



DANISH MARITIME AUTHORITY



**Exercises to retrain
medical care on board**

Purpose of exercises on our website

After popular demand, we have decided to post exercises that give our course participants a possibility to re-train medical care on board ships.

The purpose of these exercises is to train the crew in first aid and medical care in case of acute illness and accidents. Also, it allows the person in charge of medical care on board the ship to repeat his/her theoretical knowledge and re-train his skills, especially the principles of Maritime Life Support in a prioritized order. This will improve the medical care of an ill or injured crew member, and the person in charge of medical care on board the ship will know the resources of the rest of the crew.

Each exercise requires that the person in charge of medical care on board the ship incorporates his/her knowledge of how to work the mobile resuscitation equipment and stretcher and remembers how he/she may use medicine and medical equipment as recorded in the Control Document. Also, the person in charge of medical care on board the ship must consider how and when he/she will contact Radio Medical and use the RM-record.

Getting started on the exercise requires a small amount of preparation from the person in charge of medical care on board the ship. There is no limit to the number of course participants that are able to participate in the exercise but we have chosen to give defined exercise tasks.

The person in charge of medical care on board the ship will still be the turning point for planning and delegation but he/she is still primarily the one who's aim is to train or retrain existing qualifications. Therefore, for these specific exercises, we have defined tasks for observers, assistants, supervisors and actors for 5 different exercises. Naturally, crew size determines the extent of the exercises and therefore each ship must adjust their exercises to their specific crew size.

The duration of an exercise may be difficult to predict as various factors play a role. The task leader considers this before the beginning of the exercise.

Before the exercise

The task leader points out participants for the exercise and gives out instructions. A small amount of preparation where any questions may be answered will be beneficial to all parties before the start of the exercise.

During the exercise

Participants who have not been assigned a "role" during the exercise observe how it plays out as it may be their turn to participate in the next exercise.

The participants must follow the instructions closely as they play a great role in the outcome of the exercise. It must be emphasized that the outcome is for the good of the entire crew's safety and health.

The task leader clearly states when the exercise is over.

After the exercise - evaluation

The purpose of the evaluation is that the person in charge of medical care on board the ship finds out how he/she has provided medical care to the ill or injured person.

Important: It is very important that the evaluation takes place in a positive manner, as the purpose of the exercise is new knowledge for the entire crew. Remember that everyone can improve their skills in first aid and medical care. Everyone must do their best effort in each exercise.

- The observers describe what they have noticed during the exercise
- The actor describes how he/she experienced the medical care/how the medical care felt
- The supervisor contributes with comments, if any

The person in charge of medical care on board the ship reflects on his/her own medical care after the exercise – also by consulting the control chart.

The person in charge of medical care on board the ship may choose to do his/her own follow-up by means of the medical book or the MLS-procedures, and naturally he/she is welcome to give all the participants a suggestion as to what must happen with the patient subsequently.

Adjustments in the use of resources/assistants may be a consequence of the exercises on board, and therefore the discussion among the crew is important.

Finally, the equipment used during the exercise should be inspected after use.

Instruction concerning the observer/assistants

Before the exercise:

The observer's role

If you are pointed out for the role of observer, it is important to know exactly what to observe.
E.g.:

Important information

Conversation between the patient and the person in charge of medical care on board the ship;

- Does the person in charge of medical care on board the ship listen to the patient?
- Does the patient unsolicited provide information regarding his/her health?

Clear commands

Does the person in charge of medical care on board the ship give his/her assistants' clear commands during the exercise? E.g.:

- "Hand me the oxygen mask",
- "Fixate the head until I say otherwise".

Psychological First Aid

Does the person in charge of medical care on board the ship have the enough strength to calm the patient:

- Does he inform the patient of his actions?
- Does he calm the patient by speaking and handling him/her in a gentle manner?

The above-mentioned is all about communication. What is communicated and how it is communicated may affect the patient and the information passed on to Radio Medical.

