EMERGENCY MEDICAL CARE COMMITTEE MEETING AGENDA

Thursday, November 30th, 2023, at 8:30 A.M.
2995 McMillan Ave, Ste #178, San Luis Obispo

MEMBERS
CHAIR Jonathan Stornetta, *Public Providers, 2020-2024*
VICE – CHAIR Dr. Brad Knox, *Physicians*, *2022-2026*
Bob Neumann, *Consumers*, *2022-2026*
Matt Bronson, *City Government, 2020-2024*
Alexandra Kohler, *Consumers, 2020-2024*
Chris Javine, *Pre-hospital Transport Providers, 2022-2026*
Michael Talmadge, *EMS Field Personnel, 2020-2024*
Jay Wells, *Sheriff's Department, 2020-2024*
Julia Fogelson, *Hospitals*, *2022-2024*
Diane Burkey, *MICNs*, *2022-2026*
Dr. Rachel May, *Emergency Physicians*, 2022-2026

EX OFFICIO
Vince Pierucci, *EMS Division Director*
Dr. Bill Mulkerin, *EMS Medical Director*

STAFF
Denise Yi, PHEP Program Manager
Rachel Oakley, *EMS Coordinator*
David Goss, *EMS Coordinator*
Ryan Rosander, *EMS Coordinator*
Alyssa Vardas, *Administrative Assistant*

AGENDA	ITEM	LEAD
Call To Order	Introductions Public Comment	J. Stornetta
Action/Discussion	Approval of minutes: May 16th, 2023 Minutes (*attached)* September 21st, 2023 Minutes (attached)	J. Stornetta
Action/Discussion	• Policy #343 & attachments: Field Training Officer • Add Amiodarone to approved drug formulary & relevant policies and procedures	R. Rosander D. Goss
Staff Reports	• Health Officer • EMS Agency Director Report • EMS Medical Director Report • PHEP Staff Report	P. Borenstein V. Pierucci B. Mulkerin D. Yi
Committee Members Announcements or Reports	Opportunity for Board members to make announcements, provide brief reports on their EMS-related activities, ask questions for clarification on items not on the agenda, or request consideration of an item for a future agenda (Gov. Code Sec. 54954.2[a][2])	Committee Members
Adjourn	**Next Meeting:** ***Thursday, January 18th, 2024 at 8:30am***	

Emergency Medical Care Committee
Meeting Minutes
Thursday May 18th, 2023
2995 McMillan Ave, Ste 178, San Luis Obispo

Members
- ☒ CHAIR Jonathan Stornetta, Public Providers
- ☒ VICE CHAIR Dr. Brad Knox, *Physicians*
- ☒ Bob Neumann, *Consumers*
- ☐ Alexandra Kohler, *Consumers*
- ☐ Matt Bronson, *City Government*
- ☒ Chris Javine, *Pre-Hospital Transport Providers*
- ☒ Michael Talmadge, *EMS Field Personnel*
- ☒ Dr. Rachel May, *Emergency Physicians*
- ☐ Jay Wells, *Sheriff's Department*
- ☐ Julia Fogelson, *Hospitals*
- ☒ Diane Burkey, *MICNs*

Ex Officio
- ☒ Vince Pierucci, *EMS Division Director*
- ☒ Dr. Thomas Ronay, *LEMSA Medical Director*

Staff
- ☒ Rachel Oakley, EMS Coordinator
- ☒ David Goss, EMS Coordinator
- ☒ Ryan Rosander, EMS Coordinator
- ☐ Denise Yi, *PHEP Program Manager*
- ☒ Sara Schwall, Administrative Assistant

Guests – Nick Drews, Health Agency Director; Tim Benes, CCHD Aaron Hartney, CalSTAR; Christy Mulkerin, Health Agency Chief Medical Officer

AGENDA ITEM / DISCUSSION	ACTION
CALL TO ORDER	Meeting called to order at 08:35 AM
Introductions	
Public Comment	No comments
Approval of March 16th, 2023 Meeting Minutes –	R. May Motions. B. Neumann 2nds. All present in favor.
Staff Report for revisions to Policy #124, Documentation of Prehospital Care: • For any patient deemed critical and life-threatening, follow upload requirements of 60 minutes following transfer. Uncategorized patients shall have upload time of 2 hours. • SLO EMSA Repository is adding Hospital Hub to Base Hospital contracts, allowing hospital staff to view reports immediately. • Auto-narratives are not permitted, eliminating insufficient care information. • Specialty Care Systems shall be properly labeled and required in ePCR. ○ V. Pierucci says the State EMSA purchased a data repository, but it does not include all the nuances of the calls to accurately report the data. This specialty care data is important to accurately show the occurrences in our county. • Addition of definitions such as patient contact and dry run. **Discussion:** D. Burkey asks if devices need to be connected to Wi-Fi to upload an ePCR. D. Goss says yes with cellular connection or Wi-Fi in the vehicle. R. May asks if the ePCR will automatically be uploaded in Cerner. D. Goss responds eventually, it will. There is a current issue with Hospital Hub connecting to Cerner. V. Pierucci says there is a software patch we are hoping to get that will make the connection between ImageTrend and Cerner. M. Talmadge requests that non-transport agencies be given 24 hours instead of 12 hours to complete and upload ePCRs due to scheduling conflicts. J. Stornetta says this topic was discussed at length during the operations subcommittee and it was agreed 12 hours would be sufficient. V. Pierucci says that providing good documentation is proving good patient care. J. Stornetta adds that response takes precedence over training, so we should keep the time requirements as is.	D. Goss

T. Benes says that in Cambria, they cannot attach names at this time to each element of care. D. Goss says that in the interim, just listing the agency of the personnel is fine. C. Javine asks to change the wording on the policy item requiring a name of a bystander to simply "bystander" and add in more specifics to the dry run definition, such as AMAs and refusals. R. May also suggests adding a clearer definition of a patient within the dry run definition. Motion for approval with addendums.	Motion to approve: B. Knox 2nd: C. Javine All in favor, motion carries.
EMS Agency/EMCC 2023/2024 Goals Update: • Goal 1: Several meetings have taken place with key stakeholders. Currently, no facility exists in SLO County that meets requirements, however there is excitement surrounding the plans for a new sobering center. • Goal 2: Staff are working with stakeholders to develop an on-line resource to find available psychiatric beds. This is expected to go live as soon as July 2023. Staff have also been focused on developing Community Paramedicine and Triage to Alternative Destinations. o J. Stornetta says that this year has seen a 300% increase in unhoused responses since last year. o B. Knox says that we need to take a deep dive into that data to find out what interventions are needed. o T. Ronay says that paramedics are experts in triage and knowing where a patient needs to go. There is no reason a paramedic can't determine mental health needs vs medical needs. Response and billing are two systems that will need to be reworked. • Goal 3: Staff met with Behavioral Health to discuss policies and protocols for pre-hospital use of Buprenorphine. • Goal 4: No reportable action at this time. • Goal 5: Reviewing City of Grover Beach City Council and County of SLO BOS Code of Ethics. Anticipating presenting a Code of Ethics to EMCC in the Fall.	V. Pierucci
Q&A with Nick Drews, Health Agency Director: The Health Agency oversees several departments, with Public Health being one of them. Health Agency has been focusing a lot on the Behavioral Health Department to ensure the solution to this crisis is not 10 years away. One move that was made is the transfer of ownership of the Psychiatric Health Facility (PHF) to Crestwood on July 1st. Crestwood owns 6 different PHFs across the state, so this will help a lot with staffing shortages. Another area we are moving toward is creating a crisis receiving center, which will be right next to the crisis stabilization unit (CSU). This center will take patients for triage and ensure they go to the right facility, acting as a location for drop-off instead of the ER. We are anticipating opening a sobering center in the Fall also next to the CSU. The Health Agency is working with Marian to build a regional model for a crisis receiving center. We are also looking at plans to put a clinician on the street. C. Mulkerin talks about 24/7 mobile crisis services and mental health evaluation teams who respond to non-facility calls. J. Stornetta says that if a city can pay a sum to offset costs for a street clinician, that is something we would be interested in to help the system. B. Knox says that if the question of billing is an obstacle, we have to realize we are already paying in other ways for this issue.	

