# Northwest Community EMS System 2025 SOP Self-Assessment MEDICAL

Name (Print):	Date of submission
EMS Agency:	Date graded/feedback sent:
PEMSC signature:	Initial Score: Acceptable Not acceptable
EMS Educator signature:	☐ Incomplete ☐ Incorrect answers  Resubmission: ☐ Acceptable ☐ Not acceptable

**Instructions: Complete; discuss** with your Provider EMS Coordinator; obtain their signature; **SUBMIT** to the NWC EMSS Office at least 1 week prior to date of System Entry written testing for this module

This document is designed to measure a candidate's knowledge of practice standards in the NWC EMSS. Only use the 2022 NWC EMSS SOPs, System Procedure Manual, and Policy Manual to answer these questions. May also use the 2022 SOP Changes and Rationale document if needed (System website: <a href="https://www.nwcemss.org">www.nwcemss.org</a>).

## **Acute ABDOMINAL/FLANK PAIN**

- 1. A patient with a pulsating midline abdominal mass above the umbilicus is c/o severe midline epigastric pain radiating to the back and flank with diminished femoral pulses. VS: BP 88/66; P of 100. Should this patient be treated with IV fluid challenges?
  - A. Yes
  - B. No
- 2. An adult presents with severe abd pain (10/10). The abdomen has significant involuntary guarding, point tenderness and rigidity in the RLQ & the pt winces when the heel is tapped (rebound tenderness.) VS are WNL. Is this patient a candidate for pain medication per SOP?
  - A. Yes
  - B. No

#### **DIALYSIS / Chronic Renal Failure Emergencies**

3. An adult with chronic renal failure presents with severe weakness generalized fatigue, paresthesias, and nausea prior to renal dialysis. ECG to right. Which of these is contraindicated for this patient?



- A. Treat dysrhythmias per SOP
- B. Sodium bicarbonate slow IVP
- C. Magnesium sulfate slow IVP or IVPB
- D. In-line albuterol 5 mg continuous neb up 20 mg

#### **ALCOHOL INTOXICATION / WITHDRAWAL**

- 4. An adult presents with the odor of an alcoholic beverage of their breath. Their speech is slurred and they are unable to state their address or phone number. The pt. tilts to the right when sitting, is unable to perform rapid alternating movements, and has ocular nystagmus. There are no signs of dehydration or tremors. The patient is refusing transport. Which of these is indicated first?
  - A. Sequential IV NS 200 mL fluid challenges up to 1 L
  - B. Obtain a blood glucose reading to assess for hypoglycemia
  - C. Midazolam in 2 mg increments q. 30-60 sec up to 20 mg to prevent seizures
  - D. Execute a Refusal of Service as long as a family member agrees to remain with him
- 5. An adult presents with confusion, nausea/vomiting; tachycardia (HR > 100), constant tremors, sweating, anxiety, agitation, a feeling of bugs crawling on their skin, visual hallucinations; fever, and dehydration 36 hours after their last ingestion of alcohol. The BP is 100/70. What EMS intervention is indicated?

## **ALTERED MENTAL STATUS (AMS)/SYNCOPE**

6. If a patient with AMS presents with unilateral neuro deficits, what assessment is indicated?

What S&S suggest a post-ictal state?

## **DRUG OVERDOSE / POISONING**

7. An adult presents w GCS 9 (2, 2, 5) with slow snoring ventilations. VS: T 98.7° F, BP 100/70, P 84, R 6; RA SpO<sub>2</sub> 90%. Skin: diffuse flushing w/o lesions or bruising; lungs clear bilaterally; Pupils small & reactive; abdomen: normal bowel sounds; no distension or tenderness. PMH unknown. Capnogram below. Which of these is indicated FIRST?



- A. CPAP 5 cm PEEP
- B. O<sub>2</sub> NC to SpO<sub>2</sub> 94%; suction as needed
- C. Support ventilations O₂ 15 L/BVM; ECG; ✓ blood glucose
- D. Immediate placement of ET tube; ventilate w/ O<sub>2</sub>15 L/BVM at 16 BPM
- 8. What is the maximum total dose of naloxone that may be given by EMS per SOP?
  - A. 2 mg
  - B. 4 mg
  - C. 8 mg
  - D. 12 mg
- 9. A landscaper has been spraying insecticides and spreading fertilizer for several hours. The patient presents with profuse sweating, drooling, tearing, copious bronchial secretions, GI distress, vomiting, urinary incontinence and pinpoint pupils. Which of these is indicated for this patient?
  - A. Atropine
  - B. Naloxone
  - C. Midazolam
  - D. Sodium bicarbonate
- 10. An adult presents with severe agitation, paranoia, violent behavior and has four police officers trying to subdue him after inhalation of cocaine. The patient is growling and is diaphoretic with hot skin. VS: BP 230/130; P 180; RR 24; T 103° F. Pupils are dilated; glucose 120. Wt: 250 lbs. Which of these is indicated?
  - A. Midazolam 10 mg IN or IM
  - B. Etomidate to rapidly induce unconsciousness
  - C. Fentanyl to abate pain and reduce CNS irritability
  - D. Ketamine 2 mg/kg slow IVP or 4 mg/kg IN/IM (max 300 mg per SOP)

