Clinical Advisory Subcommittee of the Emergency Medical Care Committee

Meeting Agenda
10:15 A.M. Thursday, February 16th, 2023
Location: SLOEMSA Conference Room
2995 McMillan Ave, Ste 178
San Luis Obispo, CA 93401

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

Staff
STAFF LIAISON: David Goss, *EMS Coordinator*
Vince Pierucci, *EMS Division Director*
Dr. Tom Ronay, *Medical Director*
Ryan Rosander, *EMS Coordinator*
Rachel Oakley, *EMS Coordinator*
Sara Schwall, *EMS Admin Assistant III*

AGENDA	ITEM	LEAD
Call to Order	Introductions	Dr. Teitge
	Public Comment	
Summary Notes	Review of Summary Notes December 15th	
Discussion	**Review and Adoption of Draft Procedure Revision:** • Procedure #710: Vascular Access and Monitoring	David
Adjourn	**Declaration of Future Agenda Items** • Roundtable on Future Agenda Items	Dr. Teitge
	Next meeting date – Thursday April 20th, 2023 1015 hrs – **EMSA Conference Room** 2995 McMillan Ave. Suite 178 San Luis Obispo, CA 93401	

DRAFT

Clinical Advisory Subcommittee of the Emergency Medical Care Committee

Meeting Minutes
10:15 A.M., Thursday, December 15th, 2022

Virtual Via Zoom

Members

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☐ Dr. Heidi Hutchinson, *ED Physician Tenet*
☐ Dr. Kyle Kelson, *ED Physician Tenet*
☐ Dr. Lucas Karaelias, *ED Physician Dignity*
☒ Lisa Epps – *Air Ambulance*
☐ Jeffrey Hagins – *Air Ambulance*
☐ Rob Jenkins, *Fire Service Paramedics*
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☒ Tom Ronay, *Medical Director*
☒ Ryan Rosander, *EMS Coordinator*
☒ Rachel Oakley, *EMS Coordinator*
☒ Sara Schwall, *EMS Admin Assistant III*

Guests

Doug Weeda, *CHP*
Kandi Sagehorn, *Air Ambulance*

AGENDA	ITEM	LEAD
Call to Order 1025	Introductions	Dr. Stefan Teitge
	Public Comment – No public comment	
Summary Notes	No Additions – Dr.Teitge motions, D. Burkey 2nds, Finalized	
Discussion	**Review and Approval of Draft Procedure #710 Vascular Access and Monitoring:** • Currently, SLO County ALS providers are unable to utilize PVAD. • Additions to procedure include routine access for medication/fluid; access to tunneled and non-tunneled central lines via base order; access procedure; considerations for providers for IV/IO access; humoral IO placement available via base orders. Discussion Dr. Ronay – From paramedic perspective, they have little experience with wide variety of access lines. IV access is the best method for administration. D. Goss – Would there be any procedure change based on the type of line? D. Burkey – No, there is not much variation for accessing lines. Will medics be able to utilize an already accessed port? - only if there is a lure lock system can the line be accessed. Dr. Teitge – Dialysis ports are very finicky and would need input from an IR or surgeon before accessing. D. Goss – The timeline for this procedure is to move to approval at EMCC in time for training in May.	David Goss

	Dr. Teitge – The IO system makes a lot of sense and is much easier and more effective than IV.	
Adjourned – 1120	**Next meeting date –** Thursday, February 16th, 2023, 1015 a.m.	