Task at the beginning of the exercise:

The person in charge of medical care on board the ship will clearly state what you must keep an eye on and possibly write down in a few words during the exercise. Your cue words will be used in the evaluation after the exercise.

The supervisor's role

It is your task to check up on the actions of the person in charge of medical care on board the ship. You must primarily do this by taking down notes in the chart below but you are also welcome to write comments. Keep in mind that the purpose of the exercise is to repeat and re-train, and it gives the crew and the person in charge of medical care on board the ship a chance to train first aid principles together, meant for an acutely ill or injured crew-member.

The purpose is learning, so be positive when commenting the evaluation.

The person in charge of medical care on board the ship has been shortened to PMC in the chart below.

In the chart, numbers (1,2,3,4 etc.) must be placed in the order in which the PMC performs his actions. The acts that are not carried out must be marked (0).

After the exercise, give the control chart to the person in charge of medical care on board the ship.

Control chart		
Attending the patient	Does the PMC speak to the patient?	()
	Does the PMC listen to the patient?	()
	Is the patient moved to better the PMC's work?	()
	Does the PMC put on gloves?	()
Airways	Is the patient placed in-line on the floor?	()
	Does the PMC examine if the patient's airways are clear?	()
	Does he place a cervical collar?	()
	Does the PMC give the patient oxygen?	()
	Does the PMC give the patient 9 l. oxygen via oxygen mask?	()
Breathing (breathing quality)	Does the PMC lean over the patient's mouth to listen to and hear if there is breathing?	()
	Does the PMC examine the patient's chest?	()

Circulation	<p>Does the PMC squeeze the patient's fingernail?</p> <p>Does the PMC take the patient's wrist to measure a pulse?</p> <p>Does the PMC examine the patient's skin?</p> <p>Does the PMC examine and feel the patient's body (to see if there are any bleedings/injuries?)</p> <p>Does the PMC inform the patient that he/she is going to place a venous needle and drip?</p> <p>Does the PMC examine the patient again: breathing, pulse?</p>	<p>()</p> <p>()</p> <p>()</p> <p>()</p> <p>()</p> <p>()</p>
Disability (level of consciousness, pupil response)	<p>Does the PMC examine the patient's level of consciousness?</p> <p>Does the PMC examine the patient's pupil response by shining light into the eyes?</p> <p>Does the PMC consider whether or not treatment may continue on present site?</p>	<p>()</p> <p>()</p> <p>()</p>
Expose (physical examination and transfer)	<p>Does the PMC examine the patient from top to toe?</p> <p>Is the patient fixated on a board and in a stretcher?</p> <p>Is the patient moved in the stretcher to sick bay?</p>	<p>()</p> <p>()</p> <p>()</p>
Further treatment	<p>Does the PMC contact Radio Medical?</p> <p>Does the PMC give the patient medicine before contacting Radio Medical?</p> <p>Does the PMC give the patient medicine after contacting Radio Medical?</p> <p>Does the PMC provide medical care after contacting Radio Medical?</p>	<p>()</p> <p>()</p> <p>()</p> <p>()</p>
Documentation	<p>Does the PMC fill out a Radio Medical record?</p> <p>Does the PMC fill out a delivery form?</p> <p>(This takes place before any evacuation or before the patient is handed to the care of the recovery team).</p>	<p>()</p> <p>()</p>



Instruction concerning the person in charge of medical care on board the ship

Exercise 1

The purpose of this exercise is that the person in charge of medical care on board the ship re-trains the principles of Maritime Life Support in case of illness and accidents. Also incorporated in the exercise is specific knowledge on medical care for burn victims.

Situation

Cook Bent Nielsen, 42 years old, is in the galley and has by accident poured hot deep fat onto his body.

He has been burnt on his neck, on his right arm and the right side of his chest.

