

## **Guidance on the prevention and control of COVID-19 on board (Version 2.0)**

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This document is to provide recommendations and guidance, based on relevant documents developed by the World Health Organization (WHO) and the International Maritime Organization (IMO), together with the experience gained by shipping companies, on the prevention and control of COVID-19 onboard ships, and on personal protection of crew members.

The Maritime Safety Administration of the People's Republic of China (China MSA) will update this guidance when deemed necessary.

## **I. Management system**

Shipping companies may, based on the types of ships, the areas the ships are operating, and the multi-level COVID-19-related requirements in different regions, incorporate the prevention and control system into their companies' safety management systems.

### **1.1 Management plan**

Shipping companies should develop management plans to prevent and control COVID-19. The management plan should include an on-board quarantine plan and provide guidance on the establishment of COVID-19 prevention and control task force, with the captain acting as the team leader and the ship's department head as its member. The task force is responsible for detailed measures and their implementation and sees that no loophole is left to secure the delivery of the detailed prevention and control arrangements.

### **1.2 Management responsibilities**

The shipping company should ensure there are proper communications between the company's shore-base and the ships. The company should designate the captain or other appropriate personnel as the primary responsible person for the overall epidemic prevention and control measures of the ship. That person should be in charge of the COVID-19 prevention and control on the ship, and oversees the full implementation of these measures so as to strengthen the prevention and control work onboard.

### **1.3 Screening system**

Ships should have their COVID-19 logs in place. The shipping company should instruct the ship to screen all the crew members onboard the ship, keep record of the ones who have stopped in transit the COVID-19 affected countries or areas before boarding, and make sure that the screening and daily prevention and control work leave a paper trail.

#### **1.4 Training system**

Shipping companies should provide the ship with training courses on epidemic prevention and control in a timely manner, formulate training plans, teach the crew to identify the symptoms of COVID-19, promptly report the outcome of epidemic prevention and control, and ensure that the newly-embarked crew members have completed their epidemic prevention and control trainings before the ship sails, and regularly organize the crew to take the training on how to use personal protective equipment (PPE) and carry out emergency drills. The company should also train the crew members to deal with scenarios such as on board isolation of suspected cases, management on close contacts, transfer of patients of suspected cases, and crowd management. The company can train the crew remotely via internet or video. Training can also be organized on board through various means, from books, videos to leaflets or broadcasting.

#### **1.5 Response drill system**

The shipping company should instruct the captain to regularly organize the crew to do emergency response drills simulating an epidemic outbreak. The drill should include operations like communications with the company's shore base, the quarantine/care/nursing and transfer practices of patient(s) of suspected cases, evacuation and crowd management.

#### **1.6 Crew changing system**

The shipping company should clearly define the management responsibility on crew changing with the recruitment and placement agency, formulate a crew changing plan, clarify the requirements for epidemic prevention and control during the crew shift, and effectively implement these preventive measures. The shipping company should be aware of the epidemic situations in both the last and the next ports of call. Based on the information of the updated epidemic situations there. The shipping company should carry out risk assessment with a view to minimizing the risk of epidemic transmission. Special personnel should be designated to be responsible for timely updates of the transit route information of the crew before boarding the ship to make sure the crew stay in good health and help the ship to prepare for the crew changing later on. The personnel should also supervise the crew to take their personal protection measures before the changing happens, so as to ensure that changing is carried out in a safe and orderly manner. The shipping company should also strengthen communications with the authorities of next port of call to timely address the epidemic prevention problems encountered by both the ship and the crew.

## **II. Prevention and Control Measures**

### **2.1 Material Supply**

2.1.1 Shipping companies should provide ships with necessary epidemic prevention materials in a timely manner and establish a list-based materials supply system.

2.1.2 Adequate protective masks should be provided and distributed according to the number of crew members on board, including the duty person guarding the gangway entry point, personnel in contact with outsiders and shore-based staff boarding the ship (based upon actual needs on board).