DRAFT

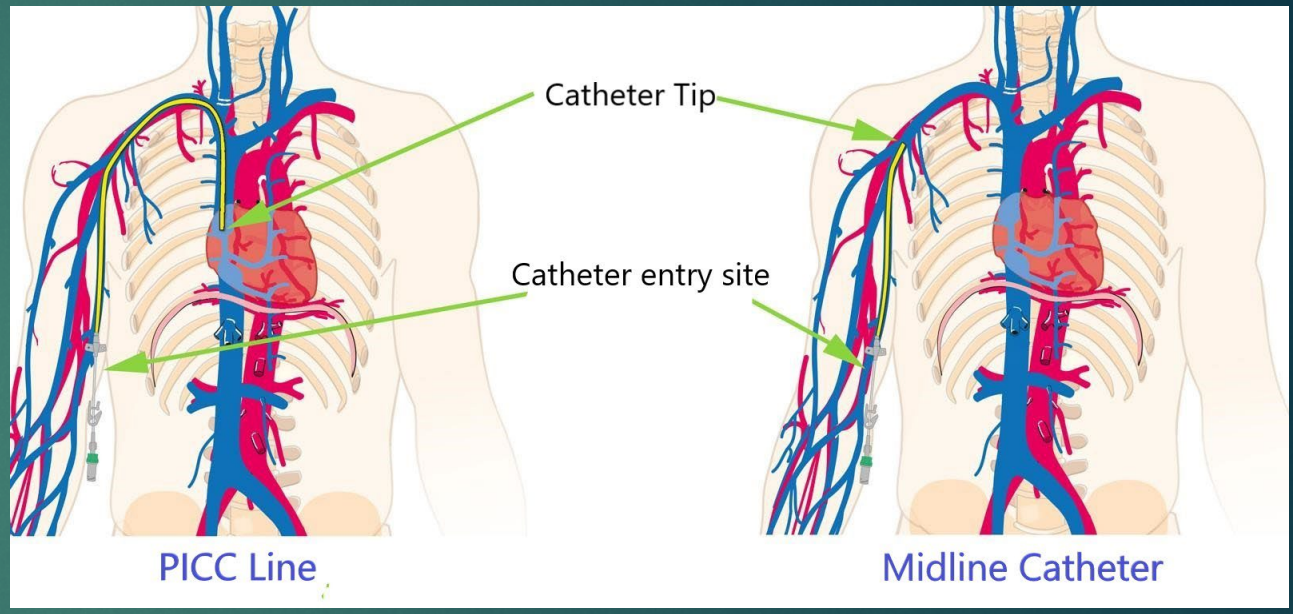
MEETING DATE	February 16th, 2023
STAFF CONTACT	David Goss, EMS Coordinator 805.788.2514 dgoss@co.slo.ca.us
SUBJECT	Policy #710: Vascular Access and Monitoring Revision/Addition
SUMMARY	In the fall of 2022, generation of a revision to Policy #710: Vascular Access and Monitoring began following feedback from San Luis Ambulance Services to include the use of Pre-Existing Vascular Access Devices (PVAD). Following research into PVADs, it was found that a large amount of counties residing in the State of California had authorized the use of PVADs in various stages of use. This included the use of Peripherally Inserted Central Catheters (PICC), Midline Catheters, and Tunneled/Non-Tunneled Central Lines. After researching individual county protocols, SLOEMSA is proposing a revision to allow routine utilization to pre-existing PICC and Midlines along with utilization of tunneled/non tunneled catheters for emergency patients in extremis or cardiac arrest. Both of these included items would assist in providing quick medication administration and patient care for those who requires expedient intervention. While looking for further revisions, an opportunity was also found to expand what ALS Providers are able to perform when utilizing IO devices. In an effort to provide options to ALS Providers, the proposed revision would include the ability for providers to be able to start an IO without the mandated two IV access attempt. In an effort to allow more flexibility for IO usage, an expansion to humoral access is also being proposed if providers are unable to utilize tibial access. Both of these additions to Policy #710 would provide to ALS Providers the freedom to provide patient care best suited to the patient they are caring for. Current implementation timeline would show recommendation by CAC in February, introduction / recommendation from EMCC in March, training through the Annual Paramedic Update Class in late April/May, and implementation July 1st of 2023.
REVIEWED BY	Vince Pierucci, Dr. Thomas Ronay, SLOEMSA Staff
RECOMMENDED ACTION(S)	Recommended PVAD / IO Expansion for adoption by CAC and move to EMCC Agenda.
ATTACHMENT(S)	CAC PowerPoint Presentation, Policy #710 Draft