N. Drews says that he would never want something to not be done because of billing. He says another area we should look at are kids and anyone else seeking help who has private insurance.	
EMSA Director Report: An RFP went out for a new Medical Director and the committee selected Bill Mulkerin. Bill is an EMS professor at Stanford, on the medical staff for the 49ers, has gone through paramedic school and many other things that will add a lot of experience and knowledge to the EMSA. Dr. Ronay has done a fantastic job leading in this role for the past 24 years. **EMS Medical Director Report:** T. Ronay welcomes Dr. Mulkerin to the EMSA and looks forward to assisting him in transitioning into the role. He thanked the many members who have been an integral part in building our EMS and Specialty Care System into the capable and comprehensive level of care it is today. He anticipates continued successful growth and maturation into the future. Additionally, EMS partners and staff are well prepared for the upcoming Ironman half triathlon. He thanks all the contributors for the significant planning involved to ensure this large event is successful. **PHEP Staff Report:** The medical surge response exercise is taking place on June 7 with the hospitals.	V. Pierucci T. Ronay D. Yi
Announcements: None	
Future Agenda Items: None	M. Talmadge motions to adjourn. R. May 2nds. Meeting adjourned 10:23 AM
Next Regular Meeting Next meeting will be held Thursday, September 21st, 2023 at 08:30 AM at EMS Agency.	

Emergency Medical Care Committee
Meeting Minutes
Thursday September 21st, 2023
2995 McMillan Ave, Ste 178, San Luis Obispo

Members
- ☐ CHAIR Jonathan Stornetta, Public Providers
- ☐ VICE CHAIR Dr. Brad Knox, *Physicians*
- ☐ Bob Neumann, *Consumers*
- ☐ Alexandra Kohler, *Consumers*
- ☐ Matt Bronson, *City Government*
- ☒ Chris Javine, *Pre-Hospital Transport Providers*
- ☐ Michael Talmadge, *EMS Field Personnel*
- ☒ Dr. Rachel May, *Emergency Physicians*
- ☐ Jay Wells, *Sheriff's Department*
- ☒ Julia Fogelson, *Hospitals*
- ☒ Diane Burkey, *MICNs*

Ex Officio
- ☒ Vince Pierucci, *EMS Division Director*
- ☒ Dr. Bill Mulkerin, *LEMSA Medical Director*

Staff
- ☒ Rachel Oakley, EMS Coordinator
- ☒ David Goss, EMS Coordinator
- ☒ Ryan Rosander, EMS Coordinator
- ☒ Denise Yi, *PHEP Program Manager*
- ☒ Sara Schwall, Administrative Assistant

Guests – Rob Jenkins, CALFire; Natasha Lukasiawich, French Hospital

AGENDA ITEM / DISCUSSION	ACTION
CALL TO ORDER	Meeting called to order at 08:34 AM
Introductions	
Public Comment	No comments
Approval of Meeting Minutes –	No quorum
Schedule next meeting – EMSA administrative decision tentatively Thursday, November 9th	V. Pierucci

2022 State of the EMS System Report:
- System Data:
  o 2022 saw a significant increase in responses and transports. The system experienced almost 2,000 more calls than this time last year.
  ▪ V. Pierucci says locally we can look at building a more formal EMD system that will help lessen code 3 calls.
  ▪ J. Fogelson asks if the data compares code 3 vs code 2 calls to see how much time would be saved.
  ▪ C. Javine responds depending on the system, 10-20% time could be saved.
- Incident Volume for 2022:
  o The top five highest call volumes included traumatic injury, weakness, abdominal pain, behavioral health and general illness. Behavioral health rose to number 4 in 2022; not included in the top five the previous year and making up 10% of call volume.
- Review of Trauma Alert Step Map and Cardiac Arrest Map:
  o Many cardiac arrests have drug overdose as an underlying cause.
  ▪ J. Fogelson says this may be worth looking at ROSC policies.
  ▪ R. May says it is difficult to accurately show the volume based on just transports instead of total calls.
- Hospital Destinations:
  o The highest destination is TCCH at 27% and second highest is SVRMV at 26%.
	V. Pierucci

- Mental Health Call Volume:
  o Cities with highest call volume are SLO/Avila at 28%, followed by Five Cities area at 21% and Paso/Templeton/San Miguel at 20%.
  o Most common ages of these calls are 31-40 years old at 21% and 21-30 year olds at 18%.
- Mental Health Transport vs Response and Repeat Callers:
  o 2022 saw 72 repeat callers compared to 44 repeat callers in 2021.
- Overdose/Substance Abuse – Incident Volume by Substance:
  o 49% reported alcohol followed by 16% fentanyl.	

EMS Agency/EMCC 2023/2024 Goals Update:
• Goal 1: A plan to open a sobering center is in place for Spring 2024. Currently, there are no facilities eligible to be an alternate destination. There are plans to upgrade the CSU and/PHF to meet these requirements for an alternate destination.
  ▪ R. May asks what can be done to get these plans to come to fruition.
  ▪ V. Pierucci responds that the main challenges are staffing and getting all stakeholders on the same page.
  ▪ B. Mulkerin says that EMS has tried to put out the message that EMS can do more with an alternate destination.
• Goal 2: A new Medi-Cal benefit requires counties to have a mobile crisis team. Mental health evaluation team does not go out into the field often. There are concerns that one team will be able to meet demands. EMSA will be a part of a workgroup to look at how to optimize this benefit.
• Goal 3: Staff met with Behavioral Health to discuss policies and protocols for pre-hospital use of Buprenorphine. No new progress has been made.
• Goal 4: No reportable action at this time.
• Goal 5: A code of ethics is anticipated to be proposed at the next EMCC meeting.
	V. Pierucci

EMSA Director Report: The passage of AB-40 Bill will require a policy for patient offload from each LEMSA. **EMS Medical Director Report:** I am getting up and running in this new position and please feel free to reach out. We are still seeing medication shortages. **PHEP Staff Report:** A date has been set for this year's POD exercise. This year will be a FRPOD, which is open to first responders. The FRPOD will take place on Wednesday, October 25th and will be at four locations throughout the county.	V. Pierucci B. Mulkerin D. Yi
Announcements: None	
Future Agenda Items: None	Adjourn at 9:38 AM.
Next Regular Meeting Next meeting is tentatively set for Thursday, November 9th, 2023 at 08:30 AM at EMS Agency.	

