

The procedure cards for a Mass Casualty Incident at Sea have been developed by the Institut für Sicherheitstechnik/Schiffssicherheit e.V. within the research project KOMPASS. This project is part of the program “Civil Safety Research” of the German Federal Government encouraged by the Federal Ministry of Education and Research.

Procedure Cards for a Mass Casualty Incident at Sea

As a result of the increasing shipping traffic and the worldwide rise of the number of passengers it is essential to create suitable concepts for a Mass Casualty Incident (MCI) at sea.

Different scenarios may lead to a mass casualty incident at sea and are often connected with certain patterns of injuries:

1. Fire onboard - burns und burnt gas intoxications
2. Explosions - burns, amputations, splinter injuries
3. Collisions, heavy sea - fractures, bruises, internal injuries
4. Flooding, unprotected stay - hypothermia
5. Infectious disease - vomitus, diarrhea, fever, ...
6. Terrorist attack - bullet wounds, ...

Every passenger vessel should be prepared to such incidents with precise internal concepts. Measures should be pre-thought and integrated to the vessels safety concept. Measures for a mass casualty incident at sea have to be communicated to the crew and practiced in appropriate exercises.

For exercises as well as real scenarios in this folder specific measures are described and summarized in terms of laminated procedure cards to assist the crew in a MCI at sea. Every measure is presented on a separate folio and color-encoded. Depending on the available personnel onboard the procedure cards can be issued in case of emergency. If the number of available personnel is insufficient certain tasks have to be executed by only one person (e.g. Head of Patient's Classification and Head of Treatment Location). Hence this person should get more procedure cards until an adequate number of personnel is available.

Having a sufficient number of crew available certain tasks can be shared by more than one person and at different onboard locations at the same time. For that case (e.g. transport) some procedure cards should be present several times in the folder. Depending on the local situation it is conceivable that several tasks may be carried out by volunteer helpers/passengers which have to be equipped with the respective procedure cards too.

All measures and tasks are based on the premise that the incident which led to casualties is over (e.g. heavy sea) and an additional threat is not expected! Either a general alarm with complete mustering has been deployed and finished before or has not been activated due to the onboard situation.

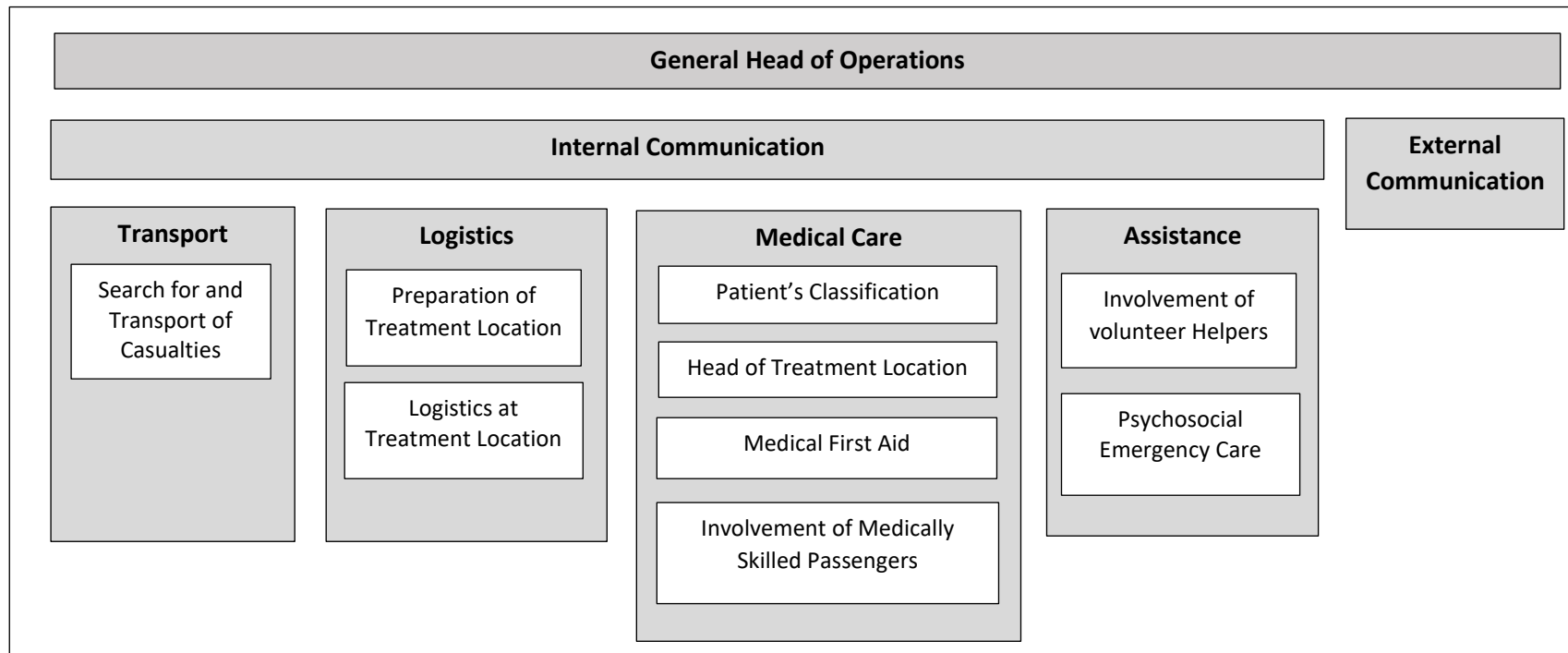
<i>General precautionary measures</i>	
Folio 1	Specification of organisational and personal structures to manage a MCI onboard
Folie 2	Determination of appropriate places for treatment locations
Folio 3	Provision of MCI-Equipment
<i>Measures in an urgent situation</i>	
Folio 4	General Head of Operations (Bridge)
Folio 5	Internal communication, Head of internal operations (Bridge)
Folio 6	External communication, Head of external operations (Bridge)
Folio 7	Search for casualties and evacuation from dangerous areas
Folio 8	Search for casualties and evacuation from safe areas
Folio 9	Preparation of treatment locations
Folio 10	Ensuring the logistics at treatment locations
Folio 11	Patient's Classification and documentation of casualties
Folio 11a	Patient's classification algorithm, life-saving handles
Folio 12	Head of treatment location
Folio 13	Medical first aid
Folio 14	Involvement of medically skilled passengers
Folio 15	Psychosocial emergency care
Folio 16	Involvement of volunteer helpers
<i>Specific measures in case of infectious diseases</i>	
Folio 17	Preparation of quarantine areas
Folio 18	Instruction of assistants and their protection at infectious diseases
Folio 19	Implementation of hygiene measures onboard