Clinical Advisory Subcommittee

FEBRUARY 16TH, 2023

PVAD Utilization Review from Oct 11th

- Currently, San Luis Obispo County ALS Providers are unable to utilize Pre-Existing Vascular Access Devices (PVAD).
- PVADs included in other county protocols and procedures include:
  - Peripheral Inserted Central Catheters (PICC
  - Midlines
  - Tunneled & Non-Tunneled Central Lines
  - Implanted Ports
- Protocol Usage of PVADs Across California:
  - Total Access to PICC, Mid, and Central: 42%
  - Restricted Access (unstable patients only): 42%
  - Monitor Only: 15%
  - Implanted Ports for routine use are not allowed in any county



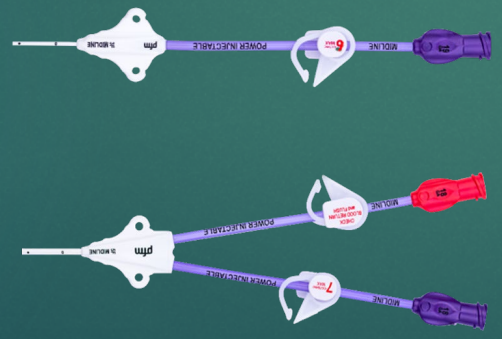
PVAD Utilization Review from Oct 11th

- Restricted Use County Specifics:
  - PVAD only authorized for unstable, extremis, or cardiac arrest conditions
  - Counties Placing these restrictions are for these devices
    - Tunneled/Non-Tunneled Central Lines: 100%
    - PICC: 85%
    - Mid: 85%
    - Implanted Port: 71%

LEMSA	PICC Usage	Mid Line Usage	Implanted Port Usage	Central Catheter Usage	Central only for unstable pts	Notes
Alameda	x	x		x		
Contra Costa	x	x				
El Dorado	x	x				
Imperial	x	x			x	
Kern	x	x		x		
Los Angeles	x	x		x		
Marin	x	x		x		
Merced	x	x				
Monterey	x	x				
Napa						Monitor only
Orange	x	x			x	PVAD only for unstable pts
Riverside						Monitor only
Sacramento					x	PVAD (central) only for unstable pts
San Benito	x	x			x	PVAD only for unstable pts, requires base order
San Diego	x	x			x	PVAD only for definitive therapy, requires base order
San Francisco	x	x			x	PVAD only for unstable pts
San Joaquin	x	x		x		
San Luis Obispo						Monitor only
San Mateo						Monitor only
Santa Barbara						Monitor only
Santa Clara	x	x		x	x	Emergent use only unless pt is conscious and can walk the medic through how to access
Santa Cruz	x	x			x	PVAD only as last choice for unstable pts, requires base order
Solano	x	x		x		
Tuolumne	x	x			x	Only for pts in extremis
Ventura	x	x			x	PVAD only for unstable pts
Yolo	x	x			x	Only for pts in extremis
Central California	x	x			x	Only for use if a peripheral IV is unable to be started or for cardiac arrest
Coastal Valleys					x	Only for use during cardiac arrest or extremis
Inland Counties	x	x				
Mountain-Valley	x	x			x	Only for unstable pts
Norcal	x	x		x		
North Coast	x	x			x	
Sierra-Sac Valley	x	x			x	Only for patients in extremis

Procedure #710 PVAD Addition

- Additions:
  - Routine access for medication/fluid administration through PICC and Mid lines as standing orders while following appropriate preparation and procedure.
  - Access of Tunneled and Non-Tunneled Central Lines via Base Order for patients in Extremis or Cardiac Arrest.



- Access Procedure:
  - Wipe the access port with an alcohol pad.
  - Ensure that if line is a dual lumen line that you utilize the line for medication and not for blood.
  - Attach 10ml syringe and draw up 5-10ml of fluid out of the line or until blood is noted in the syringe.
  - Discard filled syringe and administer medication into line followed by an entire 10ml saline flush
  - Wipe down port and replace any protective cap (if one was present).
  - ALS providers may attach a saline bag for an infusion after the PVAD has been properly aspirated.

