

# APPENDIX C

## STANDARD OF COMPETENCE FOR PERSONS DESIGNATED TO PROVIDE MEDICAL FIRST AID

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# **STANDARD OF COMPETENCE FOR PERSONS DESIGNATED TO PROVIDE MEDICAL FIRST AID**

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## **STANDARDS - SECTION A-VI/4-1 OF STCW CODE**

Every seafarer who is designated to provide medical first aid on board ship shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/4-1.

The level of knowledge of the subjects listed in column 2 of table A-VI/4-1 shall be sufficient to enable the designated seafarer to take immediate effective action in the case of accidents or illness likely to occur on board ship.

Candidate for certification under the provisions of regulation VI/4, paragraph 1 shall be required to provide evidence that the required standard of competence has been achieved in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-VI/4-1.

**TABLE A-VI/4-1 of STCW CODE**  
**STANDARD OF COMPETENCE FOR SEAFARERS DESIGNATED TO**  
**DESIGNATED TO PROVIDE**  
**MEDICAL FIRST AID**

**Specification Of Minimum Standard Of Proficiency In Medical First Aid**

<b>COMPETENCE</b>	<b>KNOWLEDGE, UNDERSTANDING AND PROFICIENCY</b>	<b>METHODS FOR DEMONSTRATING COMPETENCE</b>	<b>CRITERIA FOR EVALUATING COMPETENCE</b>
Apply immediate first aid in the event of accident or illness on board	First aid kit Body structure and function Toxicological hazards on board, including use of the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG) or its national equivalent Examination of casualty or patient Spinal injuries Burns, scalds and effects of cold Fractures, dislocations and muscular injuries Medical care of rescued persons Radio-medical advice Pharmacology Sterilization Cardiac arrest, drowning and asphyxia	Assessment of evidence obtained from practical instruction	The identification of probable cause, nature and extent of injuries is prompt, complete and conforms to current first aid practice Risk of harm to self and others is minimized at all times Treatment of injuries and the patients condition is appropriate, conforms to recognized first aid practice and international guidelines

# COAST GUARD ASSESSMENT GUIDELINES

## TABLE A-VI/4-1

### SPECIFICATION OF MINIMUM STANDARD OF COMPETENCE FOR PERSONS DESIGNATED TO PROVIDE MEDICAL FIRST AID

Each candidate for an STCW endorsement as an officer in charge of a navigational watch, as an officer in charge of an engineering watch in a manned engine room, or as a designated duty engineer in a periodically unmanned engine, or each candidate seeking to meet the standards of competence for seafarers designated to provide medical first aid on board ship, must meet the standards of competence set out in STCW Code Table A-VI/4-1. To accomplish this, each candidate must:

- Complete approved education and training and meet all the competencies listed in the table;
- Pass a written examination for the portion of the competencies on knowledge and understanding; and
- Successfully accomplish a practical demonstration of skill for selected competencies.

The United States Coast Guard requires each mariner seeking proficiency as a seafarer designated to provide medical first aid on board ship to attend a course approved by the National Maritime Center. For this reason, these guidelines contain the assessment criteria for both requirements, knowledge (listed in the paragraph below) and skill requirements of Table A-VI/4-1.

#### **Written Assessments**

The knowledge-based or understanding-based portion of the following competencies may be assessed through a written multiple-choice examination. The candidate must achieve a minimum passing grade of 70% in each kind of knowledge or understanding within the competency: the contents of a standard first-aid kit; the anatomy of the body and function of each body system sufficient to understand and apply the required knowledge and understanding; toxicological ship-board hazards; identification of the hazardous substance and the hazards of exposure; assessment of patients; standard isolation techniques; the treatment of burns and scalds, including the description of burns and the rule of nines; heat and cold emergencies; treatment of electrical and chemical burns, including safety of the scene and removal of electrical power; signs, symptoms and treatment of hyperthermia, hypothermia, and dehydration; information on patients to be communicated to radio medical services; medications; and sterilization and sterile techniques.

