

Training Circular No. 8 of 2004

No.11-TR(44)/2003

Dated: March 22, 2004

Sub: Guidelines -Medical First Aid (MFA) Course

Maritime safety and efficiency is of utmost concern to the Directorate General of Shipping(DGS), the constituted authority of the Government of India for all maritime affairs.

It was noticed that some training institutes barely met the minimum standards set by the Directorate, while other provided training facilities that were world class. In order to bring about uniformity of training, amenities and equipment provided by all, old guidelines were revised and new ones formulated. This was done by the DGS in consultation with the training institutes and employers (shipowners and manning agencies). Draft guidelines were displayed on the website of the DGS and comments invited from interested parties, regardless of the position or office held.

Meetings of interested parties were held and modification made to the draft guidelines. In keeping with Government policy, the guidelines have been made in as transparent manner as practicable. The final guidelines for **Medical First Aid (MFA) course** is attached herewith.

It is expected that training institutes would follow these guidelines in letter and spirit.

The above guidelines shall come into force w.e.f. **01.05.2004**.

This issues with the approval of the Director General of Shipping and ex-officio Addl. Secretary to the Government of India.

**Sd/-
(Naresh Salecha)
Sr.Dy. Director General of Shipping**

GUIDELINES FOR THE CONDUCT OF MEDICAL FIRST AID (MFA) COURSE

ISSUED BY

THE DIRECTORATE GENERAL OF SHIPPING

To avoid unnecessary repetition, reference has been made herein to DGS Order no: 1 of 2003(Guidelines for the conduct of Pre-Sea Training courses for Merchant Navy) wherever appropriate.

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MEDICAL FIRST AID COURSE

1. BASIC DETAILS OF THE COURSE

1.1. Aims

This course aims at preparing seafarers to provide medical first aid in accordance with Section

A-VI/4 Paras 1 to 3 and Table A-VI/4-1 of the STCW Code.

1.2. Objectives

The objectives of this course are to provide the student with the knowledge and skill in First Aid to be able to take immediate action in the case of accident or illness likely to occur on board ship.

1.3. Application

Compliance with these guidelines shall be mandatory for all institutes from **1st May 2004**.

2. QUALIFICATION & ELIGIBILITY OF STUDENTS

2.1. Entry Standards

Completed a course in Elementary First Aid, or attained a similar standard in elementary first aid, and thereafter have served on board ship for a minimum period of 6 months.

2.2. Required Attendance

- 2.3.** 100% attendance is required for successful completion of the course. However, in exceptional circumstances, a student is allowed absence of up to one day subject to his attending the lectures missed out during the next course at the same institute. The institute shall keep proper records of such cases and intimate Chairman of respective Academic Council.

2.4. Course Intake limitations

The number of students attending each session will depend on the availability of faculty members, the equipment and facilities available for conducting the course of training. However, the upper limit is 24 students per course.

3. INFRASTRUCTURE REQUIREMENT

- 3.1.** Physical requirement for classroom, black/white boards, overhead projector, screen, notice board, faculty room, study environment, teaching equipment are to be provided as per DGS order 1 of 2003.
- 3.2.** The institute shall have a library-cum-reading room of not less than 36m² in area.
- 3.3.** Additional equipment, Training Aids, Video Cassettes/CDs/DVDs and publications, etc., required for this course are as per **Annexure 1**.

4. COURSE DETAILS

- 4.1.** Course duration: 4 days
- 4.2.** Course outline: As per **Annexure 2**.
- 4.3.** Detailed teaching syllabus: **Annexure 3**.

5. HOLIDAYS

- 5.1. Sundays shall be holidays.
- 5.2. Independence Day and Republic Day shall be compulsory holidays.

6. FACULTY REQUIREMENTS

6.1. Qualifications and experience of Course in charge

- 6.1.1. MBBS Medical Practitioner OR
- 6.1.2. Certificate of Competency as Master (FG) issued or recognised by Govt. of India.

6.2. Qualifications and experience of Faculty members

MBBS Medical Practitioner

6.3. Qualifications and experience of Instructors

- 6.3.1. Duly qualified paramedic or
- 6.3.2. Duly qualified nurse.

6.4. Training of Trainers & Assessors Course:

As per DGS Order no: 1 of 2003.

6.5. Visiting faculty members:

Qualifications and experience of visiting faculty members should be the same as that of regular faculty.

6.6. Age limit for regular faculty members:

As per DGS Order no: 1 of 2003.

7. FACULTY STRENGTH

- 7.1. Not less than one MBBS medical practitioner.
- 7.2. For demonstrations and practicals, there shall be one instructor for every eight students.

8. COURSE DURATION

Education & practical training shall be of 4 days duration.

9. ASSESSMENT

At the end of the course, there shall be assessment by written, practical & oral examination.

