8.4 Medical Evacuations

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1. Purpose

The purpose of this procedure is to establish policies and procedures concerning emergency medical evacuations on board vessels operated by the Woods Hole Oceanographic Institution (WHOI).

2. Responsibility

Aboard all vessels operated by WHOI, the Masters are responsible for the safety of their vessels as well as each and every person aboard whether they are crewmembers or part of the scientific party. The Master is also responsible for ensuring that accurate and updated records of the patient are kept. This may be delegated to the Shipboard Medical Officer if applicable. These records are extremely important when communicating to medical authorities.

3. General

NOTE: These procedures were written under the assumption that the United States Coast Guard will be assisting in this operation. Bear in mind that WHOI vessels sail worldwide and these procedures may differ depending upon who/what country is available to provide the assistance needed.

Efficient and effective medical evacuation operations are critical to saving lives. Planning involves evaluating patient location and condition, selecting an appropriate evacuation method and facility, devising a rescue plan and selecting a delivery point and a means of transport.

Requests for medical assistance can range from relaying medical advice to evacuating patients to a hospital. Each situation must be evaluated to balance the risk to the patient and the risk of the evacuation. Elements to consider include the patient's condition, the weather, sea state, time of day, and the various alternatives in transporting the patient. There are many situations where a helicopter or boat evacuation could cause greater risk to the patient than simply monitoring the case (i.e. possible heart attack victim or spinal injury).

The master shall communicate with our designated commercial medical advisory company to determine the severity of the illness/injury of the patient and to determine if there is a need for medical evacuation from the ship. Every means of communication can and should be utilized to facilitate any evacuation or assistance. (Ex. SAT phone, radio, telex, fax, email) In cases where there are diving injuries, the Divers Alert Network (DAN) shall also be contacted. (See enclosure 1 for names/phone numbers) All attempts shall be made via direct commercial communications to contact medical authorities. The Coast Guard can be contacted, if necessary, to set up a relay between the ship and the medical advisory company. The Coast Guard will attempt to arrange direct contact between the ship and the advisory service.

Upon notification of a medical problem, the Coast Guard will set up a phone patch from their District Office to a flight surgeon regardless of how minor the case may seem. The flight surgeon can/will provide guidance in determining the relative severity of a medical condition and assess the medical implications of various evacuation methods.

Evacuation methods by ship vary according to displacement and whether the rescue is made in mid-ocean or close to land. Weather, tides, currents, sea conditions, shoals, reefs, or darkness may also be important factors. Medical evacuations directly from a vessel using ship-to-ship methods may include direct, raft haul, raft drift, small boat or haulaway line.

Occasionally, both a helicopter and a boat will be dispatched. Coast Guard helicopter evacuations will normally be accomplished using a rescue basket, stokes litter, or rescue strop.

A. The rescue basket is usually preferred, since it can be readily lowered to most surfaces and offers the greatest protection to the person being hoisted.

B. A stokes litter is used to hoist nonambulatory persons, or persons who have injuries that might be aggravated by sitting in a rescue basket.

C. The rescue strop is used only to hoist persons familiar with its proper use, for example, a military aviator. In all such cases, the rescue strop's safety straps must be fastened.

D. Hoists may be performed by lowering the rescue device directly or by first lowering a polypropylene trail line with weight bag, which allows persons on the surface to assist in maneuvering the rescue device as it is lowered and retrieved.

4. Procedures

Once communications have been established with the Coast Guard or other emergency rescue facility, the following procedures should be followed if applicable:

All persons who will be involved in the operation should be assembled around the radio. This will ensure that everyone involved will be aware of how the operation will be conducted. If some members of the crew cannot be spared due to duties, do the best you can to assemble the remainder.

Upon notification that a helicopter is enroute to your location, preparations should be made to maximize the safety of the hoisting operation for the patient, the vessel, and the helicopter.

A. Lower or stow all masts and booms that can be lowered. Provide a clear area for hoisting, preferably on the port side of the stern.

B. Consider the clearance of rigging lines and antennas, as well as the chosen deck area.

C. The helicopter pilot will make the final determination as to the location of the hoisting area upon arrival.

D. Plan to keep all unnecessary personnel out of the way.

E. All personnel on deck must wear PFDs and hardhats.

F. Do not take any flash photographs because they distract the helicopter crew during this demanding operation.

G. During the entire hoist operation, gale force winds are generated by the rotor system of the helicopter and are strongest directly beneath it. Ensure that all loose gear is stowed or secured so as not to pose a personal injury hazard due to being blown around on deck, or a hazard to the helicopter's rotor system or engines.

