Operations Subcommittee
of the Emergency Medical Care Committee

Meeting Agenda:
9 A.M., Thursday February 6th, 2025
Location: SLOEMSA Conference Room
2995 McMillan Ave, STE #178, San Luis Obispo

Members
Jay Wells, *Sheriff's Department, CHAIR*
Tim Nurge, *Ambulance Providers*
Scotty Jalbert, *Office of Emergency Services*
Jennifer Mebane, *Med-Com*
Adam Forrest, M.D., *Hospitals*
Kris Strommen, *Ambulance Providers*
Rob Jenkins*, Fire Service*
Lisa Epps, *Air Ambulance Providers*
Dennis Rowley, *Air Ambulance Providers*
Jon Ontiveros, *CHP*
Deputy Chief Sammy Fox, *Fire Service*
Vacant, *Law Enforcement*
Chief Casey Bryson, *Fire Service*
Chief Dan McCrain, *Fire Service*
Roger Colombo, *Field Provider-Paramedic*
Heidi Hutchison, M.D., *Hospitals*

Staff
STAFF LIAISON, Ryan Rosander*, EMS Director*
Bill Mulkerin, M.D., *Medical Director*
Rachel Oakley, *EMS Coordinator*
Kaitlyn Blanton, *EMS Coordinator*
Eric Boyd, *EMS Coordinator*
Alyssa Vardas, *Administrative Assistant*

AGENDA	ITEM	LEAD
Call to Order	Introductions Public Comment	Jay Wells
Summary Notes	Review of Summary Notes December 5th, 2024	
Discussion	**Policy Revisions:** • 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
Discussion	**Protocol and Formulary Revisions:** • Protocol #613 Behavioral Emergencies • Protocol #620 Seizure (Active) • Formulary: Midazolam • Protocol #616 Respiratory- Bronchospasm Asthma/COPD/CROUP • Formulary: Calcium Chloride • Formulary: Epinephrine • Formulary: Ipratropium Bromide	Kaitlyn Blanton

	• Formulary: Magnesium Sulfate • Protocol#618 Respiratory Distress- Opiate Overdose • Formulary: Narcan	
Adjourn	Declaration of Future Agenda Items: - EMS Personnel Policy Revisions - Roundtable Next Meeting Date: April 3rd, 2025, 9:00 A.M. Location: SLOEMSA Conference Room 2995 McMillan Ave, STE #178, San Luis Obispo	Jay Wells

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Operations Subcommittee
of the Emergency Medical Care Committee

Meeting Minutes
Thursday, December 5th, 2024
SLO EMSA Conference Room – 2995 McMillan Ave, Suite 178, San Luis Obispo

Members		Staff	
☒	CHAIR Jay Wells, Sheriff's Department	☒	STAFF LIASON Ryan Rosander, EMS Director
☒	Tim Nurge, Ambulance Providers	☒	Bill Mulkerin, MD, Medical Director
☐	Scotty Jalbert, OES	☒	Rachel Oakley, EMS Coordinator
☐	Jennifer Mebane, Med-Com	☒	Eric Boyd, EMS Coordinator
☐	Adam Forrest, MD, Hospitals	☒	Kaitlyn Blanton, EMS Coordinator
☐	Kris Strommen, Ambulance Providers	☒	Alyssa Vardas, EMS Administrative Assistant
☒	Rob Jenkins, Fire Service		
☐	Lisa Epps, Air Ambulance Providers		
☐	Dennis Rowley, Air Ambulance Providers		
☐	Jon Ontiveros, CHP	**Public**	
☐	Deputy Chief Sammy Fox, Fire Service	☐	
☐	Roger Colombo, Field Provider, Paramedics		
☒	Chief Dan McCrain, Fire Service	☒	Shannon Wilkinson, SLOSO
☐	Chief Casey Bryson, Fire Service	☒	John MacDonald, SLOFD
☐	Vacant, Law Enforcement		
☐	Heidi Hutchison, M.D., Hospitals		
☐			

