causes such as: hypoxia, shock, hypoglycemia • Restraints per Use of Restraints Procedure #711 	
ALS Standing Orders	
<ul style="list-style-type: none"> • Obtain a blood glucose as possible/safe • Midazolam <ul style="list-style-type: none"> ○ 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 	<ul style="list-style-type: none"> • Obtain blood glucose as possible/safe • Midazolam <ul style="list-style-type: none"> ○ 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	
<ul style="list-style-type: none"> • As needed 	<ul style="list-style-type: none"> • Repeat doses of Midazolam • As needed
Notes	
<ul style="list-style-type: none"> • <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) <ul style="list-style-type: none"> ○ volumes > 1 mL are more likely to saturate the mucosal surface causing medication runoff into the proximal pharynx 	

SEIZURE (ACTIVE)	
ADULT	PEDIATRIC (≤34KG)
BLS	
<ul style="list-style-type: none"> Universal Protocol #601 Pulse Oximetry <ul style="list-style-type: none"> O₂ administration per Airway Management Protocol #602 Prevent patient from injuring themselves – Do not restrain 	Same as Adults
BLS Elective Skills	
Obtain Blood Sugar Level – if <60 mg/dL see Altered Mental Status Protocol #612	
ALS Standing Orders	
<ul style="list-style-type: none"> Midazolam <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Midazolam <ul style="list-style-type: none"> 0.1 mg/kg 0.2 mg/kg slow IV not to exceed 2 mg 5 mg 0.1 mg/kg 0.2 mg/kg IM/IN (split between nares) not to exceed 5 mg Obtain blood sugar level
Base Hospital Orders Only	
<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> Repeat doses of Midazolam As needed
Notes	
<ul style="list-style-type: none"> Pediatric maximum volume of one (1) mL per nostril per atomization (0.2-0.3 mL per nostril is ideal) <ul style="list-style-type: none"> 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

RESPIRATORY DISTRESS – OPIOID OVERDOSE	
ADULT	PEDIATRIC (≤34 KG)
BLS	
<ul style="list-style-type: none"> Universal Protocol #601 Pulse Oximetry <ul style="list-style-type: none"> O₂ 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) <ul style="list-style-type: none"> Narcan 4 mg IN in one nare – assess for adequate respirations <ul style="list-style-type: none"> may repeat in alternate nare if no improvement after 2 min, max total of 2 doses 	
ALS Standing Orders	
Suspected Opiate Overdose with inadequate respirations (O ₂ Sat < 94% or ETCO ₂ > 45 mmHg) <ul style="list-style-type: none"> Narcan up to 1mg 2 mg IV/IM/IN (split between nares) – assess for adequate respirations <ul style="list-style-type: none"> repeat as needed <p style="text-align: center;">Extremis</p> <ul style="list-style-type: none"> Narcan 0.5 mg SL – assess for adequate respirations <ul style="list-style-type: none"> repeat as needed 	Suspected Opiate Overdose with inadequate respirations (O ₂ Sat < 94% or ETCO ₂ > 45 mmHg) <ul style="list-style-type: none"> Narcan 0.1 mg/kg IV/IM/IN (split between nares) up to 1mg 2mg – assess for adequate respirations <ul style="list-style-type: none"> repeat as needed <p style="text-align: center;">Extremis</p> <ul style="list-style-type: none"> Narcan 0.5 mg SL – assess for adequate respirations <ul style="list-style-type: none"> repeat as needed
Base Hospital Orders Only	
<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> As needed
Notes	
<ul style="list-style-type: none"> 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 	

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 ~~4 mg~~ **2mg** IV/IM/IN (split dose between nares) – repeat to maintain adequate respirations (IV preferred route)
2. ~~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 ~~4 mg~~ **2 mg** – may repeat to maintain adequate respirations
2. ~~Extremis 0.5 mg SL – repeat to maintain adequate respirations~~