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	November 30th, 2023
STAFF CONTACT	Ryan Rosander, EMS Coordinator 805.788.2513 rrosander@co.slo.ca.us
SUBJECT	Revisions to Policy #343: Field Training Officer (FTO) Program and Policy #343 Attachment A.
SUMMARY	In summer of 2023, the EMS Agency felt it was time to update the FTO policy due to increase in call volume and a need to increase the available numbers of FTOs. This was based on numerous conversations with stakeholders. Policy #343: Field Training Officer (FTO) Program and Policy #343 Attachment A was brought to the Operations Subcommittee with recommended revisions implemented to enhance the overall systemic success of the FTO program within San Luis Obispo County. The Operations subcommittee has recommended Policy #343: Field Training Officer (FTO) Program and Policy #343 Attachment A. to be brought to the Emergency Medical Care Committee for review. Revision of Policy #343: • Establishing an FTO I and an FTO II • FTO I and FTO II duties and requirements • FTO Liaison duties and requirements • Process and requirements for application/reapplication for all FTOs • Continuing requirements for FTO I & II Following recommendation of EMCC, Policy #343/Attachment A will be prepared for implementation. Potential Implementation date would be July 1st, 2024 with training occurring during the 2024 SLOEMSA Update Class.
REVIEWED BY	Operations Subcommittee, Cuesta College Paramedic Program Director, EMS Director Vince Pierucci, Dr. William Mulkerin, SLOEMSA Staff
RECOMMENDED ACTION(S)	Recommend Policy #343 & Attachment A for EMCC for implementation
ATTACHMENT(S)	Policy #343 & Attachment A

POLICY # 343: FIELD TRAINING OFFICER (FTO) PROGRAM

I. PURPOSE

A. To establish and implement criteria, ongoing requirements, and the designation of authorized Field Training Officers (FTO I) / Preceptors (FTO II) for the training of standardized Advanced Life Support (ALS), and overall field quality improvement (QI) phases of the EMS System in the County of San Luis Obispo (SLO).

II. SCOPE

A. This applies to all ALS Providers in the County of San Luis Obispo, who are interested in, or are designated as an FTO I / FTO II for their agency.

III. DEFINITIONS

- Field Training Officer I (FTO I): A SLO County accredited paramedic designated to conduct pre-accreditation field evaluations and QI activities as assigned by their ALS employer with oversight by San Luis Obispo County Emergency Medical Services Agency (SLOEMSA). An FTO I shall be a paramedic actively working full-time in the field.
- A Field Training Officer II (FTO II): A SLO County accredited paramedic designated to conduct pre-accreditation field evaluations, paramedic student internships, and QI activities as assigned by their ALS employer with oversight by SLOEMSA. An FTO II shall be a paramedic actively working full-time in the field.
- Preceptor: Another term used to define an FTO II. FTO II and Preceptor can be used interchangeably, referencing the same job title and responsibilities.
- Full-time field employment: A routinely scheduled paramedic working in a 911 EMS system equal to or greater than 40 hours a week. Per diem and or part-time status working 40+ hours, does not meet this requirement. Full-time field employment shall also be defined as working on an ALS fire apparatus or transport-capable ALS ambulance. An exception can be made upon approval of SLOEMSA.
- Yearly EMS Update Class: An update class hosted by the SLOEMSA that is made mandatory for all paramedics accredited in SLO County to continue their accreditation status.
- FTO Liaison: An agency designee, taking on a leadership/training officer role representing their agency at FTO meetings and acting as a point of contact to SLOEMSA for FTO-related matters, unless otherwise designated by SLOEMSA.
- Paramedic skill evaluator: a SLOEMSA approved paramedic evaluator who may sign off paramedic skill annual verification tracking sheets. This evaluator does not need to be an FTO. Reference SLOEMSA Policy #342: Emergency Medical Technician Paramedic Reaccreditation.

IV. POLICY

A. Paramedic skill evaluator is a SLOEMSA approved paramedic who may sign off paramedic skill annual verification tracking sheets. This evaluator does not need to be an FTO. Shall an agency have the need for additional paramedic skill evaluators, the agency shall forward the names of the selected evaluators to SLOEMSA for approval. Reference SLOEMSA Policy #342: Emergency Medical Technician Paramedic Reaccreditation.

B. Any FTOs in SLO County are under direct supervision from the SLOEMSA's Medical Director for maintenance and implementation of all current field policies/procedures. All policies/procedures or Continuous Quality Improvement (CQI) criteria that are under maintenance or being evaluated are to the kept confidential unless specified otherwise by SLOEMSA's Medical Director.

C. Any prospective FTO shall have:

1. A current and valid California Paramedic License.
2. A minimum of two years full-time 911 EMS system field experience.
3. A minimum of one year full-time in SLO County.
4. A current and valid SLO County Accreditation.
5. Letter from their primary ALS provider stating full-time field employment status.
6. Letter of support from their primary ALS employer to apply for the position of FTO.
7. Letter of Recommendation from a Mobile Intensive Care Nurse (MICN) from any SLO County Base Hospital, a local Emergency Department Physician not directly affiliated with that applicant's agency, SLOEMSA Medical Director, or an agency EMS Coordinator.

D. An FTO I is responsible for the following duties and requirements:

1. Assisting accreditation candidates in the testing and completion of County requirements. The FTO I is to assure that all candidates are educated and maintain current policies/procedures for ALS field operations in the county of San Luis Obispo. Any instances of non-compliance with County policies and procedures shall be documented on an OFI form (Policy 100 Attachment C) and forwarded to SLOEMSA for review.
2. The FTO I shall also be responsible for assisting accredited paramedics with remediation set by either SLOEMSA or their agency. Time requirements for this remediation shall be set up and followed upon approval of SLOEMSA.
3. The FTO I shall attend a yearly FTO Update Class. This class shall be hosted during the first two classes of the yearly EMS update class. This class will satisfy their requirements for attending their yearly EMS update class along with their FTO update requirement. If an FTO I is unable to attend their yearly FTO class, they shall notify SLOEMSA in advance to arrange an alternative.

4. To maintain FTO I status, a SLO County FTO I shall have overseen and attended to a minimum of one accreditee in the field during a two-year period. This two-year period shall be correlated with the FTO I's accreditation cycle. An exception can be made upon approval of SLOEMSA.

E. An FTO II is responsible for the following duties and requirements:

1. Assisting both interns and accreditation candidates in the testing and completion of County/State requirements. The FTO II assures that all candidates are educated and maintain current policies/procedures for ALS field operations. Any instances of non-compliance with County policies and procedures shall be documented on an OFI form (Policy 100 Attachment C) and forwarded to SLOEMSA for review.
2. SLO County FTO II shall also be responsible for assisting accredited paramedics with remediation set by either SLOEMSA or their agency. Time requirements for this remediation shall be set up and followed upon approval of SLOEMSA.
3. All FTO IIs shall attend a yearly FTO Update Class. This class shall be hosted during the first two classes of the yearly EMS update class. This class will satisfy their requirements for attending their yearly EMS update class along with their FTO update requirement. If an FTO II is unable to attend their yearly FTO class, they shall notify SLOEMSA in advance to arrange an alternative.
4. To maintain SLO County FTO II status, an FTO II shall have overseen and attended to a minimum of one accreditee or paramedic intern in the field during a two-year period. This two-year period shall be correlated with the FTO II's accreditation cycle. An exception can be made upon approval of SLOEMSA.

F. Correlating with their two-year accreditation cycle, all San Luis Obispo County FTOs shall re-apply for their FTO status and show proof of which accreditees or interns they have overseen (Policy 343 Attachment A). If an FTO has been unable to satisfy the required number of accreditees/interns due to a lack of available interns/accreditees or any other unforeseen circumstances, an explanation shall be submitted to SLOEMSA for review. Acceptable substitutions for unmet accreditations or internships will include, but not be limited to, any EMS training-related activities the FTO has been involved with within their agency during the FTO's two-year accreditation cycle.

G. Each agency shall designate one FTO Liaison to act as their lead FTO/training officer, unless otherwise stated by SLOEMSA. Their responsibilities are:

1. Attending required FTO meetings set forth by the SLOEMSA. Only the agency's FTO Liaison shall be allowed into these meetings. FTO Liaisons are to then relay the details of the meeting to their respective agencies and distribute said information to the other FTOs.