H. Ensure that the patient is wearing a PFD, unless his/her condition absolutely prevents it.

I. The patient should be informed of any instructions of the rescue device. If a litter is used, the uppermost strap (chest strap) must be placed under the patient's arms and over the patient's chest. All other straps are to be placed over the patient's body. If a basket is used, the patient should sit in the bottom of the basket, with his/her back to one end and must keep his/her arms and legs inside the basket until the basket is brought inside the helicopter.

J. The patient should have appropriate personal identification such as a driver's license, social security card, or passport and immunization record, a record of any medication(s) administered, and a modest supply of personal items, including any prescribed medications s/he may be taking regularly. Use of a small soft-type bag is recommended for packing these items. It should be tied to the litter between the patient's legs, or placed in the basket with the patient. Do not tie it to the hoist cable, hook, or steadying line. A person being hoisted should be free of any items of entanglement such as purses or luggage.

K. When the helicopter arrives, change course to place the wind 30 degrees off your port bow and continue at standard speed. Once steadying up on the new

heading, and after satisfied that there are no hazards on your radar, turn the radar to standby so that it does not radiate. The radar may be on again as soon as the helicopter departs the area with the patient. This new heading may be modified again at the request of the helicopter pilot upon arrival. Ensure that any heading the pilot asks for will not endanger the vessel. Advise the pilot immediately if any sea conditions or hazards exist which will limit navigational capabilities.

L. The helicopter should provide all of the required equipment for the hoist operation and will brief you prior to commencing the operation.

M. The helicopter may first deliver an orange steadying line with weighted bags at the end. Until the hoist operation is completed, one of your crewmembers must tend this line at all times, keeping the line free from fouling.

N. The vessel's crew, using the steadying line, should guide the rescue device to the selected location on deck. On each approach, allow the rescue device to touch your vessel to discharge static electricity. *An electrical shock hazard exists to individuals if they connect with an ungrounded helicopter hoist. Caution must be exercised when there is flammable/explosive cargo or when in the vicinity of a flammable spillage. The hoist rig must be grounded clear of the spillage or tank venting area to preclude a possible fire or explosion from an electrostatic discharge.*

O. If the rescue device has to be moved to the person being evacuated, unhook it from the hoist cable. Do not move the rescue device from the hoisting area with the hoist cable still attached. **If the cable is unhooked, do not attach the hook or the cable to any part of the vessel.**

P. For everyone's safety, the helicopter may move off to the side while the patient is prepared for the hoist.

Q. Upon signal from the vessel, the helicopter will move back over the vessel and lower the hook.

R. Allow the hook to touch your vessel to discharge static electricity, and then fasten the hook to the rescue device using the large part of the hook.

S. When everyone is ready for the hoist, have the deck crew give a vigorous thumbs up signal to the helicopter.

T. Ensure that the steadying line is tended to prevent the rescue device from swinging excessively, this is the primary reason it is being used.

U. Once the rescue device is inside the helicopter, the helicopter crew will probably discard the steadying line. You may keep it or toss it overboard, but ensure you do not foul your screw either way.

Enclosure II is a checklist used by the Coast Guard when gathering information for a medical evacuation. As much information as possible should be transmitted in order to establish a smooth relay of the information needed.

Enclosure I
Medical Emergency Phone Numbers

Notify:

GW Maritime Medical Access Primary Telephone: (202) 715 4219
Alternate Phone: (202) 741 2936
Backup Phone: (202) 715 4121
Facsimile: (201) 741 2214

Divers Alert Network (DAN) (919) 684-9111 emergency number
(800) 446-2671 routine matters toll free
(919) 684-2948 routine matters

Port Office (508) 289 2208 or (866) 829 1912

Ship's Agent (either last port or next port, whichever is closest)