10. QUALITY STANDARDS

As per DGS Order no: 1 of 2003.

11. INSPECTIONS

As per DGS Order no: 1 of 2003.

12. FEES TO GOVT.

As per DGS Order no: 1 of 2003.

Annexure 1

TEACHING AIDS

Equipment

The following equipment shall be made available for conducting the course:

- Ships medical chest with contents
- Various splints, braces etc.
- Dressings, bandages
- Life-size dummy of torso for practical resuscitation training
- Resuscitator
- Neil Robertson Stretcher
- Guedwell Airway (airviva)
- Human skeleton
- Models of heart, brain, lungs, etc.
- Instruments for measurement of Blood pressure,
- stethoscope, torch, syringes and needles
- A Lifeboat First Aid kit.

Video Films/CDs/DVDs

These shall include following:

- A matter of life and death
- Dealing with shock
- Bone and muscle injuries
- Dealing with the unexpected
- Oxygen for the brain ‘ maintaining the supply
- After care of shock
- After care of fractures, dislocations and sprains
- Moving casualties and dealing with other problems
- Cold water casualty
- Man overboard
- Burns
- Hypothermia

Publications

For implementation of this course, Institutes should for reference and guidance use appropriate books and publications, which may include:

IMO Model Course 1.14 “Medical First Aid”

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1995 (STCW 1995).

Medical Section of International Code of signals.

ILO/IMO/WHO International Medical Guide for ships (IMGS).

Medical first Aid guide, for use in Accidents Involving Dangerous Goods (MFAG)

Guidance on the implementation of IMO Model Course ‘ IMO

First Aid at sea-St. John’s Ambulance

COURSE OUTLINE

Tables that follow list the competences and areas of knowledge, understanding and proficiency together with total hours required for lectures and practical exercises. Timings given in the Course Outline may be adapted to suit individual groups of students depending on their ability, experience, equipment and staff available for training.

Course Outline	Approximate time (Hours)
Knowledge, understanding and proficiency	Lectures, demonstrations and practical work
1. Introduction	1.0
2. Immediate action	2.0
3. First Aid Kit	1.5
4. Body structure and function	2.0
5. Toxicological hazards aboard Ship	1.5
6. Examination of Patient	1.5
7. Spinal Injuries	1.5
8. Burns, scalds and effects of heat and cold	2.0
9. Fracture, dislocations and muscular injuries	1.5
10. Medical care of rescued persons, including distress, hypothermia and cold exposure	1.0
11. Radio Medical Advice	1.0
12. Pharmacology	1.5
13. Sterilisation	1.0
14. Cardiac arrest, drowning and asphyxia	2.0
15. Psychological/Psychiatric Problems	2.0
16. Aids, SARS, Hepatitis & other infectious diseases	1.0
17. Review and assessment	1.0
TOTAL	26.0

DETAILED TEACHING SYLLABUS

Detailed teaching syllabus given below is based on theoretical and practical knowledge specified in the STCW Code. It is written as a series of learning objectives in other words, what a student is expected to be able to do as a result of teaching and training. Each of the objectives is expanded to define a required performance of knowledge, understanding and proficiency.

Knowledge, Understanding and Proficiency

1. Immediate action (2.0 hours)

Required performance:

- i) Revises, as necessary, important aspects of the Elementary First aid training course

2. First Aid Kit (1.5 hours)

- i) Describes and lists the contents of the first aid kit required by national regulations
- ii) Lists location of first aid kits
- iii) Describes contents of lifeboat kit
- iv) Demonstrates use of the first aid box in appropriate medical situations

3. Body structure and functions (2.5 hours)

- i) uses a chart, dummy, human body or other suitable medium, such as audio- visual aids, to describe and explain the structure of the human body and functions of the important parts and systems; in particular:

For the skeletal system:

- Lists the major parts of the skeleton
- Describes the different kinds of bones
- Explains the function of the skeleton

For the muscular system:

- Lists the major muscles of the human body
- Explains their operation and function

For the cardiovascular system:

- States the location of the heart
- Describes the distribution of arteries and veins
- Describes the physiological function of blood
- Describes the heart as a pump
- Explains how the blood circulatory system operates
- States the location of the arterial pressure points and explains how they can be effectively used in an emergency involving bleeding

For respiratory system:

- States the location of the lungs
- Explains the function of the lungs in terms of gas exchange
- States the importance of respiratory rate
- Explains the importance of the composition of inspired/expired air

For the digestive system and abdomen:

- Describes in simple terms the digestive system and its operation
- List the abdominal organs and describes their function