Specification of organisational and personal structures to manage a MCI onboard

As the assignment of tasks during a fire fighting on board all relevant tasks and responsibilities at a mass casualty incident at sea should be defined at the muster list. Essential tasks should be covered as follows:

1. General Head of Operations (usually by the Captain)
2. Internal Communication
3. External Communication
4. Transport
5. Logistics
6. Medical Care
7. Assistance

Depending on the available staff individual tasks with other responsibilities can be defined:



All tasks that have to be performed at a MCI at sea should already laid down in the job description of every crew member.

Determination of appropriate places for treatment locations

A treatment location is a place outside of a dangerous area where injured or ill persons can be collected and provided with medical first aid. Since space on board is limited and transport is difficult to manage the treatment location should be chosen in such a way that medical treatment of injured persons can be ensured for a longer time (several hours). If possible a location should be defined where a certain routine already exists.

Suitable areas to install treatment locations should be pre-defined within the vessels safety concept considering the following aspects:

- Furniture / tables should be quickly removable to get enough space to lay down several persons at the same time. Sufficient space between the patients should be considered to allow medical care. The maximum number of patients at a treatment location should be defined in the safety concept. If several treatment locations are available onboard a sequence of occupancy should be determined.
- Stretchers / wheel chairs should fit to pass the entrances of a room. Crooked corridors, narrow doors, high sills are potential obstacles. Ways to come-in and go-out should be separated, if possible.
- An adequate protection against wind and weather should exist, interior rooms should be preferred. In case of excessive smoke emission at least one treatment location should be designated on open deck.
- Parts of the location should be separable without blocking other access points or passages. Ideally, separation material should be used which at the same time offers a visual protection, such as, for example, curtains or moveable walls.
- Running water and electricity should be available nearby to support the medical first aid of injured persons as well as hygiene of assistants. Rest rooms should be easily accessible.
- A safe communication with ships command should be possible using appropriate auxiliary means.
- The evacuation site (e.g. helicopter deck) should be easily accessible.

- In case of **infectious diseases** it should be noted that the ventilation system/air condition of the treatment location is decoupled from the main system and that the treatment location can be ventilated independently. If applicable appropriate separating devices should be previously installed in the system.
- A simple double door system should be able to be installed at the entrance of the treatment location.
- To pick up and securely seal infectious waste a sufficient number of litter receptacles should be available at the treatment location.

Provision of MCI-Equipment

Types and characteristics of Mass Casualty Incidents can be richly diverse and complex. An extensive provision of onboard resources cannot be guaranteed for all eventualities. During a MCI it is essential to come back to structured conditions as soon as possible.