## **Demonstrations of Skill**

In addition to passing a written examination, the competency entitled “Apply immediate first aid in the event of accident or illness on board” requires a practical demonstration of skill to assess proficiency. These assessment guidelines establish the conditions under which the assessment will occur, the performance or behavior the candidate is to accomplish, and the standards against which to measure the performance. The examiner should use a checklist in conducting assessments of practical demonstrations of skill. Checklists allow a training institution or designated examiner to avoid overlooking critical tasks when evaluating a candidate’s practical demonstration. Training institutions and designated examiners should develop their own checklists for use in conducting the assessments in a complete and structured manner.

**Coast Guard Assessment Guidelines for TABLE A-VI/4-1 of STCW Code  
Specification for minimum standard of competency in Medical First Aid**

*\* Indicates a proficiency from Table A-VI/4-1*

<b>STCW Competence</b>	<b>Knowledge, Understanding, and Proficiency</b>	<b>Performance Condition</b>	<b>Performance Behavior</b>	<b>Performance Standards</b>
Apply immediate first aid in the event of accident or illness on board	<b>Examination of casualty or patient*</b>	In a graded practical exercise, given a simulated non-critical patient,	the candidate will perform an initial assessment (primary survey).	The candidate correctly assesses and treats, within 1 minute, life-threatening conditions, including: 1. level of responsiveness; 2. breathing; 3. circulation; and severe bleeding.
		In a graded practical exercise, given a simulated non-critical patient,	the candidate will perform a detailed physical assessment (secondary survey).	The candidate correctly : 1. observes and records, within 10 minutes, all of the following: a. temperature ( $\pm 2^{\circ}\text{F}$ ); b. pulse ( $\pm 6$ , rhythm, and strength); c. respiration ( $\pm 6$ , depth, rhythm, and character); and d. blood pressure ( $\pm 10$ mm Hg systolic and diastolic); and 2. performs a head-to-toe assessment to identify any deformities, contusions, abrasions, penetrations, burns, tenderness, lacerations, or swelling.

**Coast Guard Assessment Guidelines for TABLE A-VI/4-1 of STCW Code  
Specification for minimum standard of competency in Medical First Aid**

STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
	<b>Spinal Injuries*</b>	In a graded practical exercise, given a simulated non-critical patient, use of a cervical immobilization device, a long spine board, and a team of rescuers,	the candidate will properly immobilize the patient's spine.	The candidate correctly performs, within 20 minutes and in proper sequence, all of the following: <ul style="list-style-type: none"> <li>a. stabilizes cervical spine;</li> <li>b. selects and applies appropriate size cervical spine-immobilization device;</li> <li>c. maintains cervical alignment and traction while directing a team performing a log-roll onto a long spine board; and</li> <li>d. demonstrates securing the patient to a long spine board, securing the torso, then the head.</li> </ul>
	<b>Fractures, dislocations, and muscular injuries*</b>	In a graded practical exercise, given a simulated non-critical patient and assistance from a second rescuer, and using a device to apply traction to the femur (Hare traction, Thomas D-ring, or Sager splint),	the candidate will properly immobilize and apply traction to a simulated femoral fracture.	The candidate properly applies, within 10 minutes, an appropriate femoral traction device (Hare traction, Thomas D ring , or Sager splint), performing the following tasks: <ul style="list-style-type: none"> <li>a. manually stabilizes the leg;</li> <li>b. assesses neuro-vascular distal function;</li> <li>c. properly measures and prepares device for application;</li> </ul>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
				<ul style="list-style-type: none"> <li>d. applies and maintains manual traction while               <ul style="list-style-type: none"> <li>i. positioning device on leg;</li> <li>ii. securing proximally;</li> <li>iii. securing distally; and</li> <li>iv. applying mechanical traction;</li> </ul> </li> <li>e. secures supporting straps;</li> <li>f. and re-evaluates distal pulse and neurological status.</li> </ul>
		<p>In a graded practical exercise, given a simulated non-critical patient and assistance from a second rescuer</p>	<p>the candidate will use rigid splints to immobilize a long-bone fracture of the forearm and a bent knee fracture.</p>	<p>For each fracture, the candidate properly applies rigid splints, within 5 minutes, and performs the following critical elements:</p> <ul style="list-style-type: none"> <li>a. manually stabilizes arm;</li> <li>b. assesses neuro-vascular distal function;</li> <li>c. selects and properly applies appropriate device(s);</li> <li>d. secures splinting device(s) to extremity(ies) with appropriate materials; and</li> </ul>

