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Question: 1

Which of the following statements regarding epidural hematoma is most accurate?

- A. Epidural hematomas are typically described as being crescent-shaped when seen on computed tomography (CT) scan
- B. Epidural hematomas may be arterial or venous in origin, with the etiology of most being venous
- C. Epidural hematomas in the pediatric population typically present with headache and drowsiness
- D. Epidural hematomas that progress may cause compression of the third cranial nerve

Answer: D

Explanation:

Correct answer: Epidural hematomas that progress may cause compression of the third cranial nerve. Epidural hematoma may be formed from a collection of either arterial or venous blood pooling between the skull and dura. Most epidural hematomas are arterial in origin, which are typically classified as acute, and have a lenticular shape (shaped like a lens) noted on radiologic examination. Subacute epidural hematomas more commonly arise from venous hemorrhage and are present for a longer period of time before symptoms are experienced by the patient. Ninety percent of subacute epidural hematomas are associated with linear skull fractures. The classic presentation of an acute epidural hematoma seen after the patient sustains the initial injury are a brief loss of consciousness followed by a period of recovery in which the patient is lucid and alert and the neurological examination is normal, followed some time later by the development of a headache and then a gradual decrease in the level of consciousness.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 233.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 189.

Question: 2

At what altitude does your night vision begin to decrease?

- A. 50,000 ft
- B. 10,000 ft
- C. 1000 ft
- D. 5000 ft

Answer: D

Explanation:

Correct answer: 5000 ft

At this altitude, night vision begins to be impaired.

At 1000 ft, there are no physiological changes noted.

Reference:

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 98.

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 30.

Question: 3

You respond to the scene of a two-vehicle accident on a narrow road in a rural area and find the first vehicle upright but facing the wrong way in the road and severely damaged on the passenger side, while the second vehicle left the roadway and appears to have rolled over, and is now upside down with the roof crushed downward. Which of the following spinal injuries are you most likely to encounter in the occupants of the second vehicle if they were properly restrained at the time of the accident?

- A. Hangman's fracture
- B. Greenstick fracture
- C. Chance fracture
- D. Jefferson's fracture

Answer: D

Explanation:

Correct answer: Jefferson's fracture

Of all the different types of motor vehicle accidents (MVAs) involving passenger cars, the rollover accident causes the most unpredictable of the injuries sustained by occupants of vehicles involved in MVAs. The tumbling and multiple-impacts that occur during a rollover accident often contribute to passengers of these MVAs sustaining multi-system injuries. Spinal injuries may be incurred during these accidents; Jefferson's fracture, a burst fracture of the C1 vertebra, may occur in MVAs in which the vehicle both rolled over and the roof was crushed downward.

A hangman's fracture, which is a cervical spine fracture involving the 2nd cervical vertebra, often occurs in rear-impact collisions. A chance fracture, which is a cervical spine fracture involving the T12-L1 vertebra, also often occurs during rear-impact collisions.

A greenstick fracture is a fracture typically of a young, soft bone (as in a developing child) in which the bone bends and incompletely fractures, and also may occur in vertebral burst fractures of the lumbar spine. This type of fracture is not necessarily associated with MVA collisions, but may occur.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 217-218.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 202.

Question: 4

Which of the following statements regarding medical transport of the pediatric patient is most accurate?

- A. The pediatric patient's response to various medical interventions does not typically interfere with delivery of necessary care

- B. The medical transport provider should focus communication on the parents when transporting pediatric patients
- C. When transporting a pediatric-aged patient, the medical transport provider is also providing care to the family members
- D. When transporting pediatric patients with special needs, the medical transport provider should follow standard developmental guidelines

Answer: C

Explanation:

Correct answer: When transporting a pediatric-aged patient, the medical transport provider is also providing care to the family members

The medical transport provider will face unique challenges when providing care and transport of the pediatric population. While generalizations about developmental level and developmental achievements can be made, not all pediatric patients will respond or communicate at the level most typically consistent for their chronological age. Children with special health care needs particularly may present greater challenge in this area if they are developmentally delayed as well, requiring the medical transport provider to present information in a manner and at a level that the child can understand, and performing necessary procedures or interventions in a way that is less frightening or overwhelming to the patient. When caring for the pediatric population that presents these challenges, the tendency is for the medical provider to "ignore" the child and focus communication solely with the parents or family members; the medical transport provider must remember to verbally engage with the pediatric patients he or she cares for, taking steps to ensure his communication with the child is at a level the child can understand. In addition, the medical transport provider must remember that when caring for a pediatric patient, they are also caring for the parents and family members of the child.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 491.