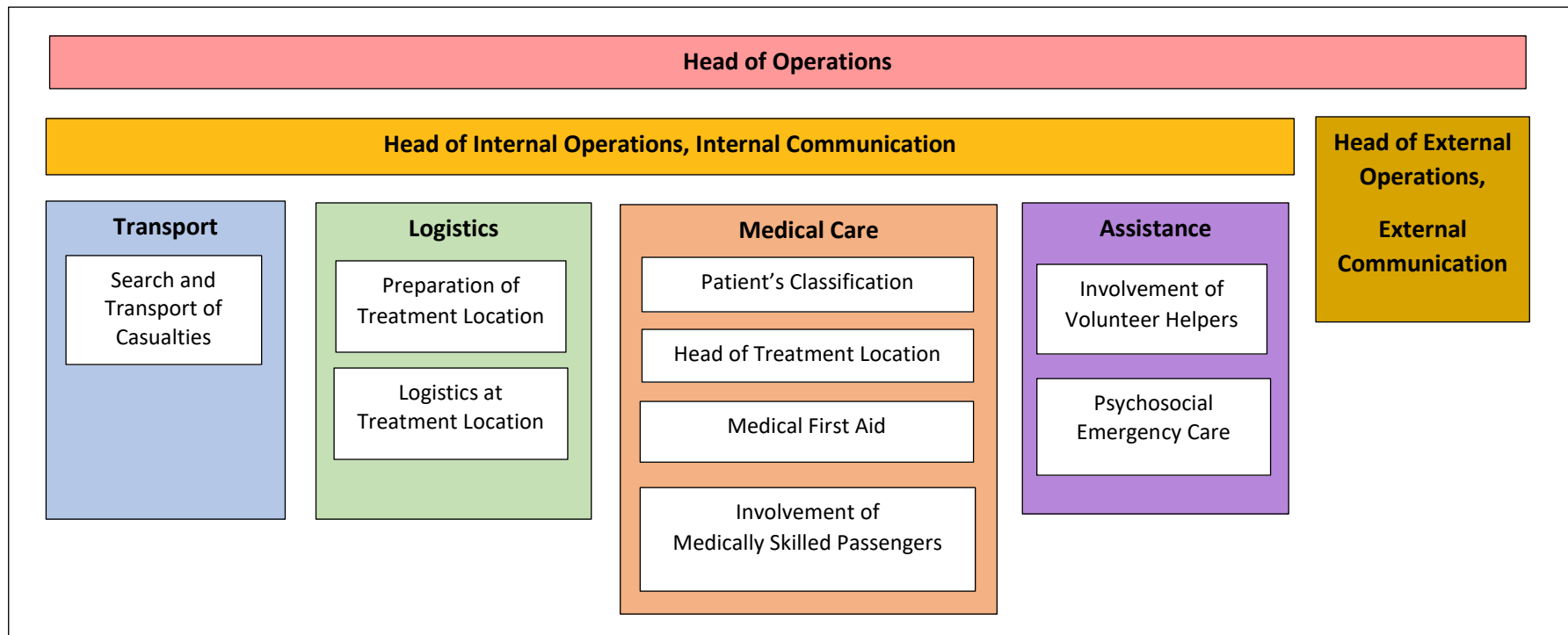
Hence the following equipment should be available onboard:

- Reflective vests in different colors and with the respective function labeled e.g. “Transport”, “Medical Care”, “Logistics”, “Assistance” and “Communication”. At least 4 reflective vests of each color should be carried onboard.
- Equipment to support the preparation of treatment locations (colored barrier tape or similar, moveable walls, length of material as privacy screen, where applicable).
- Pre-fabricated signs with the possibility to hang-up, Edding pens with thick lead for quick creating of informational signs (“Treatment Location”, “Relatives”, “Rest Rooms” or similar).
- Patient’s Classification system to mark ill / injured persons (colored patient tags or colored wristbands or similar, (see folio 11 and 11a).
- Forms to easily document the results of classifications, identity details of persons where applicable.
- Forms to easily register persons which had been handed over to external assistants.

Every crew member should know where MCI-Equipment is stored onboard.

Task: General Head of Operations (Bridge)

- Defining of responsibilities to manage the tasks according to the number of available crew, distribution of procedure cards where applicable
- Defining the means of communication, reporting lines and communication routines



- Keeping the vessel as a safe platform
- Safeguarding the approach (of other vessels), safeguarding the landing of external assistance (by helicopter), where applicable

Communication with external forces / institutions

Communication with Head of External Communication
Communication with Head of Internal Communication

Folio

4

Folio

4

Task: Head of Internal Operations, Internal Communication (Bridge)

Folio

5

Communication with the crew

- Defining of team leaders, consistent enforcement of reporting line, keeping the overview anytime! Write down times and procedures in short form.
- Regular creation of situation reports summarizing the information of all teams (current status quo, requirements, questions to be clarified, ...)
- Specific forwarding or distribution of information to each team regarding
 - the safety of the vessel
 - a change of the onboard situation
 - internal and external assistance to be expected (who and when?)
- Specific distribution of tasks to each team regarding
 - provision of resources
 - transport of injured persons
 - caring for (unaffected) passengers

Equipment

- radio set(s)
- deck arrangement plans
- current passenger list
- papers for documentation, pen