AGENDA ITEM / DISCUSSION	ACTION / FOLLOW-UP
CALL TO ORDER—9:00 am	
Introductions	
Public Comment – None	
APPROVAL OF MINUTES – R. Jenkins motioned, D. McCrain 2nd. Approved.	
DISCUSSION ITEMS	
Review of Policy, Protocol, and Procedure Revisions: SLOEMSA proposes a policy that addresses the need for paramedics to assist patients with their emergency medications. Several stakeholders have approached SLOEMSA with a request to incorporate catchment areas into the STEMI and Trauma destination policies. SLOEMSA proposes adding 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. SLOEMSA is revising the anaphylaxis protocol as there has been an increase in patients being brought to the ED without EPI administered. San Luis Obispo County Emergency Medical Services Agency (SLOEMSA) developed several PSFA policies and procedures, primarily for law enforcement agencies that request to utilize the optional skill of naloxone administration. The purpose of the new PSFA program approval policies is to align the applicable programs with California State regulations that apply to all Public Safety personnel in SLO County (peace officers, firefighters, and lifeguards). It was determined that stakeholders need to be discussed before drafting revisions to EMS personnel policies. The EMS Agency intends to clarify the intent of the suggested revisions listed below and allow for more items to be suggested and captured in new draft policies. **Discussion** **PSFA and CPR Training Program and PSFA and CPR Optional Skills:** D. McCrain says changes are good. R. Jenkins says that the policy makes reference to app. fee. We would be the only LEMSA to charge a fee. I think we shouldn't be charging a fee for that. R. Jenkins says he thinks there is another way to look at this. I want to be cautious about creating another admin. burden. This policy and the EMT policy went down the road of elective skills. We should look at these things being authorized in the system and these should be the standard of care here. We authorize in the system and then these become part of the refresher/ renewal every year. R. Oakley asks are you suggesting eliminating records?	R. Rosander

AGENDA ITEM / DISCUSSION	ACTION / FOLLOW-UP
R. Jenkins says they should have training on it. B. Mulkerin asks if PSFA agencies would have training they want to do. D. McCrain says Morro Bay Harbor Patrol, the only ones they don't do is auto-injector/Narcan. B. Mulkerin says we should double-check that this won't create hardships. R. Oakley asks what if this application is to notify us of what they are Using/ doing. Maybe change it to a notification? J. Wells says I think having a standard to follow. I think creating too many tiers is difficult. Having to track what we or everyone else is doing is too much. D. McCrain says he agrees with Rob and that just having a standard is the way to go. T. Nurge asks when you talk about choosing who participates. Would it be training versus participating? R. Jenkins says everyone would be trained whether they use it or not. R. Oakley asks if we want to move the first one forward and bring this back? **STEMI and TRAUMA Triage Policies 152 and 153:** T. Nurge says you are just putting the STEMI and TRAUMA cutoffs into writing. R. Jenkins mentions that people look into things black or white, maybe put something in there as road conditions may change this. T. Nurge says El Campo is cutoff but use your best judgement. R. Rosander mentions he will put in wording for discretion. B. Mulkerin asks if Monterey has writing like that? Says its fine to put out there but there is risk because some people may misinterpret that. **Policy 219, Assisting Patients with Emergency Medications:** R. Jenkins mentions that policy 219 is mainly pertaining to school. B. Mulkerin says this is where most LEMSAs land. J. Wells says he has a concern about the influence factor about a specific med when that is not the only Emergency they could have. R. Jenkins mentions how there should be something about contacting base. R. Jenkins asks if it is worth putting in about BLS assisting with medications and what BLS can do? **Protocol 611, Allergic Reaction/Anaphylaxis:** R. Jenkins says the anaphylaxis protocol is the perfect example of why we need a standard. B. Mulkerin mentions that if it is anaphylaxis, you should give EPI J. Wells says how unfamiliarity in giving EPI is maybe driving the fear of giving it but that people should know to give it more. T. Nurge says that there are a lot of people who are scared about what EPI can do. B. Mulkerin says to change increase to raise suspicion. R. Rosander says it is more of a training thing. T. Nurge mentions how on the EMT skills sheet is has EPI and Narcan. **EMS Personnel Policy Revisions:** R. Jenkins says he wants elective skills to go away. B. Mulkerin says he is fine with that as he does not see a benefit to having local extra skills. R. Jenkins says electives was glucometer, CPAP epi, and maybe Narcan. Its not in regulation and makes it confusing. Says to get rid of fees for PSFA. D. McCrain mentions adding something about dates for skills. R. Jenkins says we used to do all skills at APR. I would propose the backup sheet go away. I like the skills coming back to the Update class. Says maybe having FTOs at the class. Having FTO sat the class and having them help with skills at the update class. R. Oakley says If they do them in the field that could be a sign-off. J. Wells says pressure is a huge component Of it. R. Rosander mentions about if failed first time, have to do something else. D. McCrain mentions how base station meeting are a waste of time since what is put on is the same as Target Solutions. R. Oakley says we should look at the base station contracts. R. Jenkins mentions putting something in of if they can't review calls we should look at the relevance of them. It should be a call review.	