2. Submit or oversee the submission of any application for internship or accreditation when starting said internship/accreditation from their ALS provider. Provide recommendation & policies 341 & 342 upon completion.
3. Maintain a log of all interns and accreditations for their ALS provider that, upon request, can be made available to SLOEMSA.
4. Attesting FTO applicants took the SLO County Accreditation written test in their presence and passed with a score of 80% or better.
5. The FTO Liaison shall mentor, guide, and otherwise be responsible for training FTO I applicants upon completing the required steps in obtaining FTO I status.
6. Communicating with SLOEMSA regarding FTO-related matters.
7. Coordinating any ride-along SLOEMSA would like to conduct to monitor the performance of the FTO program.

H. If an FTO Liaison is to vacate their position at their agency, correspondence shall be submitted to SLOEMSA stating that person's removal from the position along with providing their replacement. This is to be submitted to SLOEMSA within 7 days of the FTO Liaison's resignation. The start date for the replacement Liaison shall be considered immediate unless otherwise designated by SLOEMSA.

I. Any exception to this policy is subject to Medical Director approval.

V. PROCEDURE

A. SLOEMSA will open the FTO application/testing process January 1st of each year or when the need exists for additional FTOs throughout the year. Individuals wishing to apply shall present the following documentation to SLOEMSA:

1. A Letter of Intent to apply for the position of SLO County FTO I / II outlining the commitment to perform all FTO duties and keep current on all County requirements outlined within this policy. Within the letter of intent, two questions shall be answered:
   - Why should you be considered for selection as a Field Training Officer?
   - What prior experience do you possess that would be beneficial as a Field Training Officer?
2. A completed SLO County FTO Application. (Policy 343 Attachment A)
3. A Letter of Recommendation from a Mobile Intensive Care Nurse (MICN) from any SLO County Base Hospital, a local Emergency Department Physician not directly affiliated with that applicant's agency, SLOEMSA Medical Director, or an agency EMS Coordinator.
4. A Letter of Support and full-time field employment verification from their primary ALS employer.

B. Following the submission of their application, applicants shall take the SLO County Accreditation written test with supervision of the agency's FTO Liaison. Applicants must pass with a score of 80% or better. Upon passing said exam, applicants shall

be placed on a list of eligible candidates and invited to an oral interview at SLOEMSA. The list shall be valid for one year following testing. Unsuccessful candidates shall wait a minimum of one year before reapplying.

C. For FTO I, if selected, each candidate shall attend an orientation class put on by the agency's FTO Liaison. This will be the final step in the FTO I selection process. This class shall instruct the FTO I on how to manage, guide, and complete paramedic accreditations for San Luis Obispo County. Upon completion of this class, the FTO Liaison shall contact SLOEMSA to relay said information. This shall be done prior to FTO I receiving paramedics to accredit.

D. For FTO II, if selected, each candidate shall attend a required Preceptor orientation class as a final step in the FTO II selection process. This class shall instruct them on how to manage, guide, and complete paramedic internship and pre-accreditation field evaluations. This class shall be hosted and taught by the local paramedic training program, either online or in person. Upon completion of this course, a copy of the certificate shall be submitted to SLOEMSA by the FTO Liaison. This shall be done prior to an FTO II receiving paramedic interns.

E. For those who initially obtained FTO I status and wish to later become an FTO II, they shall notify both SLOEMSA and their agency of their wishes. With approval from their agency and SLOEMSA, the FTO I shall then attend the Preceptor orientation class at the local paramedic training program. Upon completion of this course, the certificate shall be submitted to SLOEMSA by the FTO Liaison affiliated with the agency. This shall be done prior to an FTO I becoming an FTO II and receiving paramedic interns.

F. All FTOs shall re-apply for FTO status after a two-year period. This two-year period shall correlate with the FTO's accreditation cycle. For FTO reapplication, the FTO shall only need to submit a completed SLO County FTO Application (Policy 343 Attachment A), and proof of one accreditation or internship during their two-year accreditation cycle. This shall be submitted along with the FTO's paramedic application for county reaccreditation (Policy 341 & 342 Attachment A).

G. Failure to maintain FTO requirements, adhere to county policies, or if support is lost in an FTO by their sponsoring agency, may result in revocation of FTO status. The authority for FTO revocation is vested in the SLOEMSA Medical Director.

VI. ATTACHMENTS

A. SLOEMSA Field Training Officer (FTO) Application

VII. AUTHORITY

A. Health and Safety Code 1797.94

B. Health and Safety Code 1797.202

C. Health and Safety Code 1797.220

D. Health and Safety Code 1797.172

E. Health and Safety Code 1797.173

F. Health and Safety Code 1797.208

VIII. ATTACHMENTS

A. Field Training Officer (FTO) Application

Approvals:

EMS Agency, Administrator	
EMS Agency, Medical Director	

FIELD TRAINING OFFICER (FTO) APPLICATION

Check One: □ **Initial Application** □ **Renewal** **Check One:** □ **FTO I** □ **FTO II**

APPLICANT INFORMATION	
Last Name:	First Name and Middle Initial:
Primary Employer:	County Accreditation Number:
State License Number:	Personal Email:
Home Phone Number:	Work Email:
# of years as an ALS Provider:	# of years as SLO Co Accredited ALS Provider:

SUBMIT THE FOLLOWING WITH THIS APPLICATION
☐ Letter of intent, expressing interest in becoming an FTO (initial applicants only).
☐ Letter of recommendation from an MICN or ED Physician (initial applicants only).
☐ Letter of support and verification of FT field employment status from primary ALS employer (Initial applicants only).
☐ Copy of Driver's License or government issued photo ID (initial applicants only).
☐ Renewals need proof of completing two internships or acceditations during prior two year cycle

ATTESTATION OF PARAMEDIC FTO APPLICANT	
I hereby certify that I have reviewed and understand the County of San Luis Obispo EMS Policy #343, Field Training Officer (FTO) Program.	
Signature of Paramedic FTO Applicant:	Date:

*****EMS AGENCY USE ONLY BELOW THIS LINE*****	
☐ SLO Co Accreditation Test with 80% or better.	☐ Interview Completed
☐ Additional Training Completed	☐ Note status in Access and update FTO SS
Approved By:	Approval Date:

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	November 30th, 2023
STAFF CONTACT	David Goss, EMS Coordinator 805.788.2514 dgoss@co.slo.ca.us
SUBJECT	Addition of Amiodarone
SUMMARY	While reviewing potential improvements to the EMS system, Amiodarone was found to be a potential improvement to out of hospital cardiac arrest patients and patients experiencing Ventricular Tachycardia with Pulse. In an effort to follow ACLS and numerous LEMSAs throughout the State of California, Amiodarone was brought to the Clinical Advisory Subcommittee and Operations Subcommittee. Both subcommittees have given their recommendation for Amiodarone to be brought to the Emergency Medical Care Committee for review. Following recommendation of EMCC, Amiodarone would be prepared for implementation. Potential Implementation date would be July 1st, 2024 with training occurring during the 2024 SLOEMSA Update Class.
REVIEWED BY	Clinical Advisory Subcommittee, Operations Subcommittee, Vince Pierucci, Dr. William Mulkerin, SLOEMSA Staff
RECOMMENDED ACTION(S)	Recommend Amiodarone for adoption and implementation.
ATTACHMENT(S)	Amiodarone Formulary, Lidocaine Formulary, Protocol #641, Protocol #641 Attachment A, Protocol #641 Attachment B, Protocol #643, Policy #205 Attachment A.