## **CARBON MONOXIDE and CYANIDE POISONING**

- 11. Which of these is true when caring for a patient with carbon monoxide poisoning?
  - A. The pulse oximetry reading will be inaccurate and irrelevant
  - B. These patients are likely to be totally non-responsive to oxygen therapy
  - C. All CO poisoning patients need immediate transport to a hyperbaric chamber
  - D. Because CO binds with RBCs, internal hemorrhage is a serious complication of exposure
- 12. An adult presents at home shortly after the onset of cold weather requiring the furnace to turn on complaining of severe headache; ringing in the ears, nausea and vomiting, with a GCS of 9 (E2; S3; M4); BP 150/90; P 120; R 26; SpO<sub>2</sub> 98%; ETCO<sub>2</sub> 31 with square waveform; and clear lung sounds. Where should EMS transport this patient?

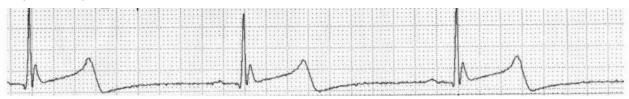
- 13. What antidote to cyanide poisoning is currently approved for EMS administration if available?
  - A. Amyl nitrate IVP
  - B. Sodium thiosulfate
  - C. Hydroxocobalamin
  - D. Amyl nitrite inhalants

# **Environmental: COLD Emergencies (adult & peds)**

- 14. Which of these is indicated for a patient with frostbite to both hands and feet?
  - A. Puncture blisters and apply pressure dressings
  - B. Rub or massage the frozen areas to rapidly restore circulation
  - C. Rapidly rewarm per SOP when there is no possibility of refreezing
  - D. Perform gradual core rewarming first before actively rewarming the injury sites
- 15. An elderly person is found after being outside for several hours in temperatures of 58 F. The pt is awake, confused and shivering violently. Family members indicate that the mental status changes are new. Paramedics note stiff muscles, ataxia, and skin is cold to the touch. VS: BP 110/62; P 62; R 16; PERL; glucose 80.

How should re-warming be achieved in this patient?

16. An unconscious adult was found outdoors after sleeping there in subfreezing temperatures. The pt responds slowly to a pressure stimulus. There is no shivering. Skin is pale and cold; extremities are stiff. A carotid pulse is palpable at 30; ECG: below; R 6; T 84° F; lungs are clear; pupils are dilated. What type of rewarming does this patient require?



- A. Active external with blankets and hot packs all over the body
- B. Rewarm trunk only, avoid rewarming extremities
- 17. An adult is found apneic in cardiac arrest with severe hypothermia [T <28°C (82.4° F)] and an agonal rhythm. Select yes or no option for each of the following:

Should an advanced airway be considered?  $\square$  Yes  $\square$  No Should they be hyperventilated?  $\square$  Yes  $\square$  No Triple zero can be confirmed?  $\square$  Yes  $\square$  No

## **Environmental: SUBMERSION INCIDENT (adult & peds)**

- 18. An adult was rescued from a lake after being submerged for about 5 min after falling off of an inflatable raft. After 2 min of CPR the pt has ROSC, wakes up, has good respiratory effort, and is refusing transport. VS: BP 110/70; P 60; R 16; SpO<sub>2</sub> 92%; lungs sound congested. Which of these is indicated?
  - A. Apply CPAP and convince to be transported
  - B. Trendelenburg position to drain the lungs and spine motion restriction
  - C. Perform abdominal thrusts to help clear the lungs of fluid before reassessing his status
  - D. Apply O<sub>2</sub> 15 L/NRM while giving patient full disclosure of risk prior to executing the refusal form