AGENDA ITEM / DISCUSSION	ACTION / FOLLOW-UP
J. Wells says there is good benefit of reviewing the calls with those that were actually on the calls. D. McCrain says they could review agency or system issues. R. Oakley says it is a Base Station requirement. R. Jenkins says if they aren't doing actual call review then there is no value to them. R. Rosander says if they have to do this then they need to go over bulletins and calls. R. Jenkins mentions how the paramedic lapsing plan used to come from EMSA but now it comes from them and that when dealing with labor unions it is helpful to have something to fall back on. D. McCrain says that it could be as simple as leave of absence employees will follow a return to work plan.	
Motion to Approve Items moving forward	R. Jenkins motions / J. MacDonald seconds / Approved.
Future Agenda Items: **M**CI Policy, QI, Base station Meetings, AED policy, and Narcotics policy.	
ADJOURN – 10:55 am	
Next Meeting: February 6, 2025, 09:00 A.M. Location: SLO EMSA - 2995 McMillan Ave, Suite 178, San Luis Obispo	

MEETING DATE	February 6th, 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	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. 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.
REVIEWED BY	Dr. William Mulkerin, SLOEMSA Staff
RECOMMENDED ACTION(S)	Policy #100, Policy #100 Attachment A, Policy #101, Policy #101 Attachment A, recommended for approval by Operations and moved to the Clinical Advisory 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.