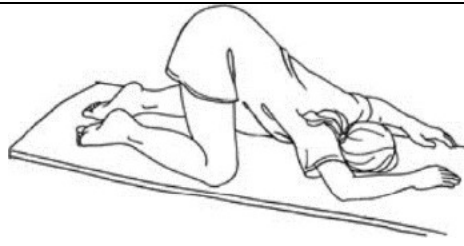
Onset: 1-2 minutes

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 1/4" TB syringe.~~

CHILDBIRTH	
NORMAL	COMPLICATIONS
BLS	
<ul style="list-style-type: none"> Universal Protocol #601 Pulse Oximetry <ul style="list-style-type: none"> O₂ administration per Airway Management Protocol #602 <p style="text-align: center;">Delivery</p> <ul style="list-style-type: none"> 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 <p style="text-align: center;">Postpartum Hemorrhage Control</p> <ul style="list-style-type: none"> Perform visual exam to determine site of bleeding For perineal tear, apply direct pressure Firmly massage fundus 	<ul style="list-style-type: none"> Universal Protocol #601 Pulse Oximetry <ul style="list-style-type: none"> O₂ administration per Airway Management Protocol #602 <p style="text-align: center;">Initiate Transport Early</p> <ul style="list-style-type: none"> Hypertension BP > 180/110 mmHg Seizures — follow Seizure Protocol #620 Vaginal bleeding in last trimester <u>not</u> 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 <u>not</u> attempt to push cord back <p style="text-align: center;">Fetal Viability</p> <ul style="list-style-type: none"> Gestation ≤20 weeks without signs of life (pulseless, not breathing) are not considered viable and may be terminated on scene without resuscitative measures.
ALS Standing Orders	
<ul style="list-style-type: none"> Refer to appropriate protocol based on patient's presentation 	<ul style="list-style-type: none"> Refer to appropriate protocol based on patient's presentation Refer to Policy #125 for Fetal viability for CPR initiation on pre-term newborns
Base Hospital Orders Only	
<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> As needed
Notes	



- Knee-chest position for prolapse chord presentation (above)
- General guideline transport in left lateral position Obtain Para/Gravida

DRAFT

NEWBORN CARE	
STABLE	UNSTABLE
BLS	
<ul style="list-style-type: none"> Universal Protocol #601 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 	<ul style="list-style-type: none"> 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% O₂, provide chest compressions X 1 minute and reassess <p>Newborn Viability</p> <ul style="list-style-type: none"> Gestation ≤20 weeks without signs of life (pulseless, not breathing) are not considered viable and may be terminated on scene by any first responder without resuscitative measures.
BLS Optional	
Pulse Oximetry – O ₂ administration per Airway Management Protocol #602	
ALS Standing Orders	
<ul style="list-style-type: none"> None indicated 	<ul style="list-style-type: none"> ALS resuscitation measures if indicated Refer to Policy #125 for Fetal viability for CPR initiation on pre-term newborns Monitor EKG, and pulse oximetry in right upper extremity (preductal O₂ Sat) Consider oxygen titrated to preductal O₂ Sat With APGAR < 7 at 5 min check blood sugar level (treat if <40 mg/dL)
Base Hospital Orders Only	
<ul style="list-style-type: none"> As needed 	<ul style="list-style-type: none"> 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			

Warming, Drying,
Position airway,
Stimulation

Suction, Ventilate
with room air,
Consider titrating
oxygen

Chest
Compressions,
100% oxygen

IV/IO,
Medications

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%

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

- Obvious Death Criteria: When a patient is assessed to be pulseless and apneic and one or more of the following conditions is present:
 1. Decapitation
 2. Evisceration of heart or brain
 3. Incineration
 4. Rigor Mortis
 5. Decomposition
- Resuscitation: Advanced Life Support (ALS) interventions whose purpose is to restore cardiac or respiratory activity at the scene of an emergency.
- Resuscitative Measures: includes chest compressions (CPR), assisted ventilation (breathing), endotracheal intubation, defibrillation, and cardiotoxic drugs (drugs which stimulate the heart).
 - Such measures do **not** affect the provision of life sustaining measure such as artificial nutrition or hydration or the provisions of other emergency medical care, including treatment for pain, difficulty breathing, major bleeding, or other medical conditions.
- End of Life Care: Medical interventions whose purpose is to alleviate suffering and provide comfort, in association with information provided in a POLST form, Advanced Directives, Durable Power of Attorney or other end of life care documents
- Do Not Resuscitate (DNR) Order – An order to withhold resuscitation, including:
 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” and whose authenticity has been verbally documented by a witness from the health care facility.