2.1.3 Protective gloves, goggles and gowns should be provided (based upon actual needs on board).

2.1.4 Medical infrared thermometer(s) should be provided.

2.1.5 Hand sanitizer should be provided and ready for use at the gangway entry point and the common area of living quarters.

2.1.6 Disinfectant solution and powder should be provided for disinfection in the kitchen and living quarters.

2.1.7 Corresponding preventive and treatment pharmacies should be provided on board according to the latest version of China's Guidelines on the Novel Coronavirus-Infected Pneumonia Diagnosis and Treatment.

### **2.2 Monitoring of Suspected Symptoms**

2.2.1 The captain should assign a dedicated person to take temperatures of crew and passengers;

2.2.2 Temperature measurements, as well as observation and inquiry about related symptoms, should be conducted both in the morning and evening each day. The measurement results and suspected symptoms should be registered in time, and archived for inspection upon the captain's signature.

2.2.3 The temperature tracking and measurement results of crew and passengers should be reported even if the number of suspected cases is zero. Under normal circumstances, the results should be reported daily to the shore-based management department of the shipping company at regular hours. Any fever, suspected symptoms or other abnormal

conditions of the crew spotted should be immediately reported to the shipping company.

### **2.3 Control of the Gangway Entry Point**

2.3.1 During berthing operation, the captain should urge the person on duty at the gangway to strengthen the control of the entry point and strictly check all boarding personnel's credentials and the wearing of personal protective equipment. Any nonessential or unrelated personnel are prohibited from boarding.

2.3.2 A duty post for temperature measurement and registration of boarding personnel should be set at the gangway entry point. Boarding personnel must first have his/her temperature taken before boarding. Anyone whose temperature exceeds 37.3°C or does not wear personal protective equipment as requested will be prohibited from boarding the ship.

2.3.3 Crew on duty at the gangway entry point should strictly wear masks and protective gloves, and wear protective gowns and goggles when necessary.

2.3.4 In countries and at ports where epidemic has been notified, preventive and control measures should be taken in accordance with the local epidemic prevention and control requirements. In high-risk areas, crew members are not recommended to disembark unless extremely necessary.

2.3.5 Masks used by people who have disembarked are strictly prohibited to be brought into the living quarters, and should all be put into the sealed recycling bin set at the gangway entry point.

### **2.4 Ship-shore Personnel Exchange**

2.4.1 Temporary epidemic control measures should be formulated on a ship. During the epidemic, ship-shore personnel exchanges should be minimized. No boarding visits and family reunion onboard should be allowed.

2.4.2 Boarding outsiders should be strictly limited within a specified perimeter. A tally room or reception should be set on the main deck. Outsiders including agents, tallymen and suppliers entering the living quarters should be restricted.

2.4.3 In high-risk areas, crew replacement should be suspended. In other areas, a replacement of seafarers can only proceed when the port authorities' requirements pertaining epidemic prevention and control are met, and should be reported in accordance with regulations.

### **2.5 Food safety**

2.5.1 Ship food should be purchased from licensed suppliers, avoiding food purchases from ports and places where the epidemic has occurred; food purchases should be registered.

2.5.2 During the epidemic, the recipes on board should be scientifically formulated, supplemented with more fresh vegetables and fruits; appropriate intake of protein food such as meat, poultry, and fish should be ensured.

2.5.3 Separate cutting boards and knives for raw and cooked foods. Avoid raw foods, especially uncooked meat, eggs, and seafood.

2.5.4 Meals should be served individually, with all tableware disinfected in advance.

## **2.6 Ventilating the ship's compartments**

2.6.1 It is recommended to ventilate the ship's compartments three times a day, 20-30 minutes a time. Keep warm in cold areas while ventilating;

2.6.2 Ships arriving at the ports of epidemic areas should pay attention to the ship's air conditioning and ventilating, and maintain the fresh air supply in living quarters. Recommended ratio is 10%-20% of fresh air and 80%-90% circulating air. Such ration can be adjusted as needed up to the shut off the circulating air.