- 19. A child was submerged for 45 minutes after falling through ice. Upon rescue, the pt is unresponsive, apneic, with no palpable pulse. Core temp is 78° F. Which of these is indicated?
  - A. Aggressive resuscitation concurrent with core rewarming
  - B. Actively rewarm to a core temp of 90° F then reassess need to start CPR
  - C. Apply automated compression device and defer all ALS care due to cold temp
  - D. Call OLMC to confirm triple zero given the submersion time and water temperature
- 20. What should a PM suspect if a patient is experiencing joint and abdominal pain, fatigue and paresthesias 2 hours after ascending from a deep water dive?
  - A. "The squeeze"
  - B. "Rapture of the deep"
  - C. Large arterial air embolism
  - D. Decompression illness (the bends)

# **Environmental: HEAT EMERGENCIES (adult & peds)**

21. A 78 y/o unconscious patient was found alone in their apartment two days after a blistering heat wave began. There are no fans or air conditioning and the heat in the room is suffocating. PMH is unknown.

Physical exam:

HEENT: GCS 8 (E2; V1; M5); pupils bilaterally midpoint and reactive

Lungs: Clear

CV: ECG: ST with PVCs
GI: Soft, no guarding, masses
Skin: Hot, flushed and dry

VS: BP: 80/60; P: 124; RR: 32; T: 105° F; SpO<sub>2</sub> 95%; ETCO<sub>2</sub> 25 with square waveform

Glucose: 90

Identify the interventions that are indicated:

What IV fluids:				
For what complication is this pt at risk due to fluid therapy?				
How should EMS attempt to cool this pt?				

22. An 18 y/o conscious male presents alert and oriented and complaining of severe cramping pain in his abdomen and legs that began an hour after starting to play basketball outdoors in extreme heat. He also is c/o slight nausea, no vomiting. He has no significant medical history; takes no meds, and denies any allergies.

Physical Exam:

HEENT: WNL; PERRL Lungs: clear bilaterally CV: ECG: ST

GI: Abdomen tender with voluntary guarding; BS active Ext: No evidence of trauma; bilateral leg cramps; SMV intact

Skin: Warm, flushed, diaphoretic

What treatment should this patient receive?

Rehydration options: _	
Environment/clothing: _	

23. An elderly adult is found on a golf course sitting under a tree. The other members of his foursome state that he had been complaining of weakness, lightheadedness, headache and nausea after the first nine holes. Outdoor temperature is 94°. The patient has a history of diabetes and heart disease and takes Inderal.

Physical exam:

HEENT: Mental status slightly confused. Can appropriately answer questions; PERRL

Lungs: Breath sounds clear bilaterally

CV: ECG: SR; no ectopics

Abd: Soft, non-tender, no guarding

Skin: Cool, pale, moist

VS: BP: 88/60; P: 64; R: 24; T: 99° F; SpO<sub>2</sub> 97%; ETCO<sub>2</sub> 30 w/ square waveform

Fluid resuscitation:		

What IMC special considerations are indicated for this patient?

## **GLUCOSE / DIABETIC Emergencies**

24. What is the normal glucose range in neonates >3 days to adults?

Fasting: Non-fasting:

- 25. If a patient with hypoglycemia has a GCS of 14 and is awake, alert, and able to independently swallow food or liquids, which of these is preferred to rapidly increase blood sugar?
  - A. 1 ice cream bar
  - B. 7-8 Hershey kisses
  - C. 1 container of sugar-free Jello
  - D. Sugared soft drink or ½ cup (4 oz.) fruit juice
- 26. An adult is awake and jittery with a history of type 1 DM. The patient is pale, cool, and moist. VS: BP 150/80; P 110 (ST) R 16. Glucose is 64. What dose of Dextrose 10% is indicated?
  - A. 2.5 gm (25 mL)
  - B. 5 gm (50 mL)
  - C. 12.5 gm (125 mL)
  - D. 25 gm (250 mL)
- 27. A pediatric patient weighs 88 lbs and presents with a bG reading <60. What dose of Dextrose 10% is indicated? (Dose: 0.5 g/kg)
  - A. 10 gm (100 mL)
  - B. 15 gm (150 mL)
  - C. 20 gm (200 mL)
  - D. 25 gm (250 mL)
- 28. If an adult presents with a glucose level < 60, what drug (dose & route) should be given?