When you reach the scene, Bent is found on a chair, bent-over by the table. He is very anxious and in a lot of pain.

Equipment for use:

- The mobile resuscitation equipment including MLS-guidelines (to-do-list).
- Cervical collar and stretcher/back board
- 1 or 2 assistants

Instruction concerning the person in charge of medical care on board the ship

Exercise 2

The purpose of this exercise is that the person in charge of medical care on board the ship re-trains the principles of Maritime Life Support in case of illness and is aware of medicine in the medicine chest that the ill crew member may benefit from.

Situation

Engineer Peter Jensen aged 63 contacts the bridge. He is not feeling well and is experiencing chest pains. He has shortness of breath after climbing stairs to the bridge. He is pale and looks tormented.

Equipment for use:

- The mobile resuscitation equipment including MLS-guidelines (to-do-list).
- Cervical collar and stretcher/back board
- 1 or 2 assistants

Instruction concerning the person in charge of medical care on board the ship

Exercise 3

The purpose of this exercise is that the person on charge of medical care on board the ship re-trains the principles of Maritime Life Support in case of illness. The person in charge of medical care on board the ship must also be aware of any medicine and medical equipment, partly the patient's own medicine and partly from the medicine chest.

Situation

Ship assistant Søren Sørensen has been reported ill after breakfast. He has vomited most of the morning and is now in bed in his cabin. From his signing on you know that he has diabetes which is diet- and tablet regulated. You choose to see him in his cabin.

Equipment for use:

- The mobile resuscitation equipment incl. MLS-guidelines (to-do-list)
- Cervical collar and stretcher/back board
- 1 or 2 assistants

Instruction concerning the person in charge of medical care on board the ship

Exercise 4

The purpose of this exercise is that the person in charge of medical care on board the ship re-trains the principles of Maritime Life Support in case of an accident and uses the relevant medical equipment from the mobile resuscitation equipment and the medicine chest. At the same time, specific knowledge on medical care in case of fractures and sprains is repeated and applied.

Situation

The 22-year-old applicant Anette Larsen has been injured during work on deck in bad weather. Apparently she is experiencing a lot of pain due to an injured chin and wrist. No one has witnessed the accident. The co-worker who found her reports over the radio that she appears to have a broken leg.

Equipment for use:

- The mobile resuscitation equipment including MLS-guidelines (to-do-list)
- Cervical collar and stretcher/back board
- 1 or 2 assistants

Instruction concerning the person in charge of medical care on board the ship

Exercise 5

The purpose of this exercise is that the person in charge of medical care on board the ship to re-trains the principles of Maritime Life Support and uses relevant medical equipment from the mobile resuscitation equipment. At the same time, knowledge on how to provide medical care when dealing with an unconscious person is repeated and incorporated in the exercise.

Situation

Engineer apprentice Tom Hansen, 34 years old, has fallen in the engine room. Tom was in contact with the control room before he passed out. Furthermore, the control room informed that Tom fell on a ladder between the main engine and deck 2- a fall of approximately 3.5 m.

Equipment for use:

- The mobile resuscitation equipment including MLS-guidelines (to-do-list)
- Cervical collar and stretcher/back board
- 1 or 2 assistants

Exercise 1 – Instruction concerning the actor

The person in charge of medical care on board the ship will in this exercise provide first aid and has been trained to follow a certain procedure, ABCDE. This means that he will examine the state of your health and in this connection make different measurements. During the exercise, you must do your best to provide him with the information mentioned below. We do not expect you to have the skills of an actor but for the benefit of this exercise we would like you to imagine that the situation is real.

You are the ship's cook, your name is Bent Nielsen and you are 42 years old. After an accident in the galley involving a full deep-fat fryer, you have received burns on your neck, on the lower part of your right arm and on the right side of your chest.

Situation on the site of the accident:

- You are found on a chair, bent-over by the table in the galley. You are experiencing a lot of pain and anxiety and you complain loudly.