2.6.3 When the fan coil in the central air-conditioning system is in normal use, disinfect the air inlet and return grilles regularly.

2.6.4 On the condition that the fresh air system of central air conditioning is in normal use, if there is an epidemic outbreak, do not stop the operation of the fan. The correct approach is to close the exhaust branch pipe after the evacuation of personnel, then shut off the fresh air exhaust duct after letting it run for a period of time. After all that being done, disinfection to both should be done at the same time.

2.6.5 For the all-air system that brings back the air, the circulating air vent should be completely closed to ensure the intake of fresh air only;

2.6.6 The isolation space on the ship should be ventilated independently or with the circulating operation for the whole ship stopped to minimize the internal air circulation in the living quarters.

## **2.7 Cleaning and disinfection**

2.7.1 Use disinfection products properly according to relevant national requirements and guidelines, with correct concentration ratio of disinfectant, alcohol, etc.; Take fire&static precaution measures to prevent deflagration, fire, poisoning and other accidents.

2.7.2 Strengthen the management of disinfection materials with dedicated staff, special room for storage and professional operations to reduce safety risks and prevent security accidents.

2.7.3 Medical facilities, cabins and quarters occupied by patients, suspected cases and close contacts of COVID-19 should be cleaned and disinfected everyday according to

cleaning and disinfection protocols.

## **2.8 Crew change operations**

2.8.1 Crew on domestic ships are suggested to be replaced within low- and medium-risk areas, avoiding high-risk areas if possible. Ships on international voyage are suggested to change the crew at domestic ports whenever possible, on condition that severe outbreaks hit overseas. The crew should always take corresponding preventive and control measures in accordance with the requirements of the local authorities.

2. 8.2 Measures including PPE (personal protective equipment) wearing and temperature monitoring should be taken during the whole process of crew changing. In case of abnormal health conditions, the changing operation should be suspended immediately and the cases shall be handled properly as required.

2. 8.3 If any confirmed cases, suspected cases, close contacts, or those running fever and/or with respiratory symptoms who need to be isolated are found during the screening, the affected crew member shall strictly abide by the relevant isolation requirements and their health conditions shall report daily to the shipping company from the beginning date of quarantine to the date of its ending.

## **2.9 Precautions against overseas epidemics**

2.9.1 Ships to berth at overseas ports shall check the list of countries, regions, and regions with high-, medium-, and low- risk of epidemics provided by their companies, formulate corresponding prevention and control strategy based on the information and prevention&control requirements of relevant ports, and comply with the requirements of the port of call for cargo operations, ship repairs, ship replenishment, and crew disembarkation.

2.9.2 After arriving at the quarantine anchorage of a foreign port, the ship shall immediately notify the port sanitary authority through its agent. Before the quarantine procedure is completed, nobody other than quarantine officials is allowed for embarkation/disembarkation.

2.9.3 Ships should do the declaration in advance, keep the communication open, and prepare relevant documents according to the requirements of the sanitary authority at the next port of call , including:

- crew health surveys,
- ship sanitation control exemption certificates
- logbooks,



-crew and passenger lists,  
-ship medical records; and  
cooperate with the inspection according to the requirements of the port sanitary authority.

2.9.4 The master of the ship should immediately alert the shipping company and the port sanitary authority if anyone on board shows symptoms such as fever, cough, diarrhea, fatigue, shortness of breath, etc. Under the guidance of local sanitary authority, active prevention and control measures shall be taken to reduce the risk of epidemic spreading on board.

2.9.5 If any confirmed cases, suspected cases, close contacts, or those with fever or/and respiratory symptoms onsets are identified by the port sanitary authority, the ship may be considered as infected. In such case, the ship shall give active cooperation to the sanitary authority.

2.9.6 When berthing at a port in a high- or medium- risk country or region, the crew on board should protect themselves and reduce their direct contact with shore personnel to the minimum. The number and area of activity of the people from the shore should be strictly controlled. Crew shall not be sent ashore unless it's essential to the ship's operation.