III. POLICY

- A. All patients require immediate medical evaluation.
- B. Patients without signs of life and without signs of Obvious Death must be evaluated for resuscitation unless the First Responder is presented with an operative Do Not Resuscitate (DNR) order.
- C. A **First Responder** may withhold resuscitation when:
 1. The criteria of Obvious Death are present.
 2. The Patient has no signs of life and it is verified the patient is the person with the DNR order.
 3. Pre-term deliveries or spontaneous abortions with a gestation ≤ 20 weeks without signs of life (pulseless, not breathing) are not considered viable and may be terminated on scene by any first responder without resuscitative measures based on provider judgement
- D. An “**on-duty EMT, Paramedic or Flight/CCT Nurse**” may additionally withhold resuscitation when one or more of the following conditions are present:
 1. Base Physician or MICN contact is not required
 - a. Reliable history of cardiac arrest with no CPR for more than 20 minutes
 - b. Traumatic arrest without signs of life upon EMS arrival
 - c. Severe or multiple injuries clearly incompatible with life
 - d. Resuscitation was initiated and information became available that would have prevented the initiation of resuscitation (i.e. Physician Orders for Life Sustaining Treatment (POLST) or advanced directive)
 2. Consultation with the STEMI Base Hospital (French Hospital) physician or MICN:
 - a. For 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. Left Ventricular Assist Device (LVAD) or other mechanical ventricular devices are present
 3. 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)
4. Consultation with the closest SLO base hospital physician or MICN:
 - a. All other termination orders: e.g. medical arrest of pediatrics <34 kg, atraumatic arrests due to non-cardiac origin (refer to protocol #641)
- E. DNR Orders must be considered operative only if one or more of the following circumstances exist:
 1. The patient is wearing a DNR Medallion.
 2. An approved DNR Order as defined above is present (original or photocopy), fully executed, and the document has been read and reviewed on scene by the First Responder.
 3. For patients who are in a licensed health care facility, or who are being transferred between licensed health care facilities, a written document in the patient's permanent medical record containing the statement "Do Not Resuscitate", "No Code", or "No CPR" has been read and reviewed on scene by the First Responder. The authenticity of this document must be verbally documented by a witness from the health care facility.
- F. During an MCI
 1. No Base Hospital contact is necessary.
 2. A triage tag denoting "black" with the time of the initial evaluation and findings must be applied.
 3. Deceased patients should not be moved unless directed by the Coroner, as needed to access other patients requiring medical care or assessment, for the safety of First Responders, or for other extraordinary circumstances.
- G. 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. DNR order is presented:
 1. A patient with no pulse and no respiratory effort - resuscitation efforts must be withheld or terminated.
 - a. No Base Station contact is necessary unless the validity of the DNR is unclear
 2. A patient with a pulse and or respiratory effort:
 - a. POLST - follow the directions noted in Section A - cardiopulmonary resuscitation (CPR) and Section B - medical intervention (<http://capolst.org/>)
 - b. Other advanced directives - follow any supportive care and interventions as noted

- c. Provide care and treatment within paramedic scope of practice, unless clearly excluded by the documents
- d. Consult the Base Hospital if situation is unclear

B. No DNR order presented:

- 1. Patient evaluated for resuscitation as defined above (III:B,C,D)

C. When resuscitation has been withheld or terminated:

- 1. The Coroner must be contacted.
- 2. Deceased patients should not be moved unless directed by the Coroner except to access other patients requiring medical care or assessment, for the safety of First Responders, or for other extraordinary circumstances.
- 3. A cellular or landline telephone to the Base Hospital should be used rather than radio communication in order to maintain patient confidentiality and family privacy.

Whenever resuscitation is terminated in the field, all IV lines, airways, etc., must be left in place.

V. DOCUMENTATION

- 1. The circumstances under which resuscitation was not initiated or was terminated, including results of the 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
- 2. The resuscitation measures performed, if any, and the results thereof.
- 3. The name of the First Responder terminating resuscitative measures or the name of the Base Hospital physician who pronounced the patient
- 4. The time of termination or non-initiation of resuscitation
- 5. When DNR is present:
 - a. Name of physician on the DNR
 - b. Date the DNR order was signed
 - c. Type of DNR - attach copy when possible
 - d. Name of the person that confirmed patient identity
 - e. 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

- A. Health and Safety Code, Division 2.5, Sections 1797.200, 1797.220, 1798, 1798.6. and Division 7, Section 7180.
- California Code of Regulations, Title 22, Division 9, Sections 100015, 100144, 100147, and 100169.