Communication with the passengers

- On a regular basis - calm but informative description of the onboard situation and summary of current and planned measures
- Announcement of the appointed treatment location, call of injured persons to go and register there
- If necessary - announcement to passengers not to hinder the rescue operations (to avoid the problem of sightseers)
- Write down times and content of announcements in a short form

Announcement of contact and assembly points

- Where necessary - announcement of contact and assembly points for
 - medically skilled passengers
 - relatives of injured persons
 - the report of missing persons
 - psychosocial assistance
 - volunteer helpers

Folio

5

↑ Periodic onboard situation report to Head of Operations (Master)
Communication with Head of External Communication

↓ Communication with team „Search and Transport“
Communication with team “Medical Care”
Communication with team “Logistics”
Communication with team „Assistance“

Task: Head of External Operations, External Communication (Bridge)

- On a regular basis - requesting of internal situation report from Head of Internal Communication and forwarding to external authorities.
- Submission of needs on
 - transport capacities for injured persons
 - medical equipment
 - supply goods
- On a regular basis - creation of an external situation report containing an overview about approaching assistance and their capacities to hand-over patients.
- Management of handing over patients from vessel to vessel or from vessel to helicopter, recording of personal data from patients which have been handed over to external forces.
- Write down times and activities in a short form.

Equipment

- radio set(s)
- deck arrangement plans
- nautical chart
- papers for documentation, pen

Periodic onboard situation report to Head of Operations (Master)
Communication with Head of Internal Communication

Communication with / periodic onboard situation report to external institutions, e.g.

- shipping company
- MRCC
- traffic control center
- ...

Communication with external assistance forces, e.g.

- merchant vessels passing the water nearby
- sea rescue cruisers
- rescue helicopters
- ...

Folio

6

Folio

6


Task: Search for casualties and evacuation from dangerous areas

Rescue from dangerous areas

- Depending on the type of accident or damage a suitable personal protective equipment should be worn as follows:
 - compressed air breathing apparatus
 - heat protection suit
 - chemical protection suit
 - life jacket
 - immersion suit
 - safety helmet
- If necessary - loud shouting in order to make sure attention
- removing obstacles from the persons found or from the way to the casualties, if necessary
- addressing persons found to estimate further transport actions (person is able to walk or has to be supported / carried)
- asking the persons found about further potential casualties nearby
- depending on the situation - supporting or carrying persons
- performing a systematic search and marking of searched areas
- preventing re-entry to already searched areas (e.g. barrier / cordon)
- if the treatment location is far away - initially, transferring of persons to the edge of the dangerous area and arranging of supervision (e.g. by unaffected passengers), arranging of further transport by an additional team or volunteer helpers

Equipment:

- personal protective equipment where necessary
- tools (hand gear, parting-off grinder, ...) where applicable
- radio set
- megaphone
- stretchers, transport accessories (wheel chair, movable seat, ...)



On a regular basis - giving information about persons found to the Head of Internal Communication (Bridge)
Periodic comparison of missing persons with persons found

Communication with team "Transport" where applicable

Registration and hand-over of persons found to the Head of Treatment Location / team "Medical Care"

Folio

7

Folio

7

Task: Search for casualties and evacuation from safe areas

- if necessary - loud shouting in order to make sure attention
- addressing persons found to estimate further transport actions (person is able to walk or has to be supported / carried)
- asking the persons found about further potential casualties nearby
- depending on the situation - supporting or carrying persons
- performing a systematic search and marking of searched areas
- preventing re-entry to already searched areas (e.g. barrier / cordon)
- accompanying people to the treatment location, even if they are able to walk alone

Equipment:

- radio set
- megaphone
- stretchers, transport accessories (wheel chair, movable seat, ...)



On a regular basis - giving information about persons found to the Head of Internal Communication (Bridge)
Periodic comparison of missing persons with persons found

Registration and hand-over of persons to the Head of Treatment Location / team "Medical Care"

Folio

8

Folio

8

Task: Determining treatment locations

(see also Folio 2)

- Location is in a safe distance to the dangerous area
- furniture / tables could be removed quickly
- good access for stretchers / wheel chairs - crooked corridors, narrow doors, high sills are potential obstacles
- ways to come-in and go-out should be separated, if possible.
- adequate protection against wind and weather, interior rooms should be preferred
- parts of the location should be separable without blocking other access points or passages
- running water and electricity should be available nearby
- rest rooms should be easily accessible
- a safe communication with ships command should be possible
- the evacuation site (e.g. helicopter deck) should be easily accessible



Information to the Head of Internal Communication (Bridge) about selected rooms / locations

Task: Preparation of treatment locations

Equipment:

- radio set
- tools too unscrew / detach furniture, if necessary
- (colored) barrier tape, scissors
- signs, pens
- blankets or sheets or large towels