Clear airways (A):

- Your airways are clear (this means that you have no trouble breathing through mouth and nose)

Breathing (B):

- Fast and shallow breathing; you touch your neck where you have been burned (you gasp for breath and your breathing sounds a bit strained).

Circulation (C):

- Skin: red and small blisters containing fluid are seen on the arm and chest. Red neck. Fast and strong pulse, capillary response >2sec.
(If the person in charge of medical care on board the ship measures your pulse and squeezes your fingernail, you may inform him of your pulse and capillary response).

Disability (D):

- When light is shone into the eyes, a normal pupil response is seen, and your level of consciousness is between 1 and 2 (you are in pain but do not respond to everything the person in charge of medical care on board the ship asks you).

Expose (E):

- If your body is examined, clearly state where it hurts and that your neck, arm and chest hurt a great deal.
In this connection you are interested in a pain-killing drug.

Exercise 2 - Instruction concerning the actor

The person in charge of medical care on board the ship will in this exercise provide first aid and has been trained to follow a certain procedure, ABCDE. This means that he will examine the state of your health and in this connection make different measurements. During the exercise, you must do your best to provide him with the information mentioned below. We do not expect you to have the skills of an actor but for the benefit of this exercise we would like you to image that the situation is real.

Situation

You are engineer Peter Jensen, aged 63. You have not been feeling well for a couple of days. You have experienced a pressure sensation in your chest and shortness of breath during strenuous labour in the engine room. This morning, your chest region hurts and therefore you are worried. You contact the person in charge of medical care on the bridge. You are not using any medicine.

Situation on the bridge:

- Some what complaining and slightly out of breath, you contact the bridge (do not complain excessively but clearly state that you are worried and would like a pain-killing drug).

Clear airways (A):

- Your airways are clear (this means that you have no trouble breathing through your mouth and nose).

Breathing (B):

- Your breathing is fast and shallow. You touch your chest (you may inform the person in charge of medical care on board the ship that your jaw and left arm hurt when taking a deep breath).

Circulation (C):

- Your skin is cold and clammy and your face is pale. Your pulse is slightly faster than normal and your capillary response is reduced to >2sec.
(If he/she measures your pulse and capillary response, you may inform him of pulse and capillary response).

Disability (D):

- When light is shone into the eyes, a normal pupil response is seen and your level of consciousness is between 1 and 2 (you are in pain and do not respond to everything the person in charge of medical care on board the ship asks you).

Expose (E):

- If your body is examined, clearly state where it hurts and that it hurts behind your sternum.

Exercise 3 - Instruction concerning the actor

The person in charge of medical care on board the ship will in this exercise provide first aid and has been trained to follow a certain procedure, ABCDE. This means that he will examine the state of your health and in this connection make different measurements. During the exercise, you must do your best to provide him with the information mentioned below. We do not expect you to have the skills of an actor but for the benefit of this exercise we would like you to imagine that the situation is real.

Situation

You are a ship assistant on board- your name is Søren Sørensen and you are 54 years old. For the past 3 years you have been a diabetic and you have now learned to live with the condition. You take one pill a day and keep to a healthy diet which the ship's cook carefully prepares for you. This morning you are not feeling well. You can not keep any food down and have been vomiting after breakfast and the rest of the morning. You have taken your pill this morning (5 mg Glibenese which is registered in the ship's hospital).

Situation in your cabin:

- When the person in charge of medical care on board the ship checks on you in your cabin, you are in bed, almost completely unresponsive although you react to pain.

Clear airways (A):

- Your airways are clear (e.g. simulate vomiting).

Breathing (B):

- Your breathing is fast and shallow (inform the person in charge of medical care on board the ship of this if he/she listens to and monitors your breathing).

Circulation (C):

- Your skin is sweaty, cold and slightly moist. Pulse somewhat faster than normal, capillary response >3sec.
(If the person in charge of medical care on board the ship measures your pulse and also squeezes your fingernail, you may inform him of pulse and capillary response).