Procedure #710 Revisions and Other Additions

- Intraosseous access has been opened as an option for primary for patients presenting with difficult vasculature.
- "When establishing IV/IO access in a critical patient with a GCS < 8, ALS Providers will take the following into consideration:"
  - When assessing a patient's vasculature and determining access to be difficult, an ALS Provider may proceed straight to IO access. Further IV attempts will continue following IO placement.
  - If the first attempt at IV placement fails, an ALS Provider may consider placement of an IO prior to a second attempt.
  - External Jugular access shall always be considered prior to IO placement.
- Humoral IO placement will become available via Base Hospital Order if:
  - Unable to gain access to the tibial plateau or plateau is nonexistent.
  - Tibial plateau is preferred for IO placement over humoral.

Procedure #710: Vascular Access and Monitoring Draft

VASCULAR ACCESS AND MONITORING

ADULT	PEDIATRIC (≤34KG)

BLS

- Universal Protocol #601
- In stable patients, providers may monitor and turn off IV lines of isotonic balanced salt solutions without medication or electrolyte additives and flowing at a maintenance rate

BLS Optional

Pulse Oximetry – O_2 administration per Airway Management Protocol #602

ALS Standing Orders

- Establish IV with drip set or saline lock as appropriate.
- Tibial Intraosseous (IO) placement may be utilized when:
  - GCS < 8 in extremis with hemodynamic instability/respiratory distress/cardiac arrest.
    AND
  - Unable to establish following attempt(s) or general suspicion of the inability to establish vascular access.
- Attempts to establish vascular access shall be continued even if IO is successful.
- ALS providers can monitor and administer medications through a Pre-existing Vascular Access Device (PVAD). These pre-existing catheters are:
  - Peripheral Inserted Central Catheter (PICC Line)
  - Midline IV Catheters
- PVAD access procedure:
  - Wipe the access port with an alcohol pad to ensure aseptic technique.
  - Ensure that if your line is a dual lumen line that it is the line designated for medication administration (do not use the line utilized for blood, this can be identified by a red colored catheter or stated on the catheter).
  - Attach a 10ml syringe and draw up 5-10ml of fluid out of the line until blood is noted in the syringe. This is to ensure the line is not pre-loaded with heparin.
  - Discard the filled syringe and connect the syringe with the desired medication and administer according to the appropriate formulary. Follow the medication administration with an entire 10cc saline flush.
  - If any sort of cap was used to cover the port, ensure the cap is wiped down and placed back on the port following use.
  - If the patient is needing an infusion from a saline bag, ALS Providers may connect the IV line to the PVAD after the line has been aspirated per instructions listed above. After the infusion is finished, ensure the line is flushed with a 10cc saline flush, and wipe the port with an alcohol pad. If any sort of cap was used to cover the port, ensure the cap is wiped down and placed back on the port following use.

Base Hospital Orders Only

- Pain management if patient becomes conscious after establishing IO access
- Humoral IO Placement
- Access to tunnelled/non-tunnelled Central Lines for patients in extremis or cardiac arrest. Access of these central lines shall follow the PVAD access procedure listed above.
- As needed

Notes

- Peripheral IV placement is preferred to IO placement – including the external jugular
- Tibial plateau is preferred for IO placement over humoral placement. Humoral IO placement shall only be utilized if the Tibial plateau is unable to be accessed.
- When establishing IV/IO access in a critical patient with a GCS < 8, ALS Providers will take the following into consideration:
  - When assessing a patient's vasculature and determining access to be difficult, an ALS Provider may proceed straight to IO access. Further IV attempts will continue following IO placement.
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- External Jugular (EJ) access shall always be considered prior to IO placement.

Questions?

VASCULAR ACCESS AND MONITORING

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