AMIODARONE (Cordarone®)

Classification: Class III Antiarrhythmic

Action: Prolongs cardiac repolarization. Also has sodium channel blockade, beta adrenergic blockade, and calcium channel blockade effects.

Indications:

1. Cardiac Arrest with Ventricular Fibrillation or Ventricular Tachycardia without Pulses
2. Ventricular Tachycardia with Pulses

Contraindications:

1. **Second Degree Type II Heart Block**
2. **Third Degree Heart Block**
3. **Junctional Bradycardia**
4. **Ventricular ectopy associated with bradycardia.**
5. **Idioventricular rhythm**
6. **Known allergy or sensitivity to Amiodarone.**

Adverse Effects: **CNS: Hypotension, Rhythm Disturbances, Bradycardia, CHF, Cardiac Arrest, Shock, Heart Block, SIADH**
Respiratory: Respiratory Depression, Pulmonary Toxicity
GI: Vomiting, Hepatotoxicity
Skin: Rash
Integumentary: Anaphylaxis
Musculoskeletal: Rhabdomyolysis
Renal: Acute Renal Failure

Administration:

ADULT DOSE

Ventricular Fibrillation/ Ventricular Tachycardia without Pulses:

- **300mg (50 mg/ml) IV/IO push; if rhythm persists after 5 min, 150mg IV/IO push refractory dose.**

Ventricular Tachycardia with Pulses:

- **150mg IV/IO drip over 10 min; repeat in 5 min to a total of 300mg.**

****Add amiodarone to a 100cc bag of Normal Saline with macro drip tubing and mix well.**

PEDIATRIC DOSE

Ventricular Fibrillation/ Ventricular Tachycardia without Pulses:

- **5mg/kg IV/IO push; repeat every 5 min to a max of 15mg/kg**

Ventricular Tachycardia with Pulses:

- **5mg/kg IV/IO over 30 min (using 100cc bag Normal Saline)**

****Add Amiodarone to a 100cc bag of Normal Saline with macro drip tubing and mix well.**

Onset: Immediate

Duration: 10-20 Minutes

LIDOCAINE (Xylocaine®)

Classification: Antidysrhythmic agent

Action: Suppresses ventricular ectopy by stabilizing the myocardial cell membrane.

Indications:

1. Cardiac arrest with ventricular fibrillation or pulseless ventricular tachycardia
2. Post conversion or defibrillation of ventricular rhythms with base contact.
3. Ventricular tachycardia with pulse present
4. Symptomatic/malignant ventricular ectopy

Contraindications:

1. **2° degree type II heart block**
2. **3° degree heart block**
3. **Junctional bradycardia**
4. **Ventricular ectopy associated with bradycardia**
5. **Idioventricular rhythm**
6. **Known allergy to Lidocaine or sensitivity to other anesthetics (report to base).**

Adverse Effects:

Cardiovascular
Bradycardia
Hypotension
Arrest
Blurred vision

Respiratory
Dyspnea
Depression
Apnea

Gastrointestinal
Nausea/vomiting

Neurological
Dizziness
Drowsiness
Paresthesia
Restlessness
Slurred speech
Disorientation
Seizures
Lightheadedness
Tinnitus
Muscle twitching

Administration:

ADULT DOSE

1. **V-Fib/pulseless V-Tach (with SLOEMSA Authorization):** 1.5 mg/kg IVP/IO, repeat every 3-5 minutes, not to exceed 3 mg/kg.
2. **V-Tach with a pulse (with SLOEMSA Authorization):** 1.5 mg/kg IVP, may repeat with 0.75 mg/kg IVP every 5-10 minutes, not to exceed 3 mg/kg.
3. **Pain Management following IO Placement:** 0.5mg/kg (total max dose of 40mg) slow IO push over 60 seconds.

PEDIATRIC DOSE

1. **V-Fib/pulseless V-Tach (with SLOEMSA Authorization):** 1 mg/kg IVP/IO. May repeat every 5 minutes, not to exceed 3 mg/kg.
2. **V-Tach with a pulse (with SLOEMSA Authorization):** 1 mg/kg IVP/IO, may repeat with 0.5 mg/kg IVP/IO every 5-10 minutes, not to exceed 3 mg/kg.
3. **Pain Management following IO Placement:** 0.5mg/kg (total max dose of 40mg) slow IO push over 60 seconds.

Onset: 30 - 90 seconds

Duration: 10 - 20 minutes

Notes:

- Lidocaine may be used as backup to Amiodarone with SLOEMSA authorization (using Policy #205 Attachment C) in cases where Amiodarone stock is unavailable. In cases when Lidocaine is substituted for Amiodarone, the minimum stock of Lidocaine shall mimic the same numbers as Amiodarone.
- In cases of premature ventricular contractions, assess need and treat underlying cause. Needs include: chest pain, syncope, R on T situations, multifocal and paired PVCs, bigeminy and trigeminy, and PVCs at 6-12 per minute. See appropriate protocols as needed.
- Lidocaine is to be administered no faster than 50mg/min, except in patients in cardiac arrest.

EMS Equipment and Supply List *DRAFT*

Description	Strength/Size	ALS Transport Minimum	ALS First Responder Minimum	ALS Special Use Medic Minimum	ALS Wildland Unit Minimum	BLS First Responder Minimum † *Elective skills as required*
MEDICATIONS						
Activated charcoal	50 gm bottle (aqueous solution)	1	1	0	0	0
Adenosine	6 mg/2 mL	5	3	3	3	0
Albuterol unit dose	2.5 mg/3 mL solution	4	2	2	2	0
Amiodarone	150mg in 3ml (50mg/ml concentration)	6	4	3	3	0
Aspirin	81 mg nonenteric coated chewable	1 bottle	1 bottle	4 tablets	4 tablets	1 bottle
Atropine	1 mg/10 mL	2	2	2	2	0
Atropine	8 mg multi-dose vial	1	1	0	0	0
Calcium Chloride 10%	1 gm/10 mL	1	1	0	0	0
Dextrose 10%	25 gm/250 mL bag	2	2	1	1	0
*Dextrose 50%	25 gm/50 mL	2	2	1	0	0
Diphenhydramine	50 mg/1 mL	2	2	2	2	0
Epinephrine	1:1,000 1 mg/1 mL	4	2	2	2	0
†Epinephrine Auto-Injector	Pediatric and Adult	0	0	0	0	†1 each
Epinephrine	1:10,000 1 mg/10 mL (10 mL preload)	8	6	3	6	0
Fentanyl	100 mcg/2 mL	2	2	2	2	0
Glucagon	1 mg/1 mL	1	1	0	0	0
Glucose gel	15 gm	2 tubes	2 tubes	2 tubes	2 tubes	2 tubes
Lidocaine 2%	100 mg/ 5 mL	2	1	1	1	0
Midazolam	5 mg/1 mL	2	1	1	1	0
Naloxone	2 mg (vial or pre-load)	2	2	2	2	0
†Naloxone IN Kit	§2 mg pre-load and Atomizer	0	0	0	0	†2
Nitroglycerine	SL tablets or spray	2	1	1	1	0
Nitro Paste 2%	1 gm single dose packet	3	3	0	0	0
Ondansetron	4 mg /2 mL injectable	3	3	0	0	0
	4 mg dissolvable tablets	3	3	1	1	0
Sodium Bicarbonate	50 mEq/50 mL	2	2	0	0	0
Tranexamic Acid (TXA)	100 mg/1 mL 10 mL vial	2	1	0	1	0
Variations in the concentration of medications being stocked, due to medication supply shortages, must be approved by Medical Director						
***Dextrose D50 is being phased out in favor of Dextrose D10**						
†Elective skills equipment required for participating agencies						
Alternate Medications to be Stocked ONLY with Medical Director Approval						
§Other pre-packaged single dose intranasal naloxone delivery devices that may be used with Medical Director Approval		0	0	0	0	†2
Diazepam (alternate to be stocked by order of Med Dir **ONLY**)	10 mg	2	1	1	1	0
Morphine (alternate to be stocked by order of Med Dir **ONLY**)	10 mg	3	2	2	2	0
Lidocaine 2% (alternate to be stocked during Amiodarone shortage by order of Med Dir ONLY)	100mg / 5ml	6	4	3	3	0