Question: 5

When preparing a patient with a flail chest injury for transport, which position should be considered to facilitate better respiratory function?

- A. Lower the head of the stretcher to 30°
- B. Place the patient on the affected side
- C. Elevate the head of the stretcher to 30°
- D. Place the patient in the prone position

Answer: B

Explanation:

Correct answer: Place the patient on the affected side

Ideally, a patient with a flail chest would be transported in a semi-sitting position; however, if the victim cannot tolerate this, placing them on the injured side will help prevent the paradoxical motion of the flail chest, stabilizing the chest wall, and minimize damage to surrounding tissues. Additionally, bulky dressings (or pillows/blankets) can be used to help stabilize the chest wall.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 253.

Question: 6

Nitroglycerin (NTG) should be used with extreme caution when treating which of the following patients?

- A. Patient's EKG shows ST elevation in II, III, and AVF
- B. Patient has a bundle branch block
- C. Patient has ST elevation in V2-V4
- D. Patient's blood pressure is 145/97

Answer: A

Explanation:

Correct answer: Patient's EKG shows ST elevation in II, III, and AVF

Patients with ST elevation in the inferior leads II, III, and AVF are at risk for right ventricular infarction as well. These patients are preload dependent. NTG causes vasodilation and, therefore, venous pooling in the vena cava, thereby reducing blood flow to the right ventricle which could cause further cardiac compromise.

A bundle branch block is not a contraindication by itself to giving nitroglycerin if that patient is experiencing chest pain. A patient with anteroseptal ST elevation would benefit from the administration of NTG. A patient with high blood pressure would benefit from the use of NTG if they were experiencing chest pain.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 302.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 145.

Question: 7

Which of the following breathing techniques most accurately describes the use of tactical breathing?

- A. Inhaling for 4 seconds, holding the inhaled breath for 4 seconds, exhaling for 4 seconds, then holding the exhale for 4 seconds
- B. Inhaling for 4 seconds, holding the inhaled breath for 7 seconds, then exhaling for 8 seconds
- C. Breathe in slowly through the nose, then exhale slowly through pursed lips
- D. Inhale slowly for a count of 15, then exhale slowly for a count of 30

Answer: A

Explanation:

Correct answer: Inhaling for 4 seconds, holding the inhaled breath for 4 seconds, exhaling for 4 seconds, then holding the exhale for 4 seconds

Tactical breathing is a breathing technique that was designed by the military for use in extremely stressful situations to try to help military personnel quickly de-escalate from their stress and be able to

continue working within the stressful environment. This breathing technique aids in lowering heart rate and stress levels, and can help in moderating the surge in sympathetic nervous system activity in direct response to stress.

The technique of inhaling for 4 seconds, holding holding the inhaled breath for 7 seconds, then exhaling for 8 seconds, is referred to as "relaxing breath" or the "4-7-8 breathing technique" and is used to help in falling asleep or decreasing anxiety.

Pursed lip breathing is useful for improving shortness of breath.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 81.

Question: 8

The medical air transport team is packaging an 80-year-old male patient who has an abdominal aortic aneurysm (AAA) and is being emergently transferred for surgical repair. The patient's family is requesting to delay the transport by one hour to spend time with the patient prior to transfer. Which of the following statements regarding AAA is most accurate?

- A. Males are at a much greater risk of experiencing AAA than females
- B. Half of all AAA occur in women under 65
- C. The medical crew should prepare for aggressive volume resuscitation in the event of cardiac arrest
- D. Transport should not be delayed due to the emergent need for surgical repair

Answer: B

Explanation:

Correct answer: Half of all AAA occur in women under 65

While many patients with abdominal aortic aneurysm (AAA) do not experience rupture of the AAA (RAAA) and are able to undergo surgery in a timely fashion to correct the defect, the risk of RAAA is real, and poses greater than an 80% mortality risk. Due to this significant risk of death should a AAA rupture, medical transport crew members should be willing to consider a brief delay of transport to allow family members to spend time with their loved one prior to transport. The medical crew should also be prepared for the likelihood of cardiac arrest in the event of RAAA; however, in the event of hemorrhage, fluid volume resuscitation should be managed very cautiously due to the risk of dislodging a clot with aggressive fluid volume administration.

Until recently, it was standard "knowledge" that males made up the lion's share of AAA cases. More recent data has found that nonsmoking females who are under the age of 65 make up 50% of all cases of AAA.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 372-373.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 94.

Question: 9

As part of the medical transport team, you are called out to respond to a home where an 18-month-old child is reported to have sustained an oral commissure burn. Which of the following is the most likely cause of oral commissure burns in a child under two years of age?

