ROC AMIODARONE, LIDOCAINE OR PLACEBO FOR OUT OF HOSPITAL CARDIAC ARREST DUE TO VENTRICULAR FIBRILLATION OR TACHYCARDIA (ALPS) STUDY: MEDICAL CARDIAC ARREST MEDICAL DIRECTIVE

An Advanced Care Paramedic will provide the treatment based on the randomization scheme and as prescribed in this medical directive if certified and authorized

INDICATIONS

Non-traumatic cardiac arrest

CONDITIONS

CPR

AGE:	≥ 18 years
LOA:	Altered
HR:	N/A
RR:	N/A
SBP:	N/A
Other:	N/A

Manual Defibrillation

AGE:	≥ 18 years
LOA:	Altered
HR:	N/A
RR:	N/A
SBP:	N/A
Other:	VF or pulseless VT

AED Defibrillation

AGE:	≥ 18 years
LOA:	Altered
HR:	N/A
RR:	N/A
SBP:	N/A
Other:	Shockable rhythm Alternative to manual defibrillation

Epinephrine

AGE: ≥ 18 years

LOA: Altered

HR: N/A

RR: N/A

SBP: N/A

Other: N/A

ALPS

AGE: ≥ 18 years

LOA: Altered

HR: N/A

RR: N/A

SBP: N/A

Other: Persistant or recurrent VF or pulseless VT or shockable after receipt of ≥ 1 shocks

Vascular access secured

CONTRAINDICATIONS

CPR

Obviously dead as per BLS standards

Meet conditions of DNR standard

Manual Defibrillation

Rhythms other than VF or pulseless VT

AED Defibrillation

Non-shockable rhythms

Epinephrine

Allergy or sensitivity to epinephrine

ALPS

Allergy or sensitivity to amiodarone or lidocaine

Prior receipt of open label amiodarone or lidocaine

Blunt, penetrating trauma or burn based arrest

DNR / DNAR

Exsanguination

Prisoner

TREATMENT

Consider ***CPR:***

Consider ***intravenous or intraosseous initiation:***

Consider ***Manual defibrillation***:

	VF / pulseless VT
Dose	1 shock
First dose	As per Base Hospital
Subsequent doses	As per Base Hospital
Dosing interval	2 min
Maximum doses	N/A

Consider ***AED defibrillation***: (alternative to manual defibrillation)

	Shockable rhythm
Dose	1 shock
Max. single dose	As per Base Hospital
Dosing interval	2 min
Max. # of doses	N/A

Consider ***epinephrine:*** should be administered within 5 minutes of ACP arrival on scene. Flush (IV, IO, CVAD) with 20 ml saline

	Route	
	IV / IO / CVAD	*ETT*
Solution	1:10,000	1:10,000
Dose	1 mg	2 mg
Min. single dose	1 mg	2 mg
Dosing interval	4 min.	4 min.
Max. # of doses	N/A	N/A

Consider ***ALPS:*** following ≥ 1 shock and VF / pulseless VT or shockable rhythm persists. Flush with 20 ml saline

	Route	
	IV / IO	
	Wt < 45 kg	*Wt ≥45 kg*
Initial Dose	1 vial	2 vial
Max. initial dose	1 vial	2 vial
Repeat dose	1 vial	1 vial
Max. repeat dose	1 vial	1 vial
Dosing interval	2 - 4 min.	2 - 4 min.
Max. # of doses	2	2

Consider ***advanced airway insertion:*** after a minimum of 6 minutes (3 full cycles) of CPR

Consider ***titrating oxygen:*** after ROSC with palpable pulses for more than 20 min to 94-98%

Consider ***calling the notification line:*** as soon as possible after arriving at the receiving facility

In Toronto it is the cardiac Arrest Notification (CAN) line

In Ottawa it is the Study Notification line

CLINICAL CONSIDERATIONS

1. The ALPS kit should not be opened until vascular access is established. Once opened no “open label” antiarrhythmic is to be used.
2. Defibrillation provided by first responders are to be included in the decision regarding persistent / recurrent VF / pulseless VT.
3. ALPS medications may only be administered by the IV and IO routes. ETT route is not to be used.
4. Early application, even with BVM, of ETCO2 is desirable to guide quality of CPR and confirm placement of an advanced airway.
5. Unless airway compromise is present, delay the insertion of the advanced airway until after 3 full cycles of CPR.
6. In AED mode, recurrent VF / VT is denoted by the occurrence of two shocks after which ALPS medications may be administered. Chest compressions should not be paused during the ALPS medication administration.
7. CPR to be performed to Guidelines 2010 recommendations:

Compressions: minimum 5 cm in depth at a rate of 100 to 110 per minute.

Ventilations: Standard CPR: ventilation volume is 500 ml over 1-2 seconds

Continuous compressions: ventilation volume is 500 ml during the upstroke of every 10th compression without pausing compressions

8. In AED mode, chest compressions may be performed during the defibrillator charge cycle to minimize the pre-shock pause and maximize chest compression fraction.