U.S.CG Rescue Coordination Centers
Regional contacts for SAR emergencies

RCC	Location	Area of SAR Coordination Responsibility	Phone Number
Atlantic Area SAR Coordinator	Commander U. S. Coast Guard Atlantic Area Portsmouth, VA	Overall responsibility for areas covered by RCC Boston, RCC Norfolk, RCC Miami, RSC San Juan, RCC New Orleans and RCC Cleveland plus a portion of the North Atlantic Ocean out to 40 degrees west longitude	(757) 398-6700
RCC Boston	Commander First Coast Guard District Boston, MA	New England down to and including a portion of Northern New Jersey plus U.S. waters of Lake Champlain	(617) 223-8555
RCC Norfolk	Commander Fifth Coast Guard District Portsmouth, VA	Mid-Atlantic states including the majority of New Jersey down to the North Carolina/South Carolina border	(757) 398-6231
RCC Miami	Commander Seventh Coast Guard District Miami, FL	Southeast states from the South Carolina/North Carolina border around to the eastern end of the Florida panhandle plus a large portion of the Caribbean Sea.	(305) 415-6800
RSC San Juan (Sub-Center of RCC Miami)	Commander Sector San Juan San Juan, PR	Southeast portion of the Caribbean Sea	(787) 289-2042
RCC New Orleans	Commander Eighth Coast Guard District New Orleans, LA	Southern states including the Florida panhandle to the U.S./Mexico border in Texas plus the inland rivers including the Mississippi, Missouri, Ohio and tributaries.	(504) 589-6225
RCC Cleveland	Commander Ninth Coast Guard District Cleveland, OH	US waters of the Great Lakes, their connecting rivers and tributaries.	(216) 902-6117
Pacific SAR Coordinator	Commander U.S. Coast Guard Pacific Area Alameda, CA	Overall responsibility for areas covered by RCC Alameda, RCC Seattle, RCC Honolulu and RCC Juneau	(510) 437-3701
RCC Alameda	Commander Eleventh Coast Guard District Alameda, CA	California and Eastern Pacific Ocean waters assigned by international convention off the Coast of Mexico	(510) 437-3701
RCC Seattle	Commander Thirteenth Coast Guard District Seattle, WA	Oregon and Washington	(206) 220-7001
RCC Honolulu (operated as JRCC with DOD)	Commander Fourteenth Coast Guard District Honolulu, HI	Hawaii, U.S. Pacific Islands and waters of Central Pacific Ocean assigned by international convention (extending from as far a 6 degrees south to 40 degrees north latitude and as far as 110 west to 130 east longitude).	(808) 535-3333
Sector Guam (coordinates SAR under RCC Honolulu)	Commander Sector Guam	Guam and other U.S. territories and possessions in the far western Pacific Ocean.	(671) 355-4824

Enclosure II

PATIENT INFORMATION

Name_____ Age_____ Sex___ Nationality_____

Type of injury (symptoms and location):_____

When/how injury occurred:_____

_____

Medications administered (amount and type):_____

_____

Previous medical history (including medications):_____

PATIENT VITAL SIGNS

Temp:_____ **Airway**: OBSTRUCTED GURGLING OPEN
B/P (Wrist/Neck):_____ **Resp**: SHALLOW NORMAL DEEP NONE*
Pulse: NORMAL WEAK POUNDING NONE*
* IF NO PULSE/RESP, IS CPR BEING CONDUCTED? Y / N HOW LONG?_____

Conscious Y N	Ambulatory: Y N	Eyes: Dilated Y N
Convulsions: Y N	Signs of shock: Y N	Reactive Y N
Vomiting: Y N	Bleeding: Y N	Equal Y N
Tingling Limbs: Y N	Paralysis: Y N	

Skin cond: DRY NML CLAMMY Skin color: BLANCHED YLW NML BLUE RED

First aid kit: Y N Treatment given:_____
Medical personnel: DR RN EMT OTHER _____

ADDITIONAL INFORMATION FOR DIVING ACCIDENTS

Time of accident:_____ Patient's Height:_____ Weight:_____

Total dives today:_____ Interval between dives:_____

Dive depth:_____ FT/M Dive duration:_____ Decompression:_____

Dives in last 24 HRS? Y / N If YES, when?_____

Dive depth:_____ FT/M Dive duration:_____ Decompression:_____

If diver trapped:
Amount of air left in diver's tank?_____ Depth:_____
Experience of the trapped diver:_____
Equipment available:_____
Nature of object trapping diver:_____
Actions being taken to free diver:_____
Any divers and equipment in area to rescue diver:_____

MISC INFORMATION

Vsl LPOC/Date:_____ Vsl NPOC/ETA:_____

Communications: VHF-FM MF/HF CELLULAR Freq/Number:_____

O/S WX – Wind:_____/_____ Seas:_____/_____ Vis:_____ Sea temp:_____

ADDITIONAL INFORMATION