EMS Equipment and Supply List *DRAFT*

Description	Strength/Size	ALS Transport Minimum	ALS First Responder Minimum	ALS Special Use Medic Minimum	ALS Wildland Unit Minimum	BLS First Responder Minimum † *Elective skills as required*
IV SOLUTIONS/EQUIPMENT						
0.9% Normal Saline	1,000 mL bag (or equivalent total volume)	6	4	2	4	0
100 mL Saline Delivery Equipment	0.9% NS 100 mL bag	4	2	1	1	0
0.9% Normal Saline	10 mL Vials/Flush	5	5	2	2	0
IV Tubing	60gtt/mL	4	2	0	0	0
IV Tubing	10-20gtt/mL	6	3	2	2	0
IV Catheters	Sizes 14, 16, 18, 20, 22, 24 gauge	2 each	2 each	2 each	2 each	0
Syringes	Assorted - 1mL, 3mL, 6mL-20mL	2 each	2 each	1 each	1 each	0
Needles Assorted	- ½", 1", 1 ½" - 18-30 gauge	2 each	2 each	2 each	2 each	0
Intraosseous (IO) single needle device	(FDA approved) adult and pediatric	1 each	1 each	1 each	1 each	0
Tourniquets (for IV start)		2	2	2	2	0
Saline locks		4	2	2	2	0
Luer-Lock adaptors	(Not required but recommended for use with STEMI patients)	2	2	0	0	0
Alcohol and betadine swabs		10 each	10 each	10 each	10 each	†10 each
TRAUMA						
Bandages and bandaging supplies:						
Bandaids	Assorted	10	10	5	5	10
Sterile bandage compresses or equivalent	4"x4"	12	10	10	10	10
Trauma dressing	10"x30" or larger universal dressing	2	2	2	2	2
Roller gauze	3" or 4"	12 rolls	8 rolls	2 rolls	2 rolls	8 rolls
Cloth adhesive tape	1, 2, or 3"	1 roll	1 roll	1 roll	1 roll	1 roll
Triangular bandages with safety pins		4	2	1	1	2
Tourniquet	See approved list for commercial devices	2	2	1	1	2
Vaseline gauze	3"x8", or 5"x9"	2	2	1	1	2
Tongue blade or bite stick		2	2	2	2	2
Burn Sheets (sterile or clean) –	may be disposable or linen (with date of sterilization indicated)	2	2	0	2	2
Cervical collars	Stiff: Sizes to fit all patients over one year old	1each	1 each	1 each	1 each	1 each
Cold packs		2	2	2	2	2
Irrigation equipment and supplies:						
Saline, sterile	250mL	4	2	1	2	2
Long spine board and light weight head immobilizer blocks	(or equivalent immobilization device)	2	1	0	0	1
Straps to secure patient to boards		2 sets	1 set	0	0	1 set

EMS Equipment and Supply List *DRAFT*

Description	Strength/Size	ALS Transport Minimum	ALS First Responder Minimum	ALS Special Use Medic Minimum	ALS Wildland Unit Minimum	BLS First Responder Minimum † *Elective skills as required*
TRAUMA CONT.						
Splints, traction	Adult and pediatric (or a single device suitable for both)	1 each	1 each	0	0	1 each
Splints, cardboard or equivalent	arm and leg splint	2 each	2 each	1 each	2 each	2 each
K.E.D. or equivalent		1	1	0	0	0
Pediatric spinal immobilization board	(or equivalent immobilization device)	1	1	0	0	0
Sheet or commercial pelvic binder		1	1	0	0	1
Infection Control						
Meet the minimum requirement per crew member as stated in the California Code of Regulations Title 8 (All Providers)						
Transportation Equipment						
Collapsible gurney cot with adjustable contour feature		1	0	0	0	0
Stair chair or equivalent device		1	0	0	0	0
Sheets, pillow, pillow case, towels, blankets (cloth or disposable)		2	0	0	0	0
Scoop stretcher with straps		1	0	0	0	0
Flat vinyl/canvas stretchers with		1	0	0	0	0
MISCELLANEOUS						
Blood pressure cuffs (portable):	Adult	1	1	1	1	1
	Large adult or thigh	1	1	0	0	1
	Pediatric	1	1	0	1	1
Obstetrical kit - sterile, prepackaged		1	1	0	0	1
Restraints - non-constricting wrist and ankle		1 set each	1 set each	0	0	1 set each
Stethoscope		1	1	1	1	1
Trash bags/receptacles		2	2	1	1	2
Blanket	Disposable	1 each	1 each	1 each	1 each	1 each
Bandage scissors (heavy duty)		1	1	1	1	1
Emesis basins or emesis bags with containers		2	2	1	1	2
Water, potable		1 liter	1 liter	0	1 liter	1 liter
Maps, entire county		1	1	0	0	1
Penlight		1	1	1	1	1
Triage tags		20	20	20	20	20
Bed pan		1	0	0	0	0
Urinal		1	0	0	0	0
†Glucometer	with ≥10 test strips, lancets, and other appropriate supplies	1	1	1	1	†1
Puncture proof sharps container	small	2	2	1	1	†1

EMS Equipment and Supply List *DRAFT*

Description	Strength/Size	ALS Transport Minimum	ALS First Responder Minimum	ALS Special Use Medic Minimum	ALS Wildland Unit Minimum	BLS First Responder Minimum † *Elective skills as required*
MISCELLANEOUS CONT.						
Thermometer		1	1	0	0	0
Automatic External Defibrillator	With AED pads	* For EMT-D Provider Agencies (1)				
AIRWAY						
Endotracheal tubes:	sizes-3.0, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0	1 each	1 each	1 each	1 each	0
Laryngoscope handles, with extra batteries		2	2	1	1	0
Laryngoscope blades:	Miller # 0, 1, 2, 3, 4 Macintosh # 1, 2, 3, 4	1 each	1 each	1 each	1 each	0
i-Gel Supraglottic Airways	Size 3 and Size 5	1 each	1 each	1 each	1 each	0
i-Gel Supraglottic Airways	Size 4	2 each	2 each	1 each	1 each	0
Magill forceps (pediatric and adult)		1 each	1 each	1 each	1 each	0
Adult stylets		2 each	1 each	1 each	1 each	0
10-20 mL syringe, sterile lubricant		2 each	1 each	1 each	1 each	0
Needle Cricothyrotomy kit with:	10 or 12 ga needle, 10-20 mL syringe, alcohol and betadine wipes and oxygen supply adapter	1	1	1	1	0
	Or other FDA approved percutaneous cricothyrotomy kit	1	1	1	1	0
Capnography Device	Qualitative or Quantitative	1	1	1	1	0
Hand held nebulizer for inhalation therapy		2	2	1	1	0
Medrafter or equivalent		1	1	0	0	0
Portable, battery powered, cardiac monitor-defibrillator with 12-lead ECG capability with the ability to perform computerized ECG readings and provide hard copy ECG tracings, with:		1	1	1	AED w.manal defib and w/EKG	0
	Patient ECG cable	1	1	1	0	0
	ECG recording chart paper	1	1	1	0	0
	Adult ECG electrodes	4 sets	4 sets	2 sets	2 sets	0
	Defibrillation pads or equivalent - Adult and Pediatric	1 set each	1 set each	1 set each	1 set each	0
	Conductive defibrillation pads,	4	4	2	2	0
	or tubes of conductive gel	2	2	1	1	0
IV catheter for pleural decompression	10 gauge/3 inch	2	2	1	1	0
Asherman chest seal or equivalent open wound dressing		1	1	1	1	1
Pulse oximeter		1	1	1	1	1
†Continuous Positive Airway Pressure (CPAP) Ventilator	portable/adjustable pressure settings, FDA Approved with an oxygen supply	1	1	0	0	†1
Nasopharyngeal airways (soft rubber)	Medium and Large adult sizes	2 each	2 each	1 each	1 each	2 each

