



Peninsulas Emergency Medical Services Council, Inc.

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2020 Regional Patient Care Protocols, Policies and Procedures Update 1 Change Procedure

Step	Title	Remove	Add	Location	2 nd Party Verification
1	2020 Protocol Revisions	X		3,4	
	2020 Protocol Revisions Update1		X		
2	Version 2012v0919 Medical – Hypotension/Shock (Non-Trauma)	X		Pages 113, 114, 115, 116	
	Version 2012v0320 Medical – Hypotension/Shock (Non-Trauma)		X		
3	Version 2018v0919 Norepinephrine/Levophed Pharmacology	X			
	Version 2018v0320 Norepinephrine/Levophed Pharmacology		X		

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Hypotension/Shock (Non-Trauma)

Medical

CRITERIA

- Blood pressure less than 80 mm/Hg systolic with signs and symptoms such as:
 - Chest pain
 - Dyspnea
 - Rales/Crackles
 - Pulmonary Edema/Congestive Heart Failure- use caution with fluid administration
- Trauma ruled out

PROTOCOL

EMR	Follow <i>General – Universal Patient Care/Initial Patient Contact protocol.</i>	EMR
EMR	Place patient in position of comfort, perform focused history including: <ul style="list-style-type: none"> • Active internal bleeding • Prolonged CPR • Recent surgery • Prior CVA • Pregnancy 	EMR
A	If no signs of pulmonary edema, 0.9% Normal Saline 20 mL/kg fluid bolus (up to 1000 mL) , then reassess.	A
[I]	Administer Dopamine (Intropin) 2-10 mcg/kg/min infusion ; titrate to desired effect (mix 400 mg in 0.9% Normal Saline 250 mL). or Administer Norepinephrine (Levophed) 5-20 mcg/min infusion ; titrate to MAP of 65 mmHg or systolic BP >90 mmHg (mix 2 mg in 0.9% Normal Saline 250 mL).	[I]

Refer to charts on next pages.

PEARLS

- Norepinephrine (Levophed) is more potent than Dopamine (Intropin) therefore monitor MAP very closely.

🚨 Closely monitor SpO₂ and EtCO₂

🚨 Closely monitor IV site to prevent infiltration and tissue necrosis



Hypotension/Shock (Non-Trauma)

Medical

DOPAMINE DRIP CHART

Weight lbs.	88	110	132	154	176	198	220	242	264	286	308	330	352
Weight kgs	40	50	60	70	80	90	100	110	120	130	140	150	160
mcg/kg	gtts/minute based on 60 drop set												
2	3	4	4	5	6	7	7	8	9	10	10	11	12
3	4	6	7	8	9	10	11	12	13	15	16	17	18
4	6	7	9	10	12	13	15	16	18	19	21	22	24
5	7	9	11	13	15	17	19	21	22	24	26	28	30
6	9	11	13	16	18	20	22	25	27	29	31	34	36
7	10	13	16	18	21	24	26	29	31	34	37	39	42
8	12	15	18	21	24	27	30	33	36	39	42	45	48
9	13	17	20	24	27	30	34	37	40	44	47	51	54
10	15	19	22	26	30	34	37	41	45	49	52	56	60
11	16	21	25	29	33	37	41	45	49	54	58	62	66
12	18	22	27	31	36	40	45	49	54	58	63	67	72
13	19	24	29	34	39	44	49	54	58	63	68	73	78
14	21	26	31	37	42	47	52	58	63	68	73	79	84
15	22	28	34	39	45	51	56	62	67	73	79	84	90
16	24	30	36	42	48	54	60	66	72	78	84	90	96
17	25	32	38	45	51	57	64	70	76	83	89	96	102
18	27	34	40	47	54	61	67	74	81	88	94	101	108
19	28	36	43	50	57	64	71	78	85	93	100	107	114
20	30	37	45	52	60	67	75	82	90	97	105	112	120

*gtts/min rounded to whole drop



Hypotension/Shock (Non-Trauma)

Medical LEVOPHED (NOREPINEPHRINE) DRIP CHART

Adult Norepinephrine IV Infusion

Add 2 mg of norepinephrine to 250 mL of NS (final concentration 8 mcg/mL). Infuse using drip set	
Dosing 5 -20 mcg/min. Maximum 20 mcg/min = 150 gtt/min	
mcg/min	Gtt/min
	60 drop set
5 mcg/min	38
6 mcg/min	45
7 mcg/min	52
8 mcg/min	60
9 mcg/min	68
10 mcg/min	75
12.5 mcg/min	94
15 mcg/min	112
17.5 mcg/min	130
20 mcg/min	150

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Norepinephrine/Levophed

CLASS:	Sympathomimetic
ACTIONS:	Positive inotrope (force of contractions) Peripheral vasoconstrictor Selectively dilates blood vessels of kidney, mesentery, brain and heart
INDICATIONS:	Adult Cardiac Arrest Shockable Adult Cardiac Dysrhythmia Bradycardia Cardiogenic Shock Non-Cardiogenic Non-Trauma Shock
PRECAUTIONS:	Monitor MAP, SpO ₂ and CO ₂ closely due to high potency. Should not be administered in the presence of severe tachydysrhythmias. Correct hypovolemia with volume replacement before considering norepinephrine use. Should not be administered in the presence of ventricular fibrillation or ventricular irritability. Use with caution in cardiogenic shock with accompanying congestive heart failure.
SIDE EFFECTS:	Ventricular tachydysrhythmias Hypertension Reflex bradycardia
ADULT DOSAGE:	Adult Cardiac Arrest Shockable: For Return Of Spontaneous Circulation (ROSC) consider <i>Norepinephrine 5-20 mcg /min IV/IO, titrated</i> to Mean Arterial Pressure of 65 mmHg or systolic BP > 90 mmHg Adult Cardiac Arrest Non-Shockable: For Return of Spontaneous Circulation (ROSC) consider <i>Norepinephrine 5-20 mcg/min IV/IO.</i> Adult Cardiac Dysrhythmia Bradycardia/Unstable: Refractory hypotension – <i>Norepinephrine 5-20 mcg/min infusion (2 mg in 250 mL Normal Saline) titrated</i> to MAP of 65 mmHg or systolic BP > 90mmHg Non-Cardiogenic Non-Trauma Shock: Consider <i>Norepinephrine</i> , contact Medical Control



Norepinephrine/Levophed

Adult Norepinephrine IV Infusion

Add 2 mg of norepinephrine to 250 mL of NS (final concentration 8 mcg/mL). Infuse using drip set

Dosing 5 -20 mcg/min. Maximum 20 mcg/min = 150 gtt/min

mcg/min	Gtt/min
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