2.9.7 The ship shall provide necessary protective gloves, masks and other necessary PPE for pilots and other essential personnel who needs doing their job in ship's bridge cabin. At the same time, crew members who need to be in contact with such personnel should take protective measures properly. Areas occupied by such personnel and their movement area should be cleaned and disinfected after their disembarking.

## **2.10 Region-specific, multi-level targeted approach on passenger ships**

Passenger ships should also implement prevention and control measures in accordance with the recommendation of a region-specific, multi-level targeted approach in the annex to this guide. Measures should be taken to effectively protect the health and safety of crew and passengers, and to prevent the spread of epidemics, including:

- Minimizing the risk for introduction of persons through pre-embarking screening;
- Raising crew awareness through training and related drills on epidemic prevention and control knowledge;
- Arranging passenger cabins reasonably;
- Ensuring disinfection and ventilation of the cabins;
- Highlighting personal protection for crew and passengers;
- Reducing the exchange between shipboard and shore personnel
- Information about health issues should be provided to passengers and crew onboard.

### **III. Personal protection of crew members**

#### **3.1 Personal hygiene**

3.1.1 Wash hands, bathe and change clothes frequently, and wash hands with soap or use hand sanitizer:

3.1.2 Wash hands properly or use hand sanitizer if without access to running water, after coughing or sneezing, before, during and after preparing food, before eating, after going to the toilet, after touching others, after touching animals and after going out.

3.1.3 Keep the clothes worn for working or for outdoors activities in the changing room. Do not take them into cabins. Use disinfectants frequently for the laundry.

3.1.4 Cover mouths and noses with tissue or to their elbows when coughing or sneezing to prevent droplets spraying. Used tissue is recommended to be collected and incinerated.

#### **3.2 Recommended hand washing**

Wash hands with soap or sanitizer and running water. It is recommended to use six-step hand washing methods.

Step 1: Rub hands palm to palm; Rub your palms together. (five times);

Step 2: Right palm over left dorsum with interlaced fingers and vice versa; Rub the back of each hand (five times)

Step 3: Palm to palm with fingers interlaced; Rub both your hands while interlocking your fingers (five times)

Step 4: Backs of fingers to opposing palms with fingers interlocked; - Rub the back of your fingers (five times)

Step 5: Rotational rubbing of left thumb clasped in right palm and vice versa; Rub your thumbs (five times)

Step 6: Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa. Rub the tips of your fingers (five times)



### **3.3 Raise awareness**

3.3.1 Minimize contact with other crew members onboard and avoid unnecessary contact with outsiders and keep at a safe distance if needed;

3.3.2 All the outsiders including pilots should wear facial masks onboard;

3.3.3 After their disembarkation, ventilate and disinfect anywhere the outsiders appear onboard;

3.3.4 Seafarers should wear facial masks and protective gloves when touching documents, receipts and other items and have them disinfected if needed.

### **3.4 Self protection**

3.4.1 Wear personal protective equipment properly;

3.4.2 At port, wear masks and protective gloves when leaving the living quarters to work on deck area; avoid close contact with anyone with cold or flu-like symptoms; stay away from public area, livestock or wild animals;

3.4.3 Take sufficient sleep. The reason is insufficient sleep does harm to human brain's nerve system, brings about unstable emotions, results in low work efficiency and diminish the immunity function and eventually make people vulnerable to COVID-19;

3.4.4. Maintain workout routine; keep adequate body weight and keep fit.

### 3.5 Medical Masks

The types of masks that can effectively prevent infection of COVID-19 include: single-use medical masks, medical surgical masks (including ear-mounted and lace type, Standard YY0469-2010/ YY0469-2011, printed on the package), and particulate respirator and surgical mask (GB19083-2020, KN95,N95-3M1860/1870+,FFP2-UVEX) and so on.