4. Toxicological hazards aboard ship (1.5 hours)

- i) States that there are important regulations to be observed for the transport of dangerous cargo aboard ship as required by the IMO/IMDG Code
- ii) Applies first aid measures in accordance with Medical First Aid Guide for use in Accidents Involving dangerous goods (MFAG) or its national equivalent:
 - TWA/TLV levels
- iii) Uses, in particular, the appropriate First Aid Guide for:
 - Identifying the symptoms and clinical aspects of poisoning
 - Applying first aid in cases of poisoning by ingestion, inhalation, or skin contact/eye injuries
 - Applying therapy in cases of acid and caustic burns
- iv) Use of oxygen resuscitator:
 - Parts of the resuscitator

- Operation of resuscitator
- Changing cylinders
- CPR with resuscitator
- After use care and servicing

5. Examination of patient (1.5 hours)

- i) Makes detailed observations of a casualty, based on medical precepts
- ii) Forms a diagnosis from a large variety of individual facts based on::
 - Information derived from medical history
 - General appearance
 - Answers to specific questions
 - Physical examination

6. Spinal injuries (1.5 hours)

- i) Recognises the symptoms of spinal injury
 - Bladder control in spinal injuries
- ii) Identifies the complications which may be caused by unconsciousness
- iii) Applies appropriate first aid measures, including:
 - Control of sensitivity in the extremities appearance
 - Appropriate rescue, transport, and treatment for cases of suspected fracture of the spine
- iv) Head injuries: Levels of consciousness/unconsciousness

7. Burns, scalds and effects of heat and cold (2.0 hours)

- i) Recognises the signs of:
 - Burns
 - Scalds
 - Heatstroke
 - Hypothermia

- Frostbite
- ii) Applies appropriate first aid measures, including the definition, complications and therapy of the general condition of burns
- iii) Distinguishes between burns and scalds
- iv) Describes differences between first degree, second degree & third degree burns
- v) Applies the correct first aid procedures for burns and scalds
- vi) States the importance of sterile dressings
- vii) Describes the effects of heat and states the importance of positioning the patient in the shade, providing the increased fluid requirement and careful cooling of the body.
- viii) Distinguishes between hypothermia and frostbite and applies the correct first aid procedures, including rewarming and attention to possible tissue damage.

8. Fractures, dislocation and muscular injuries (1.5 hours)

- i) Applies practical first aid procedures for the diagnosis and treatment of fractures, dislocations and muscular injuries
- ii) Describes types of fracture as:
 - Open (or compound)
 - Closed (or simple)
 - Complicated
- iii) Describes the treatment for injured parts and explains the importance of immobilization of the injured part
- iv) States the importance of immobilization of the injured part.
- v) Describes the special requirements for the treatment of pelvic and spinal injuries and demonstrates the correct procedure for transporting the casualty.
- vi) Describes the symptoms and therapy of sprains, strains and dislocations
- vii) Demonstrates the correct procedures to be used in cases of fractures, dislocations and muscular injuries
- viii) States the necessary precautions while issuing pneumatic splints.

9. Medical care of rescued persons, including distress,

hypothermia and cold exposure

(1.0 hours)

- i) Applies basic skill in the care of rescued persons
- ii) Recognises the special problems in cases of:
 - Hypothermia, applying the correct treatment and taking precautions against heat loss and taking into account the effects of wind and humidity.
 - Congelation, applying the correct treatment for cold injury, immersion foot etc.
 - Seasickness, describing the cause and applying the correct therapy.
 - Sunburn, describing the cause and applying the correct therapy and prophylaxis ❖ dehydration and nutrition in rescue situations, describing frequent errors and hazards
 - Rewarming.

10. Radio medical advice (1.0 hours)

- i) states that radio medical advice is available using GMDSS Bmed 1
- ii) describes the methods used to obtain radio medical advice
- iii) interprets advice obtained from external sources
- iv) helicopter evacuation.

11. Pharmacology (1.5 hours)

- i) Drug list on board:
 - Usage
 - Dosages
 - Injections sc/im
 - Test dose for penicillin

12. Sterilization (1.0hours)

- i) Demonstrates disinfection of surgical instruments:

13. Cardiac arrest, drowning and asphyxia (1.5 hours)

- i) States the cause of and applies the appropriate treatment for:
 - Cardiac arrest
 - Asphyxia
 - Drowning

- ii) Explains how mouth-to-mouth resuscitation is applied and states under what conditions it cannot be used
- iii) Explains how cardiac massage is applied and states the limiting factors related to the use of cardiopulmonary resuscitation (CPR) practice on a dummy
- iv) Demonstrates the correct procedures for mouth-to-mouth resuscitation and cardiac massage using a practice dummy

14. Psychological/Psychiatric Problems (2.0 hours)

- i) Explains the situational disturbances may be influenced by:
 - Psychological characteristics of seafarers
 - Psychological consequences of separation
- ii) States that these may be contributory factors for psychological malfunctioning

15. Review and Assessment (1.0 hours)