- 29. An unconscious adult received dextrose 10% IVP for hypoglycemia. After regaining consciousness, the patient is refusing transport to the hospital. Of these options, what must the patient be advised to do before EMS leaves the scene?
  - A. They need to eat to prevent recurring hypoglycemia
  - B. They should check their blood sugar ever 5 minutes for the next hour
  - C. They should skip their next dose of insulin to avoid another dip in blood sugar
  - D. They should take their next insulin dose early to offset the effects of the IV dextrose

#### Questions 30 – 32 refer to the following scenario:

An unconscious female appears to be in her late 40's. She is found in bed; opens her eyes and withdraws to a pressure stimulus; and is moaning incoherently. VS: BP110/68; HR 112; R deep and rapid at a rate of 40; SpO<sub>2</sub> 98%; ETCO2 26 with a square waveform. Her lips are dry and cracked, skin is flushed, warm and dry; pupils are midpoint and reactive to light. You note a sweet odor to her breath. She is wearing a Medic-Alert tag revealing that she is a type 1 diabetic.

30.	What condition is this patient likely experiencing?						
	<ul> <li>A. Insulin shock</li> <li>B. Profound hypoglycemia</li> <li>C. Diabetic ketoacidosis (DKA)</li> <li>D. Hyperosmolar hyperglycemic nonketotic syndrome (HHNS)</li> </ul>						
31.	What intervention is indicated as long as the lungs are clear?						
	<ul> <li>A. 10% dextrose, 250 mL IV or IO</li> <li>B. NS wide open up to 1 L unless contraindicated</li> <li>C. O<sub>2</sub> at 2 L per simple face mask so the patient rebreathes CO<sub>2</sub> and stops hyperventilating</li> <li>D. Assist the patient in administering an additional dose of insulin to bring the blood sugar down</li> </ul>						
32.	Besides hyperglycemia, what two major pathophysiological problems are occurring simultaneously in this patient?						
33.	An elderly adult with type 2 DM has had a fever and productive cough of green sputum for three days. The pt is comatose and appears severely dehydrated. Glucose monitor reads HI. VS: BP 90/60, P 120, R 16 and regular with no abnormal breath odor. What should a PM suspect?						
	<ul> <li>A. Insulin shock</li> <li>B. Hypoglycemia</li> <li>C. Diabetic ketoacidosis (DKA)</li> <li>D. Hyperglycemic hyperosmolar non-ketotic syndrome (HHNS)</li> </ul>						
HYPE	<u>RTENSION</u>						
34.	Hypertensive urgencies and emergencies both have SBP elevations above:						
35.	What S&S of a hypertensive emergency suggest end-organ dysfunction?  Neurologic damage						
	Cardiovascular damage						
	Other organ system dysfunction						
	Ask about:						
36.	If a patient with a hypertensive emergency develops chest pain or pulmonary edema, what EMS intervention is indicated?						
PSYC	H / BEHAVIORAL /Agitated/Violent (adult & peds)						
37.	What assessments must be done to determine decisional capacity?  Alertness (GCS) and orientation:						
	Speech:						
	Affect:						
	Behavior:						
	Cognition:						

38.

	health	health safety risk level should be assigned?				
	A. B. C.	Low Medium High				
39.	a gun	You are called to a home where a wife greets you outside and states that her husband is inside the house with a gun and threatening to kill anyone who comes near. What are the most appropriate actions? <b>Select the two options that are correct.</b>				
	A. B. C. D. E.	Withdraw to a safe place Ask the wife to stay with the husband until help arrives Contact police to secure the scene before EMS entry Enter the home immediately to sedate the patient and safely transport ASAP Have the wife talk to the man from outside to convince him to go to the hospital				
40.	List a	t least three possible RISK FACTORS for suicide:				
41.	 Which	n of these is indicated when presented with a patient who is a suicidal risk?				
	A. B. C. D.	Spend as little time as on-scene as possible; proper care can only begin at the hospital Position yourself higher than the patient so they must look up at you Using safety measures such as continuous visual observation Stand within one foot of the patient so they must focus on you				
42.	If a pt has S&S of anxiety, is verbally aggressive and confrontational but is cooperative and has a low-medius safety risk; what steps are indicated first?					
43.	If that	is unsuccessful and if BP (MAP) normal for pt/age, what intervention is indicated next?				
44.	or oth	If a patient is physically aggression/violent has severe agitation; is UNcooperative and a high safety risk to self or others, what dose and route of ketamine is indicated if there is no IV and verbal de-escalation is unsuccessful and the situation is unsafe for the patient and/or the responders?				
	A. B. C. D.	2 mg/kg IM/IN up to 150 mg 4 mg/kg IM/IN up to 300 mg 250 mg (5 mL) IM, may repeat X1 500 mg (10 mL) with 6 L O <sub>2</sub> /HHN or mask				
45.		Which of these is an acceptable transport position for an agitated patient in 4-point restraints who is at risk for airway compromise?				
	A. B. C. D.	Prone with both arms secured over their head Hogtied, under a backboard On their side with a pillowcase placed over their head to prevent spitting On their side with one arm secured above the head and the other at the patient's side				