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

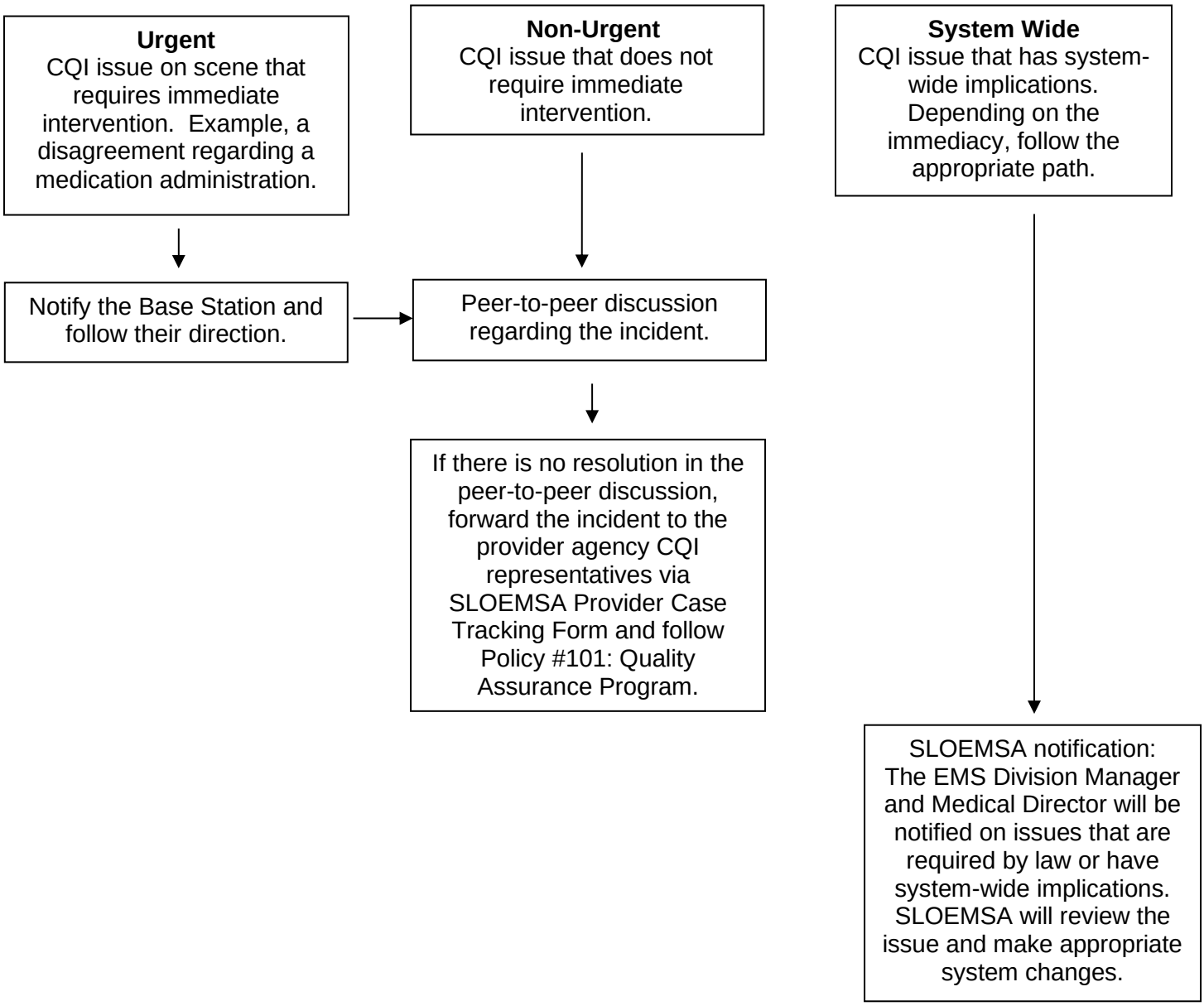
- California Health and Safety Code, Division 2.5

- California Code of Regulations, Title 22, Division 9

VI. ATTACHMENTS

A. CQI Review Process – Flow Chart

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. 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 protocol

Examples include, but not limited to:

- Communication or transport issues between responding agencies and
- 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.

   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 #100: 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
☐ Equipment
☐ Medication
☐ Physician Issue
☐ Inappropriate Behavior
☐ Patient Assessment
☐ Destination
☐ Interpersonal
☐ MICN Issue
☐ Base Modified/ Contact
☐ Manpower Utilization
☐ Policy/ Protocol
☐ Documentation
☐ MCI
☐ Patient Transfer of Care
☐ Dispatch
☐ Medical Control
☐ 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
- ☐ Dispatch Audio Files
- ☐ Patient refusal of Service
- ☐ Pre Hospital Personnel Interviews
- ☐ Incident Reports
- ☐ Cardiac monitor/ AED
- ☐ PCR
- ☐ Base Hospital Documentation
- ☐ Dispatch Logs
- ☐ 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:

MEETING DATE	February 6th, 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.
SUMMARY	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 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. 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. 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. 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.
REVIEWED BY	Dr. William Mulkerin, SLOEMSA Staff
RECOMMENDED ACTION(S)	Listed attachments are recommended for OPS approval to move to CAC agenda
ATTACHMENT(S)	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