EMS Equipment and Supply List *DRAFT*

Description	Strength/Size	ALS Transport Minimum	ALS First Responder Minimum	ALS Special Use Medic Minimum	ALS Wildland Unit Minimum	BLS First Responder Minimum † *Elective skills as required*
AIRWAY CONT.						
Lubricant, water-soluble jelly (K-Y)		2	2	2	2	2
Oropharyngeal airways	(sizes 5.5 – 12 or equivalent)	2 each	1 each	1 each	1 each	1 each
Adult non-rebreather masks		2	2	1	1	2
Pediatric/infant non-rebreather mask		2	2	1	1	2
Adult nasal cannula		4	2	1	1	2
Oxygen Cylinders	D or E size cylinder with regulator capable of delivering 2-15 LPM	1	1	1	1	1
	M, H, or K cylinder with wall outlet(s) and constant flow regulator(s)	1	0	0	0	0
Oxygen reserve:						
	D or E cylinders	1	1	0	0	1
Face masks for resuscitation (clear)		2	1	1	1	1
Bag-valve mask with O2 reservoir and supply tubing						
	Adult	1	1	1	1	1
	Pediatric	1	1	1	1	1
	Infant	1	1	1	0	1
Suction equipment and supplies:						
Rigid pharyngeal tonsil tip		2	2	0	0	2
Spare suction tubing		1	1	0	0	1
Suction apparatus (portable)		1	1	1	1	1
Suction catheters	at least 2 sizes suitable for adult and	2 each	1 each	1 each	1 each	1 each
	pediatric endotracheal suctioning					

CARDIAC ARREST (ATRAUMATIC)

ADULT	PEDIATRIC (≤34 KG)
BLS Procedures	

• Universal Algorithm #601
• High Performance CPR (HPCPR) (10:1) per Procedure #712
  • Continuous compressions with 1 short breath every 10 compressions
• AED application (if shock advised, administer 30 compressions prior to shocking)
• Pulse Oximetry
  • O_2 administration per Airway Management Protocol #602
	• Same as Adult (except for neonate)
	• Neonate (<1 month) follow AHA guidelines
	• CPR compression to ventilation ratio
	  • Newborn – CPR 3:1
	  • 1 day to 1 month – CPR 15:2
	  • >1 month – HPCPR 10:1
	• AED – pediatric patient >1 year
	• Use Broselow tape or equivalent if available

ALS Procedures	

Rhythm analysis and shocks
• At 200 compressions begin charging the defibrillator while continuing CPR
• Once fully charged, stop CPR for rhythm analysis
• **Defibrillate V-Fib/Pulseless V-tach –** Shock at 120J and immediately resume CPR.
  • Subsequent shock, after 2 mins of CPR: 150J, then 200J
  • Recurrent V-fib/Pulseless V-tach use last successful shock level.
• **No shock indicated** – dump the charge and immediately resume CPR.
V-Fib/Pulseless V-Tach and Non-shockable Rhythms
• **Epinephrine 1:10,000** 1mg IV/IO repeat every 3-5 min.
  • Do not give epinephrine during the first cycle of CPR.
V-Fib/Pulseless V-Tach
• **Amiodarone** 300mg IV/IO push; if rhythm persists after 5 min, administer 150mg IV/IO push refractory dose.
	• **<u>Emphasize resuscitation and HPCPR rather than immediate transport.</u>**
	Rhythm analysis and shocks
	• Coordinate compressions and charging same as adult.
	• **Defibrillate V-Fib/Pulseless V-Tac**h – shock at 2 J/kg and immediately resume CPR.
	  • Subsequent shock, after 2 mins of CPR: 4J/kg
	  • Recurrent V-Fib/Pulseless V-tach use last successful shock level.
	• **No shock indicated –** dump the charge and immediately resume CPR.
	V-Fib/Pulseless V-Tach and Non-shockable Rhythms
	• **Epinephrine 1:10,000** 0.01 mg/kg (0.1 ml/kg) IV/IO not to exceed 0.3mg, repeat every 3-5 min.
	  • Do not give epinephrine during the first cycle of CPR.
	V-Fib/Pulseless V-Tach
	• **Amiodarone** 5mg/kg IV/IO push; repeat every 5 min to a max of 15mg/kg.

Base Hospital Orders Only	
ROSC with Persistent Hypotension • **Push-Dose Epinephrine 10 mcg/ml** 1ml IV/IO every 1-3 min	Contact closest Base Hospital for additional orders **ROSC with Persistent Hypotension for Age**

• Repeat as needed titrated to SBP >90mmHg.
• See notes for mixing instructions.
 	
OR
 	
• **Epinephrine Drip** starts at 10 mcg/min IV/IO infusion.
  • Consider for extended transport.
  • See formulary for mixing instructions.
 	
Contact STEMI Receiving Center (French Hospital)
• Refractory V-Fib or V-Tach not responsive to treatment
• Request for a change in destination if patient rearrests en route.
• Termination orders when unresponsive to resuscitative measures
• As needed.
 	
Contact appropriate Base Station per Base Station Report Policy #121 – Atraumatic cardiac arrests due to non-cardiac origin (OD), drowning, etc.)
	• **Push-Dose Epinephrine 10 mcg/ml** 1 ml IV/IO (0.1 ml/kg if <10kg) every 1-3 min
	  • Repeat as needed titrated to age appropriate SBP.
	  • See notes for mixing instructions.
	
	OR
	
	• **Epinephrine Drip** starts at 1 mcg/min, up to max of 10 mcg/min IV/IO infusion.
	  • Consider for extended transport.
	  • See formulary for mixing instructions.
	