- removing of furniture / tables, unscrewing or detaching, if necessary
- providing of sufficient room to lay down a number of persons
- preparing of separated areas (e.g. with barrier tape) labeled with the following signs:
 - severely injured (red)
 - heavily injured (yellow)
 - slightly injured (green)
 - dead persons
- at the same time and if possible - setting up privacy screens (assembly of rows of chairs, use of curtains, moveable walls, ...)
- laying out of blankets / sheets / large towels to indicate places to lie, leave access to or between the patients



Information to the Head of Treatment Location (if there is one), otherwise to the Head of Internal Communication (Bridge) about preparedness

Folio

9

Folio

9

Task: Support of Head of Treatment Location, Provision of medical equipment and supply goods

Folio

10

Equipment:

- radio set
- reflective vest
- papers for documentation, pen
- tools to carry goods (boxes, bags, ...)
- garbage bags, gloves

Improvising

Medical dressing

- linen, towels, cut of clean clothes into pieces
- feminine hygiene products (e.g. from onboard shop)

Fixing of medical dressing

- duct tape
- sellotape

Splints

- large spoons, whisks etc. from the galley
- broomsticks
- PET bottles

Medical Support

- gathering information to get an overview about
 - all auxiliary means and their location onboard (wheel chairs, stretchers, defibrillators, ...)
 - all medications and their location onboard (hospital, onboard pharmacy, oxygen, first-aid kits)
 - the possibility to use telemedicine
- transferring of auxiliary means / medications to the treatment location, distribution to several treatment locations, if there are more than one
- in case of shortage on auxiliary means: improvising has to be done

Support of supply and disposal

- According to demand - provision of:
 - blankets
 - coolants (e.g. ice cubes in towels)
 - fabric hand towels
 - paper hand towels
 - sick bags
 - water
 - alcohol
 - beverages
 - food
 - lighting
 - tools
- On a regular basis - collecting of waste and disposal using garbage bags (protective gloves should be worn!)



- On a regular basis - requesting needs from team "Medical Care"
- reporting inventories to team "Medical Care"

Communication with Head of Internal Communication (Bridge)

Folio

10

Task: Patient's Classification and documentation of casualties

Equipment:

- radio set (if there is no assistant)
- patient's classification flow chart (see Folio 11a)
- labeling material – red, yellow, green (colored tags, wristbands, colored Edding pens)

- classification of casualties arriving at the treatment location following the patient's classification algorithm according to the severity of their injuries in
 - red - severely injured - immediate treatment required
 - yellow - heavily injured - early treatment required
 - green - slightly injured - treatment where applicable
- according to previous prioritization - labeling of injured persons with colored labels
- in case of an acute life-threatening situation - conducting of immediate lifesaving measures, involving assistants (if there are some):
 - airway obstruction – bring person into recovery position
 - shock – bring person into shock position
 - heavy bleeding - elevation of bleeding body parts
- if assistance is not available: keeping overview!, numerical recording and documentation of all ill or injured persons that are marked red, yellow or green
- only if the situation became relaxed: recording of personal details

↑ On a regular basis - giving information about the current situation to the Head of Treatment Location (if there is one), otherwise to the Head of Internal Communication (Bridge)

↓ in urgent cases: request of transport (rescue helicopter, sea rescue cruiser, ...)

Task: Documentation, Assistance

Equipment:

- radio set
- papers for documentation, writing paper, pen
- labeling material - red yellow green

- support of patients classification
- numerical recording and documentation of all classified ill or injured persons that are marked red, yellow or green, if there is time: concurrent recording of personal details
- according to previous prioritization - labeling of injured persons with colored labels
- in case of an acute life-threatening situation, conducting of immediate lifesaving measures:
 - airway obstruction – bring person into recovery position
 - shock – bring person into shock position
 - heavy bleeding - elevation of bleeding body parts