**Coast Guard Assessment Guidelines for TABLE A-VI/4-1 of STCW Code  
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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
				<p>(con't)</p> <p>e. reassesses distal neuro-vascular function.</p> <p><i>Note:</i> Bent-knee fracture—padded board splints should be secured transversely to the medial and lateral aspects of the leg both above and below (distal to) the knee.</p>
	<p><b>Cardiac arrest, drowning, asphyxia, and obstruction of airway by a foreign body</b></p>	<p>In a graded practical exercise, given an adult manikin designed for cardio-pulmonary resuscitation,</p>	<p>the candidate will demonstrate airway-management techniques and management of a patient in cardiac arrest.</p>	<p>The candidate correctly demonstrates, according to standards of the American Heart Association, the following:</p> <ol style="list-style-type: none"> <li>a. assessing responsiveness;</li> <li>b. calling for help if victim remains unresponsive;</li> <li>c. opening airway by head-tilt/chin-lift (if neck injury not suspected) or modified jaw-thrust (suspected neck injury);</li> <li>d. assessing breathing by looking, listening, and feeling;</li> <li>e. giving rescue breaths (2) to non-breathing victim;</li> </ol>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
				<p>(con't)</p> <ul style="list-style-type: none"> <li>f. assessing for signs of circulation by looking for normal breathing, coughing, or movement;</li> <li>g. if no pulse, properly locating hand positions for chest compressions and administering 15 chest compressions followed by 2 ventilations;</li> <li>h. continuing CPR for a total of 4 cycles (one minute) of 15:2;</li> <li>i. after performing 1 minute CPR, reassess breathing and pulse;</li> <li>j. if no pulse or breathing, continue CPR;</li> <li>k. if pulse but no breathing, continue rescue breathing; and</li> <li>l. if pulse and breathing present, place victim in recovery position (on side).</li> </ul>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
	<b>Cardiac arrest, drowning, and asphyxia*</b>	In a graded practical exercise, given an adult manikin designed for cardio-pulmonary resuscitation, simulating a patient in pulseless V-tach, V-tach over the maximum rate, or V-fib, and an Automated External Defibrillator (AED),	the candidate will demonstrate the proper set-up and simulate the use of an AED.	The candidate correctly demonstrates, according to standards of the American Heart Association: <ul style="list-style-type: none"> <li>a. attaching AED to pulseless victim over 12 years-of-age and 90 pounds;</li> <li>b. activating AED according to operating procedures; and</li> <li>c. stating the circumstances under which CPR may be terminated (victim revived, unsafe to continue, too exhausted to continue, relieved by competent provider).</li> </ul>
		In a graded practical exercise, given an adult manikin designed for cardio-pulmonary resuscitation,	the candidate will demonstrate airway-management techniques and management of a choking/obstructed airway in a conscious victim.	The candidate correctly demonstrates, according to standards of the American Heart Association: <ul style="list-style-type: none"> <li>a. asking the victim whether he or she is(cont'd) choking;</li> <li>b. if victim cannot respond, performing sub-diaphragmatic thrusts (5); and</li> <li>c. re-assessing the victim.</li> </ul>

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				(con't) <i>Note:</i> If the victim is still choking, the candidate should repeat performing sub-diaphragmatic thrusts until victim is breathing or becomes unconscious.
		In a graded practical exercise, given an adult manikin designed for cardio-pulmonary resuscitation,	the candidate will demonstrate airway-management techniques and management of a choking or obstructed airway in an unconscious victim	The candidate correctly demonstrates, according to standards of the American Heart Association: <ul style="list-style-type: none"> <li>a. assessing (look, listen, feel);</li> <li>b. laying victim on his or her back;</li> <li>c. attempting rescue breathing, repositioning head if necessary;</li> <li>d. if airway blocked, performing appropriate (adult, child, infant) CPR (no abdominal thrusts or mouth sweeps); and</li> <li>e. continuing until airway cleared</li> </ul>