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	
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 min
	• 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)

Base Hospital Orders Only	
• As needed	• Repeat doses of **Midazolam** • As needed
Notes	
• Behavioral Emergencies – 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	Same as Adults
BLS Elective Skills	
Obtain Blood Sugar Level – if <60 mg/dL see Altered Mental Status Protocol #612	
ALS Standing Orders	

• **Midazolam**
  ○ ~~2 mg~~ 5 mg slow IV or
  ○ 5 mg IM/IN (split between nares)
  ○ May repeat once after 5 min
• 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)
	• Obtain blood sugar level

Base Hospital Orders Only	
• As needed	• 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 min

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
   - ~~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 – BRONCHOSPASM ASTHMA/COPD/CROUP

ADULT	PEDIATRIC (≤34 KG)
BLS	
• Universal Protocol #601 • Pulse Oximetry ○ O_2 administration per Airway Management Protocol #602 • May assist with patient's prescribed medication, inhaler, etc.	
BLS Elective Skills (Approved Providers Only)	
• **CPAP** per Airway Management Protocol #602	• None
BLS Optional Scope Skill (Approved Providers Only)	

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/CPAP/BVM with adjunct 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
 	
Combined with:
• **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**
• In addition to previous therapies:
• **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
  ○ No signs or symptoms suggestive of MI/STEMI
  ○ No history of angina, CVA, MI
	BRONCHOSPASM/ASTHMA
	~~**Stable**~~ **Mild**
	• **Albuterol** 2.5-5 mg via HHN/Mask/BVM with adjunct over 5-10 min
	  ○ repeat as needed
	
	~~**Unstable**~~ **Moderate**
	• **Albuterol** 2.5-5 mg via HHN/Mask/BVM with adjunct over 5-10 min
	
	Combined with:
	• **Ipratropium Bromide** 250 mcg via HHN/Mask/BVM with adjunct over 5-10 min
	  ○ Repeat once after 20 minutes
	
	~~**Extremis**~~ **Severe distress**
	• In addition to previous therapies:
	• **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 in 250cc normal saline (over 5 minutes)
	  ○ Additional doses – base order only
	• ~~**Epinephrine 1:1,000** 0.01 mg/kg SL – not to exceed 0.3 mg~~
	  ○ ~~may repeat every 5 min, max 3 doses~~
	
	CROUP

Severe distress – unresponsive to previous therapy
• **Magnesium Sulfate** IV 2Gm in 250cc normal saline (over 5 minutes)
  ○ May repeat once after 5 minutes
 	
• ~~**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~~
	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 overdose is suspected (indicated by decreased deep tendon reflexes) consult for orders for Calcium Chloride • 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 overdose is suspected (indicated by decreased deep tendon reflexes) consult for orders for Calcium Chloride **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)	

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 tenson reflexes)

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

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. ~~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 (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)
AV Block/Complete Heart Block
Bradycardia
Respiratory Depression
Diaphoresis
Itching/Rash
Drowsiness
Facial Flushing

Administration:

ADULT DOSE

Refractory in Severe Respiratory Distress and Bronchospasm:

2Gm in 250cc Normal Saline over 5 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 5 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

RESPIRATORY DISTRESS – OPIATE 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 Standing Orders	

Suspected Opiate Overdose with inadequate respirations
(O_2 Sat < 94% or $ETCO_2$ > 45 mmHg)
• **Narcan** up to ~~1mg~~ 2 mg IV/IM/IN (split between nares) – assess for adequate respirations
  ○ repeat as needed
~~**Extremis**~~
• ~~**Narcan** 0.5 mg SL – 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~~ 2mg– assess for adequate respirations
	  ○ repeat as needed
	~~**Extremis**~~
	• ~~**Narcan** 0.5 mg SL – 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	

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~~ 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 ~~1 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 ¼" TB syringe.~~