	• As needed

Notes

- **Mixing Push-Dose Epinephrine 10 mcg/ml (1:100,000):** Mix 9 ml of Normal Saline with 1 ml of **Epinephrine 1:10,000**, mix well.
- Use manufacturer recommended energy settings if different from listed.
- Assess for reversible causes:
  - Tension PTX, hypoxia, hypovolemia, hypothermia, hyperkalemia, hypoglycemia, overdose
- Vascular access – IV preferred over IO – continue vascular access attempts even if IO access established)
- Oral Intubation and Supraglottic Airways (Adults) – Utilize if airway is not patent or with maintained ROSC.
- Adult ROSC that is maintained:
  - Obtain 12-lead ECG and vital signs.
  - Transport to the nearest STEMI Receiving Center ***regardless of 12-lead ECG reading.***
  - Maintain O2 Sat greater than or equal to 94%
  - Monitor ETCO2
  - Protect airway with oral intubation or Supraglottic Airway
  - With BP < 100 mmHg, contact SRC (French Hospital) for fluid, or pressors.
- Termination for patients > 34 kg – Contact SRC (French Hospital) for termination orders
  - If the patient remains pulseless and apneic following 20 minutes of resuscitative measures
  - Persistent ETCO2 values < 10 mmHg, consider termination of resuscitation.
  - Documentation shall include the patient's failure to respond to treatment and of a non-viable cardiac rhythm (copy of rhythm strip)

- Pediatric patients less than or equal to 34 kg
  - Stay on scene to establish vascular access, provide for airway management, and administer the first dose of epinephrine followed by 2 min of HPCPR.
  - Evaluate and treat for respiratory causes.
  - Use Broselow tape if available.
  - Contact and transport to the nearest Base Hospital
  - Receiving Hospital shall provide medical direction/termination for pediatric patients.
- Lidocaine may be substituted for Amiodarone with SLOEMSA authorization (via Policy #205 Attachment C) when Amiodarone stock is unavailable. Refer to Lidocaine Formulary for dosages.
- While treating Ventricular Fibrillation/Pulseless Ventricular Tachycardia, only one antiarrhythmic may be given to one patient. ALS Providers shall not switch Amiodarone and Lidocaine for the treatment of Ventricular Fibrillation/Pulseless Ventricular Tachycardia.

ADULT PULSELESS ARREST – (ATRAUMATIC)

Universal Protocol
HPCPR 10:1
Consider Reversible Causes
Monitor $ETCO_2$

- At 200 compressions begin charging the monitor – continue CPR while monitor is charging
- Once fully charged, stop CPR for rhythm analysis

Shockable Rhythm?
V-FIB OR V-TACH

YES

Shocks
- Initial shock at 120J
- Subsequent shocks at 150J then 200J
- Recurrent V-fib/V-tach use last successful shock level

Medications
- **Epinephrine 1:10,000** 1 mg IV/IO repeat every 3-5 min
- **Amiodarone** 300mg IV/IO push; if rhythm persists after 5 min, administer 150mg IV/IO push refractory dose.

NO

- Dump charge
- Continue HPCPR

Medications
- **Epinephrine 1:10,000** 1 mg IV/IO repeat every 3-5 min

Base Orders – **STEMI Receiving Center (French Hospital)**
- **Dopamine** 5-20 mcg/kg/min with SBP<100 mmHg
- Termination of resuscitation if no response after 20 min

Arrests due to non-cardiac origin i.e. OD, drowning – contact appropriate Base per Policy # 121

Notes
- Perform 2 minutes of CPR between treatment modalities
- Pulse checks – perform during rhythm analysis with an organized rhythm >40 bpm
- Organized rhythm <40 BPM continue HPCPR for 2 min, then reassess for ROSC
- ROSC – transport to nearest STEMI Center regardless of 12-lead ECG reading
- Perform 2 minutes of uninterrupted CPR between rhythm analysis
- Immediately resume CPR after defibrillations
- Utilize BVM unless airway compromised or patient has ROSC without adequate respiratory effort
- Use manufacturer recommended energy settings if different from listed

PEDIATRIC PULSELESS ARREST

Universal Protocol
> 1 month – HPCPR 10:1
1 day to 1 month – CPR 15:2
Newborn – CPR 3:1
Consider Reversible Causes
Monitor $ETCO_2$

- At 200 compressions begin charging the monitor – continue CPR while monitor is charging
- Once fully charged, stop CPR for rhythm analysis

Shockable Rhythm?
V-FIB OR V-TACH

YES

Shocks
- Initial shock at 2 J/kg
- Subsequent shocks at 4J/kg
- Recurrent V-fib/V-tach use last successful shock level

Medications
- **Epinephrine 1:10,000** 0.01 mg/kg (0.1 ml/kg) IV/IO, not to exceed 0.3mg, repeat every 3-5 min
- **Amiodarone** 5mg/kg IV/IO Push; repeat every 5 min to max of 15mg/kg

NO

- Dump charge
- Continue HPCPR

Medications
- **Epinephrine 1:10,000** 0.01 mg/kg (0.1 ml/kg) IV/IO, not to exceed 0.3mg, repeat every 3-5 min

Base Hospital Orders
- Contact and transport to the nearest Base Hospital
- Termination of CPR

Notes
- Provide 2 minutes of CPR between treatment modalities
- Pulse checks – perform during rhythm analysis with an organized rhythm >60 BPM
- Organized rhythm ≤60 continue HPCPR for 2 mins, then assess for ROSC
- Immediately resume CPR after defibrillations
- Do not hyperventilate – keep ventilations to 1 sec
- Use Broselow tape or equivalent, if available
- Prior to transport:
  - IV access
  - Management of the airway
  - First round of Epinephrine followed by 2 min CPR

VENTRICULAR TACHYCARDIA WITH PULSES

ADULT	PEDIATRIC (≤34 KG)
BLS	
• Universal Protocol #601 • Pulse Oximetry • O2 administration per Airway Management Protocol #602	Same as Adult
ALS	
Stable • **Amiodarone** 150mg IV/IO drip over 10 min; if rhythm persists after 5 min administer refractory dose to a total of 300mg. • Using a 100cc bag of Normal Saline and macro drip tubing (10gtts/ml): add Amiodarone and mix well. Run at 1.5gtts/second. **Unstable** • Consider **Midazolam** up to 2mg slow IV or 5 mg IN (split into two doses 2.5 mg each nostril) to pre-medicate. • Synchronized/Unsynchronized cardioversion sequences (see notes) • Unresponsive to previous therapy: • **Amiodarone** 150mg IV/IO drip over 10 min; if rhythm persists after 5 min administer refractory dose to a total of 300mg.	**Stable** • **Amiodarone** 5mg/kg IV/IO drip over 30 minutes. • Using a 100cc bag of Normal Saline and macro drip tubing (10gtts/ml): add Amiodarone and mix well. Run at 1gtt every 2 seconds. **Unstable** • Synchronized/Unsynchronized cardioversion sequences (see notes) • **Midazolam** 0.1 mg/kg IV/IN not to exceed 2 mg to pre-medicate prior to cardioversion. • Unresponsive to previous therapy: • **Amiodarone** 5mg/kg IV/IO drip over 30 minutes.
Base Hospital Orders Only	
• **Amiodarone** post conversion • As needed.	• **Amiodarone** post conversion • As needed

Notes

- Obtain a 12-lead ECG before and after conversion, if possible.
- Vascular access may be omitted prior to cardioversion if in extremis.
- QRS ≥ 0.12 seconds typical for VT in adults
- QRS ≥ 0.09 seconds typical for VT in pediatrics
- Malignant PVCs – that may pose heightened risk of precipitating sustained dysrhythmias: short coupling interval <0.3 seconds, multifocal, couplets, and frequent occurrence.
- Irregular Wide-complex tachycardia (Torsade's de Pointes) requires unsynchronized cardioversion.
- Synchronized/Unsynchronized Sequences (if synchronized mode is unable to capture use unsynchronized cardioversion)
- Lidocaine may be substituted for Amiodarone with SLOEMSA authorization (via Policy #205 Attachment C) when Amiodarone stock is unavailable. Refer to Lidocaine Formulary for dosages.

- While treating Ventricular Tachycardia with Pulses, only one antiarrhythmic may be given to one patient. ALS Providers shall not switch between Amiodarone and Lidocaine for the treatment of Ventricular Fibrillation/Pulsating Ventricular Tachycardia.
- Use manufacturer recommended energy setting if different from below.

Adult	Pediatric
100 J	1 J/kg
120 J	2 J/kg
150 J	2 J/kg
200 J	

(*start at 120J unsynchronized in adult patients with Torsade's de Pointes)