3.5.1 Single-use medical mask is recommended to be worn by the crew members in a non-crowded public place;

3.5.2 Medical surgical mask is recommended to be worn by crew members who have suspected infection symptoms or have to keep in touch with other people frequently when on duty;

3.5.3 The protective effect of particulate respirator and surgical mask (KN95 / N95 and above particle protective masks) is better than that of medical surgical masks and single-use medical masks, which are mainly used by medical personnel. It can also be worn by crew members in highly crowded places or in closed public places.

3.5.4 Particulate respirator and surgical mask is recommended to be worn when patients with confirmed diagnosis are transferred.



挂耳式医用外科口罩

Ear-Mounted Type Medical Surgical Mask



系带式医用外科口罩

Lace Type Medical Surgical Mask



医用防护口罩

Particulate Respirator and Surgical Mask

### 3.6 How to wear a mask correctly

Select different types of masks according to different operating requirements. Wash hands or disinfect hands with a quick hand sanitizer before wearing a mask. Check the validity and completeness of the mask, apply it when they are normal.

3.6.1 Masks are required in crowded or closed public places on board;

3.6.2 If any crew member is suspected of being infected, they should wear a particulate respirator and surgical mask or a medical surgical mask, which should be replaced by a new one every four hours and be replaced in time when damaged, damped or contaminated by the patient's blood or body fluids;

3.6.3 Crew members with respiratory diseases must use protective masks under the

doctor's instruction.

### 3.6.4 Proper wearing medical surgical mask

3.6.4.1 Spread the mouth flat layer with the darker color facing outwards and the metal nose clip facing upwards;

3.6.4.2 Put the mask on the nose, mouth, and chin. Ear-mounting type: ear straps on both sides are hung on both ears; Lace type: lace up the lower straps at the back of neck and the upper ones on the top of head;

3.6.4.3 Put two fingers on the nose clip, press your finger inward starting from the middle position, and gradually move to both sides to shape the nose clip according to the shape of the nose;

3.6.4.4 Lace type: Adjust the tightness of the lace.

### 3.6.5 How to remove the mask?

3.6.5.1 Do not touch the front of the mask (the contaminated surface);

3.6.5.2 Ear-mounted medical surgical masks: lift the double-handed ear straps on both sides;

3.6.5.3 Lace medical surgical masks: unfasten the lower strap firstly and then the upper strap;

3.6.5.4 Particulate respirator and surgical mask: pull the lower headband of the neck from the back of head, and pull headband over head to remove the mask;

3.6.5.5 Hold the mask straps with your hands and discard it.

## 3.7 Disposal of used masks

3.7.1 The discarded masks on board should be classified;

3.7.2 The masks worn by healthy crew members should be replaced when deformed, damped, soiled, or the poor protective performance is found. Masks used by healthy people should be disposed of in accordance with the requirements of domestic waste classification;

3.7.3 Masks worn by suspected or confirmed patients or patients with respiratory diseases or people who were in close contact with them should not be discarded randomly but should be regarded as medical waste and collected in the yellow medical waste bin. Then sprinkle the 5% chlorine disinfectant at the concentration ratio of 1:99 onto the mask, and use 75% alcohol or chlorine disinfectant to disinfect the trash bin twice a day.

## **IV Emergency response when suspected COVID-19 case(s) identified**

When a suspected case is identified, the outbreak prevention and control management plan should be activated. Procedures to isolate, prevent and control should be followed.

### **4.1 at port**

4.1.1 The patients should be immediately isolated, and all crew members should take protective measures;

4.1.2 Ships should report the case(s) to their companies and port authorities, and accept telemedicine instructions;

4.1.3 Ships should contact with the local agency or their company representatives to arrange for the patients' disembarkation and medical transportation and ask the company to provide relevant shore-based assistance. Crew members on board should refrain themselves from being involved in the movement and transportation of patients;

4.1.4 Contact tracing should begin immediately after a suspected case has been identified on board.

4.1.5 The ships should be fully disinfected, and terminal disinfection be done in the patients' cabins and their movement areas.

4.1.6 Close contacts to patients should be isolated and placed under medical observation in their cabins.

4.1.7 Adequate crew for watchkeeping shall be ensured for ships' safety. When in shortage, crew changing shall be properly and timely arranged to make the necessary complements.

### **4.2 underway**

4.2.1 The patients should be immediately isolated, and all persons on board should take protective measures;

4.2.2 Ships should report to their companies and request telemedicine help from the nearest port authorities and follow their instructions;

4.2.3 The shore-based and ship's medical staff jointly evaluate the patient's condition. If the condition is stable, the patient can be arranged to the local hospital for examination and treatment after the ship arrives at the port; if the patient's condition is acute, emergency response should be kicked in and patients should be send ashore

for treatment as fast as possible;

4.2.4 Ships should activate procedures for emergency crew replacement. Close contacts to patients should be isolated and placed under medical observation in their cabins;

4.2.5 The ship(s) should be fully disinfected, and terminal disinfection be done in the patient(s)' cabins and their movement areas.

### **4.3 on cargo ships**

4.3.1 The ship's air conditioning system should be shut down;

4.3.2 The ventilators of the crews' cabins and public areas should be closed to block the internal air circulation between the crews' cabins;

4.3.3 The patients should be arranged for isolation in the sickbay or their own cabins with natural ventilation;

4.3.4 Suspected patients should be arranged in the same area and in private rooms with doors closed.

### **4.4 on passenger ships**

4.4.1 The patients should be quarantined in the cabins with portholes. The ventilators in their cabins should be closed to block the internal air circulation with others, only naturally ventilation allowed.

4.4.2 The ventilators and return air of the public areas should be closed. The ventilators of the cabins with portholes should also be closed, letting fresh air in;

4.4.3 The air conditioning system only supplies air to rooms without portholes and should be adjusted to fresh air mode;

4.4.4. Return air should be closed to prevent virus spreading;

4.4.5 If possible, ultraviolet sterilizers can be installed in the air-conditioned rooms. According to the requirements of the disinfection duration of the ultraviolet sterilizer, the air conditioner should be started briefly after the disinfection is completed, and intermittent air supply should be applied to ensure sufficient oxygen content in the cabins without portholes.

### **4.5 Communicating with patients**

The broadcasting system and intercoms on board should be used for communicating with patients to reduce the opportunities of direct contact. Food supply and other matters should be provided one after the other at intervals to decrease the possibility of cross-infection.

#### **4.6 Attending patients isolated in the cabins**

4.6.1 Patients should wear a mask and be isolated in separate cabins. They should have their meals alone in their own cabins and not be allowed to participate in group activities on board to avoid close contact with other crew members.

4.6.2 The isolation room should be well ventilated or using exhaust fans if necessary. Keep the rooms tidy and clean.

4.6.3 Gloves, tissues, masks and other wastes used by the patients should be placed in a special disposable bag and labelled as pollutants.

4.6.4 Limit the number of caregivers and try to arrange individuals in good health and without any chronic diseases to take care of the patient. Caregivers should take personal protective measures, such as wearing masks, eye shields and gowns. Protective equipment should be disinfected or disposed after used. Refuse all visits.

#### **4.7 Managing close contacts**

All persons on board should be assessed and classified as close contacts or low risks based on their exposure level and the Passenger/Crew Locator Forms (PLF). Contact tracing should begin immediately after a suspected case has been identified on board. All passengers, medical staff and crew members who have had high-risk exposures to the patients should undergo self-monitored isolation under the supervision of ship medical staff or telemedicine providers for 14 days starting from the last possible exposure.

#### **4.8 Transferring suspected patients**

During the disembarkation, other persons on board should avoid contacting the patients. The patients should be limited within a specified perimeter.

In principle, the patients should be transferred by professional medical staff ashore. When circumstances require other crew members' involvement in the transfer of patients, they should perform hand hygiene and wear medical mask, goggles, gowns and gloves.

#### **4.9 Disposal of the medical waste**

All wastes in cabins or isolation rooms must be disposed as medical wastes, which should be incinerated on board if possible; or collected and handed over to shore for special



treatment as required by the authority of the next port of call.

## **V Reporting suspected case(s)**

### **5.1 Reporting time**

Ships should immediately report any death on board or illness (including fever, cough or short of breath) of the crew member or passenger that has traveled to epidemic areas within the past 14 days to the nearest port or health authority or inspection and quarantine agency ashore and inform the maritime administration.

### **5.2 Reporting the following information:**

5.2.1 Ship's name, type, flag state, port of registry, IMO number or distinctive number or letters, number of crew members and passengers on board;

5.2.2 Ship's ports of call during the last 14 days, including the list of ports of call where the suspected case disembarked;

5.2.3 Suspected cases' onset dates, time and location of the ship;

5.2.4 Patients' information including name, gender, position, birth date, nationality and embarkation date;

5.2.5 The patients record of measured temperature, signs and symptoms (including the time when each symptom appears), the number of deaths (if any), possible causes, measures taken and the growth of the disease.

For ships on international voyages, if a suspected case occurred on board, complete the Maritime Declaration of Health and send to the competent authority, according to the 2005 International Health Regulations and the national laws and regulations of the country of disembarkation.

## **VI Adjusting crew members' mental health during the epidemic period**

The captain should organize the psychological intervention and health adjustment for the crew. During the epidemic period, the normal work arrangement on ship may be suspended

due to the COVID-19 development onshore. Frequent overtime work and without leave, plus insufficient information may result in crew members' negative emotions, such as anxiety, paranoia, irritability, depression, sadness, fear, blind optimism, loneliness, impulsiveness, which should be addressed and get help in a timely manner. The following methods are recommended:

### **6.1 Breathing relaxation**

Inhale, hold breath for five seconds, then exhale. Inhale through the nasal cavity slowly and fully to the deepest part of the abdomen, exhale through the nasal cavity or mouth slowly. Allowing two normal breathing, then repeat the inhale-hold-exhale for 3-5 minutes.

### **6.2 Muscle relaxation**

Lie low or sit upright, relax the muscle from top to bottom, head to toe, and vice versa.

### **6.3 Butterfly pattern patting**

With eyes full or partially closed, arms across chest, patting alternately on your shoulders while taking slow and deep breaths. Repeat several times.

### **6.4 Safe deposit box pattern sealing method**

A technique for processing negative emotions by the mean of meditation. Pack and seal the negative emotions accumulated consciously so that the self can be liberated from the negative emotions and ideas in a short time. VII consulting

To consult Chinese Center for Disease Control and Prevention (CCDC) about the latest information related to COVID-19, dial CCDC hotline of 12320 or <http://www.chinacdc.cn>.

## **ANNEX: Recommendation on region-specific, multi-level approach to prevention and control of COVID-19 for passenger ships**

**ANNEX: Recommendation on region-specific, multi-level approach to prevention and control of COVID-19 for passenger ships**

		<b>Prevention and Protective Measures</b>		<b>High-risk Region</b>	<b>Moderate-risk Region</b>	<b>Low-risk Region</b>
Screening	Passenger ship	screening travelling track within the past 14 days of crew		Before departure	Before departure	Before departure
Training	Passenger ship	Knowledge training on prevention and control COVID-19 among crew members after embarking		Before departure	Before departure	Within 24 hours after departure
		Training on personal protective equipment (PPE) and emergency drill for all crew members; training for relevant crew members on attending patients isolated in the cabins, managing close contacts, transferring suspected patients, crowd management.		weekly	weekly	monthly
Drill	Passenger ship	Simulating an emergency drill during an outbreak, including contacting with the company's shore-based staff, attending patients isolated in the cabins, managing close contacts, transferring suspected patients, crowd management.		weekly	weekly	monthly
Disinfection	Passenger ship	Seat, armrest, railing, floor, bridge, luggage rack, worn life jacket, cabin bed, toilet, etc.		Before departure	Before departure	Before departure
		Hand sanitizer should be provided at the gangway entry point and public areas of		Provided	Provided	Provided

Ventilation		living quarters, and areas with toilet or hand sink as well.			Depending on the weather temperature and
	Passenger ship (closed-type)	Natural ventilation	With fans and ventilators full-on	With fans and ventilators full-on	Use at discretion
	Passenger ship (with seats on open deck)	central air-conditioning system (internal-circulation)	Shutdown	shutdown	—
			Seats on deck preferred for passengers	Seats on deck preferred for passengers	—
Transportation	Passenger ship	Seating capacity	≤50%	≤70%	≤90% (except for ships with quarantine space for passengers with fever)
		Cabin arrangement	Single rooms	≤3 persons per cabin	As scattered as possible
		Embarkation and disembarkation of passengers	Embarkation and disembarkation in batches and reducing cluster		
	Passenger ship	Crew members and passengers should wear masks	100%	100%	100%
		Crew members should wear goggles and protective gloves	100% wear protective gloves (wear goggles as appropriate)	100% wear protective gloves (wear goggles as appropriate)	—
		Catering, retail and entertainment facilities on board	Retail facilities are available	Retail facilities are available	Catering and retail facilities are available.
		Body temperatures monitoring frequency (international voyage)	Body temperature monitored normal at boarding terminal or at gangway entry point; Take	Body temperature monitored normal at boarding terminal or at gangway entry point;	Body temperature monitored normal at boarding terminal or at gangway entry point;

g			or video.					
Ferries operating in rural areas should follow the above recommendations as practical as possible.								

		Body temperatures monitoring frequency (domestic voyage longer than 2-hour )	temperatures on-board every morning, noon and evening after departure.	Body temperature monitored normal at boarding terminal or at gangway entry point; Take temperature twice a day (morning and evening for night voyages), and every two hours in the day time (for daytime voyages).	Body temperature monitored normal at boarding terminal or at gangway entry point; Take temperature twice a day (morning and evening for night voyages), and every five hours in the day time (for daytime voyages).	Body temperature monitored normal at boarding terminal or at gangway entry point; Take temperature twice a day (morning and evening for night voyages), and every five hours in the day time (for daytime voyages).	Body temperature monitored normal at boarding terminal or at gangway entry point; Take temperature twice a day (morning and evening for night voyages), and every five hours in the day time (for daytime voyages).	Take temperatures daily on-board in the morning and afternoon after departure.	Take temperatures daily on-board once a day.
		Body temperatures monitoring frequency (national voyage shorter than 2-hour )	Body temperature monitored normal at boarding terminal or at gangway entry point;	Body temperature monitored normal at boarding terminal or at gangway entry point;	Body temperature monitored normal at boarding terminal or at gangway entry point;	Body temperature monitored normal at boarding terminal or at gangway entry point;	Body temperature monitored normal at boarding terminal or at gangway entry point;		Body temperature monitored normal at boarding terminal or at gangway entry point;
		Isolation area for passengers with fever	100% of rated capacity	5% of rated capacity	100%	At the ships' discretion	100%		
		Information registry of passengers with fever	100%	100%	100%	100%	100%		
		Garbage disposal on board	Each voyage	Each voyage	Each voyage	Each voyage	Each voyage		
	Ship-shore personnel exchange	Crew	Minimize disembarkation and suspend crew replacement	Suspended crew with necessary exceptions					
		Boarding requests of Company's shore-based staff and service-suppliers	forbidden (Except for emergency or essentials )	Restrict service-suppliers (Except for emergency or essentials )					
Onboard broadcastin	Passenger ship	Information on hygiene and prevention and protection shall be provided via broadcast	Required	Required	Required	Required	Required		Required