- A. Sucking on an electrical cord
- B. Chewing on a cellular telephone battery
- C. Drinking overheated formula through a bottle
- D. Administration of overheated foods on a spoon

Answer: A

Explanation:

Correct answer: Sucking on an electrical cord

Electrical injuries can result in burns when the patient becomes part of the circuit of electricity. High-voltage electrical current burns may have more similarity in appearance to crush injuries than actual burns, due to the devastating effects of electricity on the tissues. Dry skin is more likely than wet skin to sustain burns that are larger and result from higher heat which is produced due to the increased resistance presented by the dry skin. Children under the age of two years frequently sustain oral commissure burns (burns to the lips or oral mucosa) as a result of sucking on low-tension (110-volt) electrical cords.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 279.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 224.

Question: 10

You are transporting a patient with hypertensive crisis and need to initiate a sodium nitroprusside infusion. Your patient weighs 70 kg. Which of the following responses reflects the correct dosage rate (minute rate or hourly rate) for your patient, assuming the sodium nitroprusside solution was made by mixing 50 mg of nitroprusside in 500 mLs of 5% dextrose, and you are initiating the infusion at the highest allowable starting rate for this patient?

- A. 2.1 mLs/hr
- B. 35 mLs/hr
- C. 0.35 mLs/minute
- D. 0.21 mLs/minute

Answer: C

Explanation:

Correct answer: 0.35 mLs/minute

Sodium nitroprusside infusions for treatment of hypertensive crisis are dosed at a starting rate of 0.3 micrograms (mcg) to 0.5 mcg/kg/minute, and a maximum infusion rate of 10 mcg/kg/minute. To obtain the correct dosage rate for this patient, who weighs 70 kg, we can use the following basic formula, which will allow us to calculate both the minute rate and the hourly rate:

desired dose x kg x 60/concentration = mL/hr

We are wanting to administer the highest possible initiation dose, 0.5 mcg/kg/minute, to our patient in this scenario. And we have mixed 50 mg of sodium nitroprusside in 500 mLs of D5W. We first need to convert our concentration from mg to mcg. There are 1,000 mcg in 1 mg. Simple math computation of 50 mg x 1,000 = 50,000. So we have 50,000 mcg of sodium nitroprusside in our 500 mL bag of D5W.

Breaking this down to the number of mcg/mL, we use this computation to determine the concentration of our solution: 50,000 mcg/500 mLs = 100 mcg/mL

Now that we have this number, we can begin working on our basic formula.

0.5 mcg (the highest possible initiation dose) x 70 kg (patient weight) x 60 (60 seconds, or 1 minute)/100 mcg (the solution concentration per mL) = mL/hr

2,100/100 = mL/hr

21 = mL/hr (this is our hourly rate)

Finally, if we want to calculate the minute rate of our sodium nitroprusside infusion.

21 mL/60 = 0.35 mLs

For a rate of 0.35 mLs/minute

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 313.

Question: 11

Which law states that the diffusion rate of a gas is proportional to the difference in partial pressure and the surface area of the membrane, and is inversely proportional to the thickness of the membranes?

- A. Henry's Law
- B. Gay-Lussac's Law
- C. Fick's Law
- D. Charles' Law

Answer: C

Explanation:

Correct answer: Fick's Law

This law is important in understanding oxygenation and ventilation of patients on ventilator management. Decreasing the alveolar membrane and increasing the FiO₂ will cause oxygen to diffuse across the membrane at a higher rate.

Gay-Lussac's Law relates the pressure changes with temperature changes. Henry's law describes the diffusion of gas into a liquid. Charles' Law describes the relationship between gas volume and temperature.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 28-29.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 100.

Question: 12

During transport of a critically ill patient, you become concerned that the patient may be experiencing acidosis; however, you do not have access to arterial blood gas (ABG) testing capabilities. Which of the following formulas may be used to determine if your patient is experiencing metabolic acidosis?

- A. $(\text{Na}^+) - (\text{Cl}^- + \text{HCO}_3^-)$
- B. $(\text{K}^+) - (\text{Cl}^- + \text{CO}_2)$
- C. $(\text{Na}^+) - (\text{K}^+ + \text{HCO}_3^-)$
- D. $(\text{K}^+ + \text{Mg}^{2+}) - (\text{Cl}^- + \text{HCO}_3^-)$

Answer: A

Explanation:

Correct answer: $(\text{Na}^+) - (\text{Cl}^- + \text{HCO}_3^-)$

Determination of the anion gap can be used to assess for metabolic acidosis and is often referred to as the "poor man's ABG." Normal anion gap is 12 (+/-4), with a worsening acidosis being indicated by a larger number. Evaluation of the anion gap is particularly helpful in instances when there is suspicion for toxicity or poisoning; several mnemonics have been devised to aid in remembering potentially toxic agents that may contribute to anion gap acidosis. An example of one of the mnemonics is shown below.

"MUDPILES"

M: Methanol

U: Uremia

D: Diabetic ketoacidosis

P: Propylene glycol

I: Isoniazid or iron

L: Lactate

E: Ethylene glycol

S: Salicylates

Reference:

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 66-67.

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 416.

Question: 13

A 63-year-old homeowner, attempting to troubleshoot an apparent interruption in the solar panels powering his workshop, sustains electrical injury as a result of inadvertent contact with the direct current (DC) upon opening the battery storage panel. His wife finds him lying unresponsive on the floor, and calls emergency medical services (EMS). Which of the following cardiac rhythm disturbances are the medical transport providers most likely to encounter upon assuming care of this patient?

- A. Supraventricular tachycardia
- B. Atrial fibrillation
- C. Ventricular fibrillation
- D. Asystole

Answer: D

Explanation:

Correct answer: Asystole

Significant electrical injury sustained from contact with direct current (DC) most often results from inadvertent exposure to high-voltage (force) sources of this energy, such as solar panel storage batteries. Batteries are the primary source of DC, with many household items using a combination of alternating current (AC) low-voltage electricity and DC (rechargeable devices such as laptops, cellular phones, MP3 players, etc.). Inadvertent completion of a DC electrical loop typically results in the individual being "blasted" away from the electrical source as a result of one strong muscular contraction stimulated by the electrical impulse. This is in contrast to exposure to AC, which produces tetanic contractions of the muscles when an individual inadvertently completes the electrical circuit. Cardiac dysrhythmias may result from electrical injury, with asystole often resulting from depolarization of the entire myocardium when an individual sustains contact with the DC source.

Ventricular fibrillation and atrial fibrillation are most likely to result from contact with AC sources.

Reference:

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 223.

Question: 14

Which of the following statements regarding benzodiazepine overdose is most accurate?

- A. Flumazenil should be administered via rapid IV push to reverse the effects of the benzodiazepine overdose
- B. Due to its narrow therapeutic window, a small error in benzodiazepine dosing can cause unintentional overdose
- C. Patients who overdose on benzodiazepines often have several other poisons in their system at the time of overdose
- D. Initial treatment of benzodiazepine overdose focuses on management of the patient's ABCs

Answer: C

Explanation:

Correct answer: Patients who overdose on benzodiazepines often have several other poisons in their system at the time of overdose

Benzodiazepine overdose as a sole result of ingestion of the benzodiazepine does not occur with nearly as much frequency as does benzodiazepine overdose as a result of polypharmacy.

Quite a large dose of benzodiazepine must be ingested for overdose to actually occur as a direct result of the benzodiazepine. Most benzodiazepine-related poisonings occur as a result of the individual having multiple poisons present in his system at the time, including alcohol, the tricyclic antidepressants, etc. The first responder treating an individual with a known benzodiazepine overdose must treat with caution due to this likelihood of multiple poisons being in the patient's body, as the patient may suffer severe negative effects as a result of administration of the antidote (flumazenil), particularly severe seizures. If flumazenil is administered, it should be administered slowly and in small doses in an attempt to prevent the development of seizures; rapid administration of flumazenil itself can cause seizures. If the patient has ingested multiple substances, the seizure threshold may be significantly lowered in the face of flumazenil administration.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 419-420.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 237.

Question: 15

A patient with Mallory-Weiss syndrome is being packaged for transport from the referring facility. All of the following potential complications of Mallory-Weiss syndrome may occur as a direct result of medical air transport, except:

- A. Hemopneumothorax
- B. Alterations in gas exchange
- C. Gastric pneumonitis
- D. Mediastinitis

Answer: D

Explanation:

Correct answer: Mediastinitis

Mallory-Weiss syndrome, while dangerous due to the nature of esophageal rupture and subsequent bleeding, is typically not considered to be life-threatening, and often may resolve without intervention. If bleeding does not resolve spontaneously, the esophageal rupture should be managed in the same manner as esophageal varices. Mediastinitis may occur as a result of leaking of gastric contents into the chest cavity. With medical air transport, as a result of altitude pressure changes, patients may also experience complications such as gastric pneumonitis, hemopneumothorax, and alterations in gas exchange.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 368.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 87.

Question: 16

You and your team are called to a rural hospital for the emergent transport of a newborn to a higher level of care facility. The sending facility nurse tells you the neonate has been diagnosed with coarctation of the aorta and that the baby has absent femoral pulses. Which medication would keep the patent ductus arteriosus open?

- A. Indocin
- B. Terbutaline
- C. Surfactant
- D. Prostaglandin E1

Answer: D

Explanation:

Correct answer: Prostaglandin E1

Prostaglandin E1 or PGE1 keeps the patent ductus arteriosus (PDA) open, which may be required in patients suffering from coarctation of the aorta (PDA). The two medications that act on the PDA are PGE1 and Indocin.

Indocin is used to close a PDA. Neither terbutaline nor surfactant act on PDA and will not be useful to this infant.

Question: 17

What is the purpose of Resuscitative Endovascular Balloon Occlusion (REBOA)?

- A. To tamponade the inferior vena cava to stop bleeding
- B. To occlude the descending aorta and stop internal bleeding
- C. To monitor cardiac output
- D. To monitor fluid volume status

Answer: B

Explanation:

Correct answer: To occlude the descending aorta and stop internal bleeding

REBOA (Resuscitative Endovascular Balloon Occlusion), stops internal, non-compressible, hemorrhage by occluding the descending aorta.

Question: 18

What is the preferred method of transport for diving injuries?

- A. It does not matter what method is used
- B. It is not recommended to transport the patient until symptoms resolve
- C. High altitude flight
- D. Ground transport

Answer: D

Explanation:

Correct answer: Ground transport

Ground transport is the preferred method due to the importance of keeping the pressure variations minimal. If flight is the only option, care should be taken to fly at low altitudes to avoid major pressure changes, which could worsen the patient's condition.

Question: 19

An 82-year-old male patient with dementia residing in a skilled nursing facility slipped while being assisted in the shower, resulting in him falling forward and striking his chin on the shower floor with his

neck hyperextended. Emergency medical services were called to transport the patient and upon arrival, they noted a deep gash on the patient's chin, and the following neurologic findings: loss of motor control and weakness of the upper extremities coupled with complaint of pain and tingling to the hands, urinary retention, and priapism. Based on the information provided in the scenario, for which of the following spinal cord injuries (SCIs) should the transport team be most suspicious?

- A. Brown Sequard lesion
- B. Anterior cord syndrome
- C. Complete cord transection
- D. Central cord injury syndrome

Answer: D

Explanation:

Correct answer: Central cord injury syndrome

Central cord injury occurs most often in elderly patients who have fallen forward, striking their chin on the ground with the neck hyperextended. The injury is often frequently encountered in young males who have been involved in high-speed motor vehicle accidents. When central cord spinal injury occurs, the resulting disability takes place as a result of hyperextension of the cervical spine, versus as a result of cervical spine fracture or other disruption to the cervical spine area. Patients who sustain a central cord injury typically present with a greater degree of disability to the hands and upper extremities owing to impingement of the cervical spinal cord. The lower body and lower extremities are not affected as greatly as are the upper extremities due to the anatomical layout of nerve tracts of the lower body being located more laterally, while those of the upper body are located more medially. Bladder control is often affected, with urinary retention being most prevalent, and the presence of priapism may also be noted due to the dysfunction of the upper motor neurons.

Treatment is typically with administration of high-dose corticosteroids, followed by physical and occupational therapy. Surgery is not usually warranted in central cord injury. Over time, patients typically regain lower function and experience improvement of upper extremity function, but may never recover full use and sensation of their hands.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 244.

Smetana, Chris; Mauldin, Lindsay. Flight Medical Provider Study Guide: Current Concepts in Critical Care Transport. Pg 192.

Question: 20

All of the following are considered to be primary objectives in open-water survival in the event of a medical air transport water landing except:

- A. Protecting against salt and sun exposure
- B. Protecting against the development of hypothermia
- C. Signaling to any potential rescuers
- D. Maintaining and caring for any life rafts used

Answer: A

Explanation:

Correct answer: Protecting against salt and sun exposure

In the event of a forced water landing, the medical air transport crew members should take all the necessary steps to improve survival and possibility of rescue. Of primary importance is protecting all survivors against the development of hypothermia; if injured survivors are unable to attempt to make for shore, all survivors should aid in guarding the injured party from heat loss due to lower water temperature. Also of primary importance is the maintenance and care of any life rafts which can be used to aid in survival, as well as maximizing all measures of signaling for help.

Protecting against salt and sun exposure, while important, are of secondary importance.

Reference:

ASTNA. Patient Transport: Principles and Practice, 5th Edition. Pg 117.