- California Probate Code Sections 4780-4785.
- California Code of Regulations, Title 22, Sections 70707(6), 72527(a) (4).
- AB19 California POLST eRegistry

VII. REFERENCES

- [POLST California](#)



COUNTY OF SAN LUIS OBISPO HEALTH AGENCY
PUBLIC HEALTH DEPARTMENT

Nicholas Drews *Health Agency Director*

Penny Borenstein, MD, MPH *Health Officer/Public Health Director*

MEETING DATE	February 20 th , 2025
STAFF CONTACT	Ryan Rosander, EMS Director 805.788.2512 rrosander@co.slo.ca.us
SUBJECT	Continuous Quality Improvement (CQI) and Quality Assurance (QA)
SUMMARY	<p>Policy #300: Investigation and Disciplinary Process, has historically provided the framework for handling investigations, disciplinary actions, and certification reviews for Emergency Medical Technicians (EMTs), paramedics, and Mobile Intensive Care Nurses (MICNs) in San Luis Obispo County. While this policy has served to ensure public safety, its focus on punitive measures has highlighted the need for a broader, more collaborative, and system-focused approach.</p> <p>Policy #100: Continuous Quality Improvement (CQI) and Policy #101: Quality Assurance (QA) were developed to align with modern healthcare standards and enhance system-wide evaluation and improvement processes. This transition reflects a shift from a punitive disciplinary approach to a proactive, quality-driven model aimed at identifying systemic issues, and improving performance.</p>
REVIEWED BY	Dr. William Mulkerin, SLOEMSA Staff, Operations Committee
RECOMMENDED ACTION(S)	Policy #100, Policy #100 Attachment A, Policy #101, Policy #101 Attachment A, recommended for approval by Clinical Advisory and moved to the EMCC agenda.
ATTACHMENT(S)	Policy #100: Continuous Quality Improvement, Policy #100: CQI Review Process/Attachment A, Policy #101: Quality Assurance, Policy #101: SLOEMSA Provider Case Tracking Form/Attachment A.

Emergency Medical Services

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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. 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.

B. 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

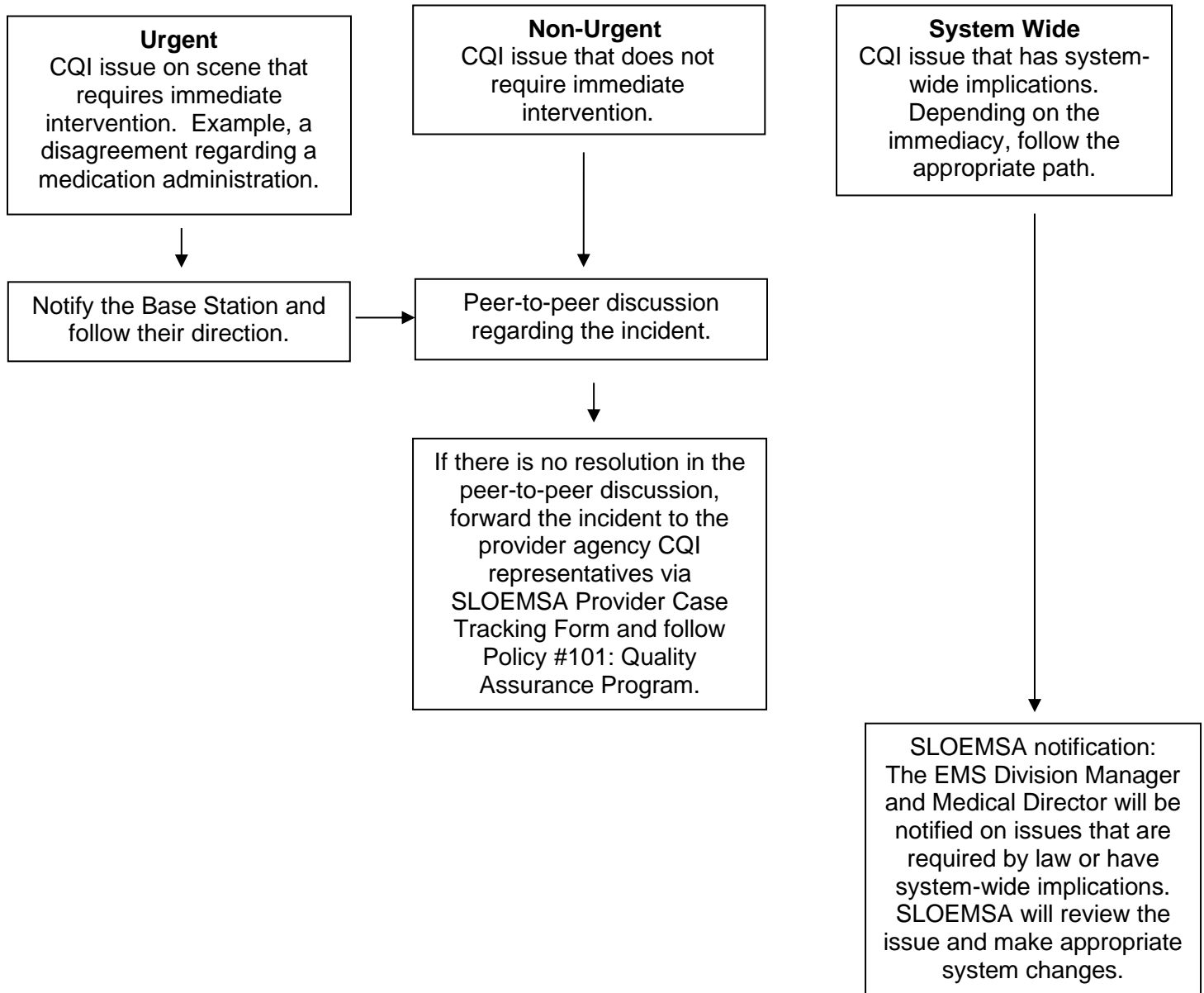
- California Code of Regulations, Title 22, Division 9