If an adult presents intoxicated, disinhibited, has no insight, is unpredictable, yet cooperative; what mental

46.	If a patient and intervention is	uestions #4, #5 or #6 on the <b>suicide screen</b> contained in the SOPs, what					
47.	An alert and oriented adult appears depressed and tells EMS that they are hearing voices telling them to overdose on their sedatives and end their pain. The patient is refusing to come to the hospital and wants to stay with a friend. Which of these EMS actions is indicated?						
	B. Provid C. Trans	<ul> <li>B. Provide full disclosure of risk and have the patient sign a refusal form</li> <li>C. Transport the patient for a medical screening exam under implied consent</li> </ul>					
STRC	<u>)KE</u>						
48.	What is the de	sired maximum	scene time for a patient with suspected stroke?				
49.	What size IV is	s indicated?	Location of insertion?				
50.	center. No sta	EMS is transporting an elderly adult with a positive stroke screen from a skilled nursing facility to a stroke center. No staff or family members are coming with the pt. Which of these is indicated to facilitate effective communication?					
	<ul> <li>A. Show the sending nurse how to Skype to the ED</li> <li>B. Provide the sending facility with a returnable pager</li> <li>C. Get a call-back phone number of a reliable historian</li> <li>D. Have the SNF copy the chart notes from the past 24 hrs</li> </ul>						
51.	is oriented X4; left facial droop numbness. Co arm due to mo pronator drift. I VS: BP 180/96 PHM: HTN and	An adult presents with weakness of the right arm for the past 30 minutes. GCS 15; he says the right words and is oriented X4; opens & closes his eyes to commands and can wrinkle both sides of his forehead. There is a left facial droop and asymmetrical smile. The patient denies vertigo, light or sound sensitivity, paresthesias or numbness. Coordination tests are normal for left arm and both legs; but cannot be accomplished on the right arm due to motor weakness. There are no vision changes/losses or gaze abnormalities. Right arm: immediate pronator drift. Left arm and both legs normal motor exam (no drift).  VS: BP 180/96; P 72; ECG: NSR; R 18; SpO <sub>2</sub> 92%; lungs are clear; glucose 120.  PHM: HTN and high cholesterol. Meds: olmesartan, Lipitor, and hydrochlorothiazide.  Last seen normal about 30 min ago. Which is indicated while on-scene?					
	<ul> <li>A. Oxygen to SpO<sub>2</sub> of 94%</li> <li>B. Sit in semi-Fowler's position</li> <li>C. Elevate patient's head on a pillow</li> <li>D. Midazolam standard dose to prevent seizures</li> </ul>						
52.	When calling in	n the stroke aler	t, how should the BEFAST screen results be communicated?				
	Balance Eyes Face Arm drift: Speech Time (LKW)	☐ Normal ☐ Normal ☐ Normal ☐ Normal ☐ Normal ☐ Second Sec	☐ Abnormal				
53.		You are within 5 minutes of transport time to the nearest Primary Stroke Center and 20 minutes from the nearest Comprehensive Stroke Center. Where should the above patient be transported?					
	Nearest Primary Stroke Center     Nearest Comprehensive Stroke Center						

54. An adult presents with extreme vertigo, double vision (diplopia), and photophobia for the past 45 minutes. GCS 15; the patient eliminates some words and speaks in short but meaningful sentences; opens & closes his eyes to commands and can wrinkle both sides of his forehead. No facial droop, smile is symmetrical. The left eye has a fixed gaze abnormality to the ear and there are losses of visual fields to the right; PERL. The patient denies paresthesias or numbness. There is no arm or leg drift; but the patient does not perceive touch on both sides simultaneously. VS: BP 210/104, HR 88, ECG Controlled A-Fib; 12 L: No acute ischemic changes; R 16, SpO<sub>2</sub> 96%; lungs clear; glucose 160. PHM: T2 diabetes; atherosclerosis; A-fib. Meds: metformin, captopril, rivaroxaban. Last seen normal about 4 hours ago

Which 3 of this patient's clinical presentation S&S suggest a large vessel occlusion (LVO)?