↑ Communication with team „Patient's Classification“

Folio

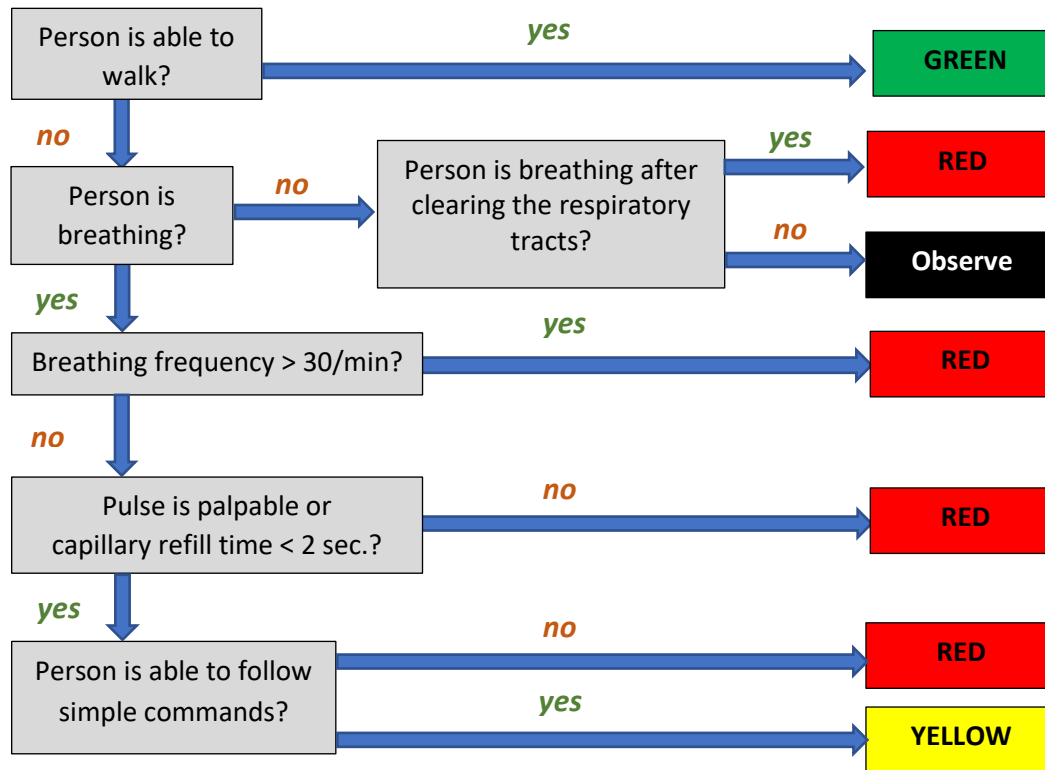
11

Folio

11

Task: Patient's classification algorithm, life-saving handles

Patient's Classification can be done in the following way:



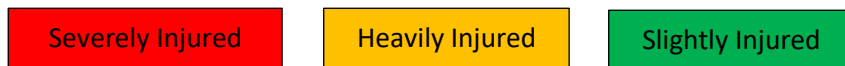
Life-saving handles:



Recovery position



Shock position



Folio

11

a

Folio

11

a

Task: Head of Treatment Location

Equipment:

- radio set
- reflective vest
- papers for documentation, pen

- putting on the reflective vest
- gathering information to get an overview about the number of patients in the different categories, documentation
- giving information to relatives if possible
- gathering information to have an overview about
 - medical equipment (medical dressing, stretchers, oxygen, blankets, ...), organization of replenishment
 - supply goods (water, beverages, ...), organization of replenishment
 - waste management
- involving of medically skilled passengers (allocation of specific tasks)
- preparing of patients for handing-over to external assistance

↑ On a regular basis - giving information about the current situation to the Head of Internal Communication (Bridge)

↓ Communication with team "Classification" / "Medical First Aid"
Communication with team "Logistics"
Communication with team „Transport“
Communication with team „Assistance“

Folio

12

Folio


12

Task: Medical First Aid

Equipment:

- radio set
- reflective vest
- emergency case, first-aid kits
- medical equipment (if available: defibrillator, oxygen, electrocardiogram, telemedicine, ...)

- putting on the reflective vest
- announcing to the Head of Treatment Location (if there is one)
- if casualties have not been classified yet: conducting classification (see Folio 11 and 11 a)
- if casualties have been classified already: starting medical first aid at persons labeled red:
 1. check vital functions (stabilize where applicable)
 2. stop heavy bleedings
 3. perform measures against shock
 4. treat burns
 5. stabilize fractures



Communication with team „Medical Care“
Communication with Head of Internal
Communication (Bridge)

Unconscious, respiration and circulation are present:

- clearing mouth and respiratory tract if necessary
- intubating if necessary
- bringing person to recovery position

Unconscious, no respiration, circulation is present:

- ventilating with oxygen if possible, otherwise mouth-to-mouth or mouth-to-nose resuscitation, preferably use of mask and resuscitation bag, handing-over to assistants (if there are some) to continue resuscitation

Unconscious, no respiration, no circulation:

- performing cardiac massage and respiration, handing-over to assistants (if there are some) to continue the measures

Heavy bleeding

- elevating bleeding body parts, applying compression bandage
- performing anti-shocking measures, if necessary (elevating legs)

Bone fractures

- do not move the fracture, covering open fractures with wound dressing, upholstering and immobilizing where applicable (with blankets, garments)
- closed fractures should be cooled
- performing anti-shocking measures, if necessary (elevating legs)

Large burns

- do not take off clothing which has incrustrated skin
- covering larger burnt body surfaces in a sterile and loosely way, do not cool
- maintaining warmth, covering of the person
- performing anti-shocking measures, if necessary (elevating legs)

Folio

13

Folio

13

Task: Involvement of medically skilled passengers

Equipment:

- radio set
- reflective vest
- papers for documentation, pen

- determining an assembly point for medically skilled passengers and telling the Head of Internal Communication in order to make an announcement via the onboard communication system
- putting on the reflective vest
- registering of medically skilled passengers approaching the assembly point according to
 - quantity
 - qualification
 - commitment (Who dares to do what?)
 - accessibility (cabin number, cell phone number, where applicable)
- on a regular basis - requesting personnel needs from Head of Treatment Location
- assigning medically skilled passengers and instructing them to whom they should get in contact at the treatment location
- where applicable - asking passengers that are currently not required to remain in standby / accessible (specify a time interval)



Communication with Head of Internal Communication (Bridge)
Communication with team "Medical Care"

Folio

14

Folio


14

Task: Psychosocial emergency care of relatives and indirectly affected persons

- determining an assembly point for psychosocial care and telling the Head of Internal Communication in order to make an announcement via the onboard communication system
- putting on the reflective vest, waiting at the designated assembly point to receive the passengers

Equipment:

- radio set
- reflective vest
- papers for documentation
- pen



Communication with Head of Internal Communication (Bridge)
Communication with team
“Medical Care”

Caring for people

To care for means to distract from terrible incidents and to provide a feeling of safety as follows:

- providing contact by sight or by voice to all persons attended
- offering a feeling of safety, clarifying that the danger is over
- listening to and giving the opportunity to express
- providing food and beverages, blankets where applicable
- providing time for recreation, e.g. advising to sleep
- integrating into meaningful work, accepting limits of personal performance, identifying and using performance capabilities
- giving information to relatives about the current situation of their injured dependants, involving them into treatment if possible
- dividing large groups of people into smaller ones, dividing them to different locations, if possible
- do not separate children from their parents under any circumstances
- bringing together travel groups, friends
- registering missing persons, apparently initiating measures to locate them

Giving information

Passengers should not be left in uncertainty. Regular information about the extent of the emergency and adopted measures are essential.

Information should:

- be given as early as possible.
- be spoken loud and clear in short and precise sentences.
- be limited to the main essentials.
- not contain assumptions or contradictions.
- if possible – be associated with a positive operational objective which shall be achieved with the next step to provide hope and motivation.
- be repeated on a regular basis as the passengers are grasping the significance of the situation and the necessity of actions only step by step
- be connected with instructions where applicable. The compliance with given instructions often takes the burden for the own acting.

Folio

15

Folio

15

Task: Involvement of volunteer helpers

Equipment:

- radio set
- reflective vest
- papers for documentation, pen

- determining an assembly point for volunteer helpers and telling the Head of Internal Communication in order to make an announcement via the onboard communication system
- putting on the reflective vest
- registering of volunteer passengers approaching the assembly point according to
 - quantity
 - commitment (Who dares to do what?)
 - accessibility (cabin number, cell phone number where applicable)
- on a regular basis - requesting personnel requirements from Head of Internal Communication, assigning and instructing volunteer helpers to whom they should get in contact!
- where applicable - asking passengers that are currently not required to remain in standby / accessible (specify a time interval)



Communication with Head of Internal Communication
(Bridge)

Before tasks are given to volunteers an estimation has to be done in order to figure out if the volunteer helpers are physically and mentally fit to undertake the task!

Possible tasks for volunteer helpers are e.g.:

- clear up of places after damage (e.g. after heavy weather)
- preparation of locations to care for uninjured persons and relatives
- registration and support of uninjured persons and relatives (see Folio 15)
- transport and / or issue of beverages, food, blankets, ...
- supervision, e.g. of
 - injured persons which should be transferred to the treatment location by team „Transport“
 - confused persons
 - stocks and equipment
 - entrances which should not be accessed by unauthorized persons
- registration of missing persons
- transport of (slightly) injured persons
- creation of provisional medical dressing

Folio

16

Folio

16

Task: Preparation of quarantine areas

Equipment:

- marking tags, warning signs
- disinfectant dispenser
- display stands, blankets, sheets
- waste bins, garbage bags
- tools, duct tape, ...

The extent of the necessary isolation depends on the path of transmission.

Contact Infection/Smear Infection

Direct human-to-human contact
or contact with objects used by infectious patients
(door handles, handrails, armatures)

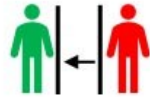


e.g.

Norovirus
Hepatitis

Droplet Infection

Contact with body fluids
(blood, saliva, urine, sweat, ...)



Influenza
Ebola

Airborne Infection

Inhalation of finest droplets



Tuberculosis
Measles
Chickenpox

The measures for a contact isolation have to be performed in general. Afterwards measures for a droplet isolation should build on **additionally**, measures for an airborne isolation have to be carried out in addition to a droplet isolation.



Information to the Head of Treatment Location (if there is one), otherwise to the Head of Internal Communication (Bridge) about preparedness to admit patients

Treatment rooms (e.g. cabin) should be lockable by doors.

Contact isolation

- treatment rooms should be protected against unauthorized access (by a warning sign where applicable!)
- to collect contaminated garbage closed waste bins should be deployed inside the treatment room
- disinfectant dispensers should be installed:
 - in front of the treatment room
 - at entrances and exits to/from restaurants, lounge areas, etc.

Droplet isolation

- maintain a distance > 2 m between the patients inside the treatment room, if possible build up partition walls consisting of display stands, stretched sheets or similar
- install a double door system in front of the treatment room:
 - preferably use a passage room
 - where applicable use aisles in front of the treatment room, stretch e.g. foils / tarpaulins / blankets in such a way that the ceiling and the walls are sealed, accessible via overlapping layers
 - define separated sectors inside the double door system, clearly marked for clothing and items which will be used inside or outside of the treatment room

Airborne isolation

- decouple the air conditioning system from the treatment room, preferably a separate ventilation should be installed
- create a slight vacuum inside the treatment room if possible

Folio

17

Folio

17

Task: Instruction of helpers and their protection at infectious diseases

Selection of Helpers

Ask and select helpers with regard to diseases having experienced / actually consisting and their actual vaccination status.

Instruction

Crew members and helpers who may get in contact with infectious patients or with objects used by infectious patients have to be familiarized with protection and hygiene measures before starting their activities!

Hand hygiene

Carefully wash, dry and disinfect hands after every contact with patients or objects used by patients, after using the lavatory or before eating!

- Preferably do not wear wristwatches, wristbands, rings or similar during the treatment of infectious patients.
- Moisten hands under running water and rub soap on the back of the hand, on the wrist and between the fingers.
- Rinse hands thoroughly with warm running water.
- Carefully dry hands with disposable paper towels.
- Rub in hand disinfectants until complete dryness is reached.
- If possible, operate armatures and door handles only by using disposable paper towels.

Also wash hands after use and removal of disposable gloves!

Protective clothing

Depending on the path of transmission (see Folio 17) helpers have to wear appropriate protection clothing inside treatment rooms:

- | | |
|--------------------|---------------------------------------------------------------------|
| Contact infection | - protective gown |
| | - disposable gloves |
| | - face mask |
| Droplet infection | - (disposable) overall |
| | - disposable gloves |
| | - face mask |
| | - safety goggles |
| | - shoe cover where applicable (e.g. plastic bags with elastic band) |
| Airborne infection | - (disposable) overall |
| | - disposable gloves |
| | - respirator mask (FFP2 / FFP3) |
| | - shoe cover where applicable (e.g. plastic bags with elastic band) |
- Disposable clothing and disposable utensils have to be disposed in dedicated closed and marked bins **before** leaving the treatment room.
 - Change of protective clothing inside double door systems only in such a way that the contamination of outdoor areas is impossible.



Communication with Head of Treatment Room / Location

Folio

18

Folio

18

Task: Implementation of hygiene measures onboard

Instruction of passengers

- Regularly inform the passengers about adopted hygiene measures and appeal to comply with the protection and hygiene measures.
- Instruction boards about hygiene measures should be installed in frequented public areas.
- Regularly request passengers (and possibly to the crew) to contact the ships command if symptoms become apparent.

Onboard procedures

- Documentation of ill persons
- Depending on the extent of the disease outbreak the following measures should be taken if necessary:
- installation of disinfectant dispensers especially in all public areas, sanitary facilities, etc.
 - closure of self-service counters, meals should be handed out by crew members
 - treatment of ill persons in their cabins / in treatment rooms and by instructed personnel
 - closure of wellness areas (pool, sauna, ...)
 - frequent cleaning and disinfection of floors, surfaces, door handles, handrails, etc. - more often as foreseen in the usual cleaning schedule



Communication with Head of Treatment Location
Communication with Head of Internal Communication (Bridge)

Infectious waste

- Clearly mark the waste with a label „Infectious Waste“.
- Use closed bins when collecting infectious waste inside the treatment room.
- Use impenetrable bins when collecting pointed or sharp objects.
- Disinfect bins externally before removal (e.g. with spray).

Clothes of patients and helpers

- Drop off clothes in the treatment room.
- Apply the double-sack principle for the disposal of clothes (a contaminated bag have to be coated by a clean bag, preferably boths bags in a different color).
- Clearly mark the clothes with a label “Infectious Clothes”.
- If necessary: do a disinfectant laundry (at least at 60°C).

Dishes

- Preferably use disposable dishes and dispose it immediately after usage.
- Used dishes should be carried in closed containers to a separated kitchen area and has to be rinsed at least at 60°C.

Sanitary facilities

- Clean and disinfect rest rooms, sinks etc. at least once a day.
- Immediately clean and disinfect sanitary facilities after a severe contamination (vomitus, diarrhea).
- Clean and disinfect door handles with a separate rag.
- Preferably use rags, wipes only once.

Wash and disinfect hands upon completion of each work!

Folio

19

Folio

19