VI. ATTACHMENTS

A. CQI Review Process – Flow Chart

DRAFT

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.

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 may refer an incident for QA review.
- B. Responsible organization must review each referred incident through their QA program as directed by the organization's QA Policy and implement a Performance Improvement Plan (PIP) when indicated by review.

-
- C. At the end of the QA review, the organization 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 responsible must send the completed SLOEMSA Provider Case Tracking Form to SLOEMSA.
- E. Disposition of QA review by Level:
1. **Level 1:** (Be reported with the annual update of QIP):
 - a) Maintain records within the organization's QIP Program
 2. **Level 2:** (Be reported annually with QIP update):
 - a) Maintain records within the organization's QIP Program. Provide blinded quarterly aggregate data to the SLOEMSA on the number of cases and PIPs generated by the review.
 3. **Level 3:** (When they occur, SLOEMSA waits to see the provider's outcome)
 - a) Maintain records within the organization'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 organization'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 protocolExamples 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 harmExamples 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 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 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 #101: Attachment A: SLOEMSA Provider Case Tracking Form

Reporting Party:

Agency Name:

Name of Reporting Party:

Date Reported: (MM/DD/YYYY)

Phone Number:

E-mail Address:

Date of Incident or Situation:

Time of Incident: (Military Time)

Run Number:

Date Investigation Initiated:

Parties Involved:

Agency Reported to:

Reporting Party Concerns:

Personnel (Units/ Engines / Shifts) Involved:

Level of Care Review:

Level 1- Issue that does not directly impact patient care

Level 2- Issue with potential for limited patient harm

Level 3- Issue with potential for patient harm

Level 4- Any incident which qualifies for review under California Health and safety Code 1798

Issue Category:

Agency(LEMSA)

Provider

Hospital

Individual

None

Specific Issue(s):

Airway

Destination

Documentation

Equipment

Interpersonal

MCI

Medication

MICN Issue

Patient Transfer of Care

Physician Issue

Base Modified/ Contact

Dispatch

Inappropriate Behavior

Manpower Utilization

Medical Control

Patient Assessment

Policy/ Protocol

Other

Responding Party Response:

Final Level of Case Review Outcome:

Level 1- Issue that does not directly impact patient care

Level 2- Issue with potential for limited patient harm

Level 3- Issue with potential for patient harm

Level 4- Any incident which qualifies for review under California Health and safety Code 1798

No Issue

Additional Information Provided/ Available to SLOEMSA:(Confidential)

Base Hospital Audio Files

Cardiac monitor/ AED

Dispatch Audio Files

PCR

Patient refusal of Service

Base Hospital Documentation

Pre Hospital Personnel Interviews

Dispatch Logs

Incident Reports

SLOEMSA Policy/ Protocol

Body Cam Footage

Resolved Between Parties?

Yes

No (Resolution to be Determined by SLOEMSA)

Resolution / Indetermination Comments:

Date Submitted to SLOEMSA:

Submitted by: