



## Wilderness First Aid Scenario

**MULTIPLE INJURIES ON A SAILBOAT****Victim 1 (Paul) – Choking (Youth)****Victim 2 (Sean) – Traumatic Brain Injury with Suspected Skull Fracture (Youth)****Victim 3 (Michael) – Cervical Spine Injury (Youth)****SUMMARY**

A group of 10 youth and two adults is crewing a sailboat based out of the BSA's Florida Sea Base, with a Coast Guard-licensed captain on board.

The trip is going well on day four of a seven-day adventure. The crew is working together as a team. They are sailing in open water with a brisk wind, approximately five hours from the nearest port.

Several of the crew are having lunch on the deck with great laughter as they share exciting stories. The day is sunny with a light breeze, and the ship is underway with a youth crew member at the helm. The weather forecast has a possibility of thunderstorms late in the afternoon.

Paul, age 14, is very excited. He is laughing as he eats his lunch. Suddenly, he becomes very quiet, with a panicked expression on his face, and he holds up his hands to his neck in the universal indication of choking. He is unable to speak.

The youth at the helm is distracted by the commotion. The captain is nearby but unable to act as quickly as needed. While sailing downwind, the helmsman allows the ship to change direction abruptly, which causes the boom to swing suddenly towards the crew members. The boom hits crew member Sean, also age 14, on the right side of the head and knocks him to the deck, where he lays unconscious.

The boom then strikes another crew member, Michael, age 16, at the base of his neck on the right side, causing his neck to violently jerk from left to right before he falls to the deck. He is verbally responsive but writhing in pain from his neck injury. The captain regains control of the sailboat and resumes its stable course. He indicates to the others that it is safe to care for the victims.

**SCENARIO DETAIL**

None of the crew – youth or adults – has experience with sailing. The captain has advanced first-aid training. Both adult leaders are trained in wilderness first aid (WFA). They have copies of everyone's Annual Health and Medical Record (AHMR) on board.

**STUDENT RESPONSE****Victim 1 (Paul) – Youth Choking Victim**

## 1. Scene safety:

Ensure that scene safety assessment is completed. Due to the nature of this scenario, this should be done within a few seconds. Primary concern should be the stability of the ship.

## 2. Primary assessment:

An initial assessment of Paul is started immediately.

He is distressed, unable to speak, unable to cough, and is not breathing. He is holding both of his hands up to his neck.

Rescuer 1 quickly moves to apply the standing abdominal thrust maneuver with immediate success.



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Paul coughs up a large amount of food, which he spits out on the deck. Paul begins breathing and is able to speak. The rescuer asks if he is okay. Paul states, "I'm fine now!" He has no residual issues from the event.

No further care or assessment is needed.

### **Victim 2 (Sean) – Youth with Head Injury and Possible Neck Injury**

#### 1. Scene safety:

Ensure that scene safety assessment is completed. Due to the nature of this scenario, this should be done within a few seconds. Primary concern should be the stability of the ship, safety of the victim, and the ability to provide care safely.

#### 2. Primary assessment:

ABCDE approach (airway, breathing, circulation, disability, and exposure):

Sean was observed to be struck by the boom on the right side of his head, and he dropped to the deck unconscious.

**A** – Open airway

**B** – Respirations are regular and unlabored

**C** – Mucous membranes (tissue inside mouth) are pale pink and moist; no evidence of open wounds or external bleeding

**D** – Unresponsive to verbal stimuli; starting to move all limbs spontaneously

**E** – Laying prone on deck

#### 3. Secondary assessment:

After five minutes, the victim starts to respond to verbal stimuli. However, he does not know his name, where he is, or what happened.

##### a. Physical exam:

Head – Skull intact, skin intact but pink in injured area, pupils are equal and reactive, clear fluid coming from right ear (small amount)

Neck – Pain-free; no deformity

Chest – Breathing; no deformity

Abdomen – Soft

Pelvis – Intact; no deformity

Arms – DOTS (deformities, open wounds, tenderness, and swelling)-negative

Legs – DOTS-negative

Back – No deformity; no localized tenderness determined

##### b. Vital signs (first check; recheck should occur every 15 minutes or as needed until advanced care is available.)

**WFA Instructor Note:** Victim 2's vital signs remain stable.

Level of responsiveness: Drowsy, not aware of person, time, or place; able to follow simple commands

Heart rate: 100 bpm, regular

Respirations: 20 bpm, unlabored, shallow

Skin: Color, temperature, and moisture are normal except over injured area, which is pink



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c. **SAMPLE** assessment:

(Information gathered from Annual Health and Medical Record and crew members)

**S** – As above

**A** – None

**M** – Claritin, 1x per day

**P** – Seasonal allergies

**L** – Eating lunch prior to injury. Output: unknown

**E** – Standing up on deck of sailboat; helmsman became distracted and did not warn those on deck that there was danger

### **Victim 3 (Michael) – Youth with Possible Cervical Spine Injury**

Michael was struck on the right side at the base of the neck. He suddenly twisted his neck and dropped to the deck, holding his neck and complaining of pain. This victim is verbally responsive and writhing in pain.

1. Scene safety:

Ensure that scene safety assessment is completed. Due to the nature of this scenario, this should be done within a few seconds and at the same time for both Victims 1 and 2. Primary concern should be the stability of the ship, safety of victim(s), and the ability to provide care safely.

2. Primary assessment (**ABCDE** approach):

**A** – Airway is open

**B** – Breathing is rapid and shallow

**C** – No evidence of open wounds or external bleeding

**D** – Responds to verbal commands

**E** – Laying prone on deck

3. Secondary assessment:

Michael responds to verbal commands. He is complaining of severe pain on the right side of his neck. After a few minutes, he begins complaining of increasing tingling in his right arm.

a. Physical exam:

Head – Skull and scalp intact, no evidence of bruising, tenderness, or deformity; pupils equal and reactive

Neck – Severe tenderness from base of right side of neck to midline lower neck

Chest – Breathing; no deformity

Abdomen – Soft; no tenderness

Pelvis – Intact; no pain

Arms (**DOTS** exam) –

**D** – No deformity

**O** – No open wounds

**T** – No tenderness

**S** – Right arm tingling with decreased sensation in right hand; symptoms begin to occur approximately five minutes after the neck injury. Left arm/hand: DOTS-negative



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Legs – DOTS-negative for both legs

Back – No deformity or tenderness

- b. Vital signs (first check): Recheck should occur at least every 15 minutes (or more often if needed) until advanced care is available.

**WFA Instructor Note:** Victim 3's level of consciousness (LOC) should deteriorate slightly.

LOC: A&Ox4

Heart rate: 100 bpm, regular

Respirations: 16 bpm, regular

Skin: Color, temperature, and moisture are normal; skin over injured area of neck is red; no swelling

- c. **SAMPLE** assessment:

**S** – As above

**A** – None

**M** – None

**P** – None

**L** – Lunch, has been drinking water; voided 1 hour ago

**E** – Standing up on deck of sailboat; helmsman became distracted and did not warn those on deck that there was danger

Vital signs (second check):

LOC: Becoming slightly drowsy, A&Ox2 = person and place

Heart rate: 88 bpm, regular

Respirations: 16 bpm, regular

Skin: No changes

### **POST-SCENARIO DEBRIEF**

When did the group determine that they needed advanced medical care? How did they determine this? Which victims needed advanced medical care? How did they contact emergency personnel?

#### **Victim 1 (Paul):**

- Victim 1 was choking on his lunch. In the process, the helmsman became distracted, turned the boat abruptly, and did not give the appropriate commands to warn the crew, resulting in an unsafe condition.

What safety issues ensued from the crew's reaction to the sudden condition overtaking Victim 1 (Paul)?

**Due to the emergency and inexperience, the youth at the helm became distracted, turned the boat abruptly, and did not give the appropriate commands to warn the crew, which resulted in an unsafe condition. Both issues occurred as a result, the boat was unstable, and the boom was swinging wildly.**



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### **Victim 2 (Sean):**

- Victim 2 has a suspected traumatic brain injury with significant loss of consciousness and clear fluid coming from his right ear. This is an indication for a “hurry” evacuation to medical facilities. The physical finding of equal and reactive pupils does not change the indication for a “hurry” evacuation.

**Expected student response: The victim is placed on their back (supine position) by logrolling with the help of several crew members to keep the head, neck, and spine in alignment. Protect the head, neck, and spine by padding as needed to maintain alignment, as well as protecting bony prominences. Rigid immobilization should not be used. The placement of some type of thin pad under the victim during the initial logrolling will help with comfort and maintaining skin integrity.**

- Careful monitoring of airway, breathing, circulation, and level of consciousness must occur until advanced emergency care is available. If vomiting occurs, prevent aspiration by logrolling victim onto their side in a modified HAINES (high arm in endangered spine) position. Be sure to support the head, neck, and spine.
- Repeat vital signs every 15 minutes, more frequently if needed.
- Notify the Coast Guard or appropriate authority of medical emergency by radio, etc.
- Plan to navigate to nearest port with medical facilities or as directed by authorities.
- Why would someone need padding under their head and body?
- How many aboard had CPR/AED/obstructed airway/WFA training?
- Why was this victim moved?

**Initially the victim was found prone (lying on his stomach) and was unconscious. Although it is recommended not to move a victim with a suspected head, neck, or spinal injury, in this case the victim’s initial position (prone) would not allow for maintaining an open airway for hours until emergency medical care arrives. It would be difficult to keep the victim’s airway open and monitor breathing. Advanced care is several hours away.**

- Did they need to protect the spine on this patient?

**Yes. Although the person was hit on the side of the head, there could have been some additional injuries due to the force of the strike to the head.**

- Why is the level of consciousness monitored so frequently?

**This victim was initially unconscious. After approximately five minutes, he began to awaken. However, this could be only temporary, and could change again; frequent monitoring needs to be a part of the ongoing assessment.**

### **Victim 3 (Michael)**

- Victim 3 has a suspected cervical (neck) spine injury and then develops neurological symptoms on his right side (arm). This is a clear indication of spinal immobilization and the need for immediate evacuation to medical facilities.

Secondary assessment (back): Assessment should be conducted carefully. Alignment must be maintained.

**The victim is placed on their back (supine) by logrolling with the help of several crew members, keeping the head, neck, and spine in alignment. Protect the head, neck, and spine by padding as needed to maintain alignment, as well as protecting bony prominences. Rigid immobilization should not be used. Placing some type of thin pad under the victim during the initial logrolling will help with comfort and maintaining skin integrity.**

- Careful monitoring of airway, breathing, circulation, and level of consciousness must occur until advanced emergency care is available. Prevent aspiration if vomiting occurs by logrolling victim onto their side in a modified HAINES position. Be sure to support head, neck, and spine.



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- Repeat vital signs every 15 minutes, more frequently if needed.
- Notify the Coast Guard or appropriate authority of medical emergency by radio, etc.
- Plan to navigate to nearest port with medical facilities or as directed by authorities.
- How did the responders immobilize the spine? What was the significance of the changing level of consciousness (LOC)? Did the responders note the significance?
- For which symptoms should they be monitoring?  
**Decreasing level of consciousness. Possible respiratory and circulatory failure.**
- How should rescue breaths be administered to a victim with a suspected neck injury?  
**If the victim with a suspected neck injury has stopped breathing, use minimal movements to open the airway sufficiently enough to allow good air flow, according to the American Red Cross and other nationally recognized providers of CPR instruction.**
- Were all three victims treated for shock?  
**Victims 2 and 3 should be treated for shock. Victim 1 has no residual medical issues.**