- 55. You are within 10 minutes of transport to the nearest Primary Stroke Center and 25 minutes from the nearest Comprehensive Stroke Center. Where should this patient be transported?
  - A. Nearest Primary Stroke Center
  - B. Nearest Comprehensive Stroke Center

#### **SEIZURES**

- An unconscious adult is found supine on the floor with rapid and unlabored ventilations and frothy secretions coming from the mouth. Bystanders report the pt had a seizure for approx. 3 minutes and the tonic clonic activity ceased just prior to EMS arrival. No trauma involved to the head or neck. The pt remains unconscious but responds with purposeful movement to pressure and has equal midpoint pupils that react briskly to light. Which of these actions are indicated next? **Select the two options that are correct.** 
  - A. Position the patient on the side
  - B. Administer midazolam to prevent another seizure
  - C. Suction the oropharynx, assess need for NPA and O<sub>2</sub>
  - D. Give naloxone 2 mg IN or IM for possible opiate toxicity
  - E. Insert a bite block and apply O<sub>2</sub> /CPAP mask with 5 cm PEEP
- 57. What is different about the timing of IV/IO midazolam administration in a person who is having a seizure rather than one being treated for anxiety or sedation?

## **SEPSIS and SEPTIC Shock**

58. 75 y/o F (90.7 kg.) Primary symptom: fever and dyspnea. Pt denies, HA, nausea, or chest pain. Pt. previously had chest pain on inspiration. Found A&O sitting in bed, lethargic and c/o dizziness. Family states pt was not acting normally and was diagnosed with pneumonia 3 days ago. Low grade fever last night; spiked to 105°F this afternoon. PMH: HTN, Dt2 | Meds: nitrofurantoin, metformin, lisinopril, Januvia

Chest: Productive cough with unspecified sputum color; basilar crackles in LLL

Skin: Hot to touch, moist

Time	ВР	Pulse	RR	SpO <sub>2</sub>	GCS	ETCO <sub>2</sub>	Temp
1909	170/60 (97)	140	40	88	15	33	40.6
1916	166/60 (95)	138	44	94	15	32	40.6

ETCO<sub>2</sub> square waveform

ECG: ST Glucose 173

What is this patient's diagnosis at this time?

- A. Infection
- B. Sepsis
- C. Septic shock
- 59. Give three examples of patients who are immunocompromised:

- 60. What is the first assessment that must be done to start the decision tree for sepsis?
- 61. An elderly adult presents one day after being discharged from a hospital where she was treated for pneumonia. The pt is confused (GCS 14); feels hot to the touch with a persistent productive cough of yellow-green sputum. VS: BP 80/50; P 114; ECG ST; R 28, SpO<sub>2</sub> 90%; EtCO<sub>2</sub> 25 with square waveform. The 12-L ECG shows no acute ischemic changes. What are the QSOFA and septic shock criteria exhibited by this patient?
- An elderly adult presents with acutely altered mental status one day after being discharged from a hospital with a severe urinary tract infection. GCS 12. VS: BP 80/50; P 114; ECG ST; R 28, SpO<sub>2</sub> 90%; EtCO<sub>2</sub> 25 with square waveform; lung sounds clear. Glucose 180. The 12-L ECG shows no acute ischemic changes. Which of these is indicated *first*?
  - A. CPAP at 8 cm PEEP
  - B. Norepinephrine drip at 8 mcg/min
  - C. Sodium bicarbonate 50 mEq to reverse acidosis
  - D. IV NS 200 mL IV boluses in rapid succession (max 20 mL/kg)
- 63. How should norepinephrine be initially administered after adding 4 mg (4 mL) to 1,000 mL NS?
  - A. 2-10 mcg/kg/min
  - B. 5 mg/min titrated up to 10 mg/kg/min
  - C. 10 mcg/kg/min titrated up to 20 mcg/kg/min
  - D. 8 mcg/min titrated upward in 2 mcg/min increments to 20 mcg/min
- 64. If you are using macrodrip tubing calibrated at 20 gtts/mL, how many drops per minute should a norepinephrine drip be INITIALLY set to run?
  - A. 20
  - B. 30
  - C. 40
  - D. 120
- 65. How often should the vital signs be taken after starting norepinephrine until the target BP is reached?
- 66. Which are anticipated side effects of norepinephrine that require careful monitoring during administration?
  - A. Bradycardia and respiratory depression
  - B. Profound vasodilation and hypotension
  - C. HTN and decreased peripheral perfusion
  - D. Prolonged QT syndrome leading to torsades de pointes