Disability (D):

- When light is shone into the eyes, a normal pupil response is seen and your level of consciousness is 3 (you only react to pain if the person in charge of medical care on board the ship e.g. pinches you or holds his knuckles on your sternum).

Expose (E):

- If your body is examined, nothing abnormal is found.

Exercise 4 - Instruction concerning the actor

The person in charge of medical care on board the ship will in this exercise provide first aid and has been trained to follow a certain procedure, ABCDE. This means that he will examine the state of your health and in this connection make different measurements. During the exercise, you must do your best to provide him with the information mentioned below. We do not expect you to have the skills of an actor but for the benefit of this exercise we would like you to imagine that the situation is real.

Situation

You are a 22-year-old applicant, Anette Larsen. During work on deck in bad weather, you fall and get stuck. You manage to pull free. You crush your right chin and sprain your left wrist during the fall. You have a closed leg fracture which means that there is no visible blood but both your chin and wrist are severely swollen. When your colleagues find you, you are in pain and complain a lot.

Situation on deck:

- When the person in charge of medical care on board the ship reaches you, you are cold and still in a lot of pain.

Clear airways (A):

- Your airways are clear (your airways are clear, because you are able to complain loudly).

Breathing (B):

- Your breathing is fast and shallow but otherwise untroubled (if the person in charge of medical care on board the ship listens to and monitors your breathing).

Circulation (C):

- Your skin is cold and slightly moist. Pulse faster than normal, capillary response >4sec. (if the person in charge of medical care on board the ship measures your pulse and squeezes your fingernail, you may inform him of pulse and capillary response).

Disability (D):

- When light is shone into the eyes, a normal pupil response is seen and your level of consciousness is 1 (normal pupil response and normal level of consciousness).

Expose (E):

- If you are examined quickly before being transported, you may share that your leg is dislocated and that you have no sensation below the fracture. Your wrist is swollen and red. (You complain about the handling of your leg no matter how the medical care is performed. Your end comment is: "Am I not to have any painkillers?").

Exercise 5 – Instruction concerning the actor

The person in charge of medical care on board the ship will in this exercise perform first aid and has been trained to follow a certain procedure: ABCDE. This means that he will examine the state of your health and in this connection make different measurements. During the exercise, you must do your best to provide him with the information mentioned below. We do not expect you to have the skills of an actor but for the benefit of this exercise, we would like you to imagine that the situation is real.

Situation

You are the new engineer apprentice on board- your name is Tom Hansen and you are 34 years old. During rounds in the engine room, you fall about 3.5 m down a ladder. Before you lose consciousness due to the blow on your head, you manage to call the control room from where the bridge is informed.

Situation in the engine room:

- When the person in charge of medical care reaches you, you are still unconscious (you lie silently on your stomach).

Clear airways (A):

- Your tongue has dropped to the back of your mouth because of your unconscious state and therefore clear airways must be secured (when the person in charge of medical care on board the ship opens your mouth, you breathe again; a tongue depressor and a cervical collar may be placed).

Breathing (B):

- Your breathing is fast, shallow and strained (share this information with the person in charge of medical care on board the ship of this if he/she listens to and monitors your breathing).

Circulation (C):

- Your skin is pale, cold and slightly moist. Your pulse is fast and soft, capillary response >3 sec. No bleeding (if the person in charge of medical care on board the ship measures your pulse and squeezes your fingernail, you may inform him of pulse and capillary response).

Disability (D):

- When light is shone into the eyes, a normal pupil response is seen on the left eye. Right eye only responds slightly to the light. You are unconscious (the person in charge of medical care on board the ship will be informed of this during the examination).

Expose (E):

- If you are examined quickly before being moved, you may inform the person in charge of medical care on board the ship that you have a 4 cm swelling on the back of your head and a small cut on your right hand.