**Shipboard self-distancing (SSD)**

SSD may involve some of the following elements for seafarers:

- Maintaining a WHO recommended social distance of at least one metre when working alongside other seafarers to the extent possible;
- Regularly washing their hands and following good respiratory hygiene;
- Wearing a medical mask if appropriate when physical distancing cannot be maintained and minimising close contact is difficult;
- Avoiding all non-essential contact or close proximity with other seafarers and any other persons;
- Using external stairways/escape routes and walkways to move around the ship when possible, but only if conditions and circumstances permit and it is safe to do so;
- Disinfecting their own work areas, equipment and tools as appropriate after use;
- Refraining from using any common areas on board, such as the mess/day room, laundry area or recreational areas when being used by others, unless special arrangements or measures are in place;
- Returning to their cabin immediately after completing work hours;
- Remaining in their cabin during rest hours, except when arrangements or measures are in place to permit them to spend some rest time on deck; and;
- Receiving and eating all meals in their cabin, provided it is safe to do so.

Procedures should be in place during the handover between the on and off signing seafarer and, in particular, SSD should be rigorously maintained during the handover.

Upon completion of the period of SSD required by the ship operator, any seafarers who are not displaying any symptoms of COVID-19 should be considered free of the virus. Seafarers who display symptoms suggestive of COVID-19 should report these immediately to the person responsible for medical care on board and be managed appropriately through the use of the ship's outbreak management plan.

### 3.3.2 Disembarkation

Disembarkation of seafarers (and any passengers) from ships needs to be carefully managed to reduce the risk of being infected with COVID-19 during disembarkation from the ship (including interaction with any personnel or infrastructures in the port/terminal).

The health of seafarers should be monitored prior to disembarkation to ensure that, as far as reasonably practicable, they are sufficiently healthy to disembark and travel for the purposes of repatriation. Measures to monitor and assess the health of seafarers (and any passengers) at the time of disembarkation include screening questionnaires, temperature scanning or measurement, and testing. The sample template for a Crew/Passenger Health Self-Declaration Form provided in **Annex C** may also be used for this purpose. [4]

Ship operators may be advised that testing is available in ports or terminals for seafarers (and any passengers) who will be disembarking from the ship. At the current time, testing should only be conducted by representatives of the port health authorities. Any seafarer who has a positive test should receive further medical assessment ashore before onward travel. Further guidance for ship operators on the disembarkation of seafarers is provided in P7 and P8 of the IMO *Recommended Framework of Protocols for Ensuring Safe Ship Crew Changes and Travel during the Coronavirus (COVID-19) Pandemic*, which is included in the IMO Circular Letter No.4204/Add.14 (5 May 2020) and is available to download from the ICS website: **www.ics-shipping.org/covid19**.

4. This sample template is consistent with the template recommended in the IMO Recommended Framework of Protocols for Ensuring Safe Ship Crew Changes and Travel during the Coronavirus (COVID-19) Pandemic, which is included in the IMO Circular Letter No.4204/Add.14 (5 May 2020) and is available to download from the ICS website: **www.ics-shipping.org/covid19**.

# 4 Managing Cases of COVID-19 On Board Ship When at Sea

Despite the development and implementation of measures to mitigate the risk of COVID-19 infection on board ships, there is a risk that shipboard personnel or passengers may become infected and begin to display symptoms of COVID-19.

When developing plans to manage individual cases or outbreaks, ship operators should take into account the WHO *Operational Considerations for Managing COVID-19 Cases/Outbreaks On Board Ships*, interim guidance 25 August 2020, which should be used in conjunction with the WHO *Handbook for Management of Public Health Events on Board Ships*: **https://www.who.int/publications/i/item/operational-considerations-for-managing-COVID-19-cases-outbreak-on-board-ships** and **https://www.who.int/ihr/publications/9789241549462/en/**

Some parts of the industry have developed sector-specific guidance such as INTERTANKO's *Outbreak Management Plan*, which can be downloaded from the IMO website: **https://wwwcdn.imo.org/localresources/fr/MediaCentre/Documents/2020-Covid_management_plan_3_Sept_20_web.pdf**

Country-specific guidance about prevention measures is also available, such as: **https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html**

A flowchart has been produced in **Annex H** identifying the process which should be followed when managing cases of COVID-19 on board.

## 4.1 Possible Cases of Infection

COVID-19 affects different people in different ways. According to WHO the following symptoms may be experienced:

| Common symptoms | Less common symptoms |
|---|---|
| Fever | Aches and pains |
| Dry cough | Nasal congestion |
| Fatigue | Headache |
| | Conjunctivitis |
| | Sore throat |
| | Nausea/vomiting or diarrhoea |
| | Loss or change in taste/smell |
| | Rash on skin |
| | Chills and dizziness |

More information about symptoms of COVID-19 can be found on the WHO website: **https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19**

Anyone displaying the above symptoms should report immediately to the person responsible for medical care on board. The outbreak management plan should be activated, the person should be considered as a suspected case of COVID-19, and be isolated in their own cabin or ship's medical facility to await further assessment. This assessment should ascertain whether there is another likely cause, e.g. allergy, tonsillitis, etc.

At the time of writing, testing to confirm a case of COVID-19 is not recommended on board. However, we are aware that some companies are purchasing tests for use on board which may have significant margins of error and so should only be used with the result being interpreted with assistance from Telemedical Maritime Assistance Service (TMAS) or another medically qualified person. Therefore the assessment as to whether a seafarer is likely to have COVID-19 rather than another respiratory infection must be based on factors including:

- Symptoms reported and findings on examination by the person responsible for medical care on board;
- Recent (last 14 days) travel history;
- Recent shore leave;
- Recent contact with visitors to the ship; and
- Recent (last 14 days) contact with people with symptoms suggestive of COVID-19, or confirmed with COVID-19.

Assistance in making the diagnosis should be sought from TMAS services or other shoreside medical support and online assessment tools may be used, for example: **https://helse-bergen.no/avdelinger/yrkesmedisinsk-avdeling/norsk-senter-for-maritim-medisin-og-dykkemedisin/covid-19-at-sea**

If COVID-19 cannot be satisfactorily excluded, the seafarer must be treated as a positive case until further assessment shoreside or until the symptoms have completely disappeared and a period of isolation has been completed. See section 4.8.1 for more detail on the recommended isolation guidance from WHO.

The following are risk factors for severe disease:

- Over 60 years old;
- Underlying non-communicable diseases (e.g. diabetes, hypertension, cardiac disease, cerebrovascular disease, chronic kidney disease, immunosuppression or cancer); and
- Smoking.

Isolate the patient in the sickbay, or in a single cabin, and make sure they wear a medical mask when in contact with other people. The patient should have access to a bathroom not used by others.

Any person entering the room must use PPE that should include a medical mask that covers the mouth and nose, goggles or a visor, a plastic apron or impermeable gown if this is available and disposable, nonsterile gloves. Contact with the suspect case should be limited to a maximum of two other seafarers. Thoroughly wash hands immediately before and after leaving the patient's cabin.

Supportive treatment may include the relief of pain and fever, ensuring enough fluid is taken, and oxygen and other treatments if necessary and as advised by TMAS. Paracetamol should be given for the relief of pain and fever. Advice regarding the use of Ibuprofen is conflicting, therefore it should only be used after consultation with a doctor. Any additional medication should also be discussed with a doctor ashore before being prescribed on board.

The patient's condition should be assessed regularly – two or three times per day – either in person or by telephone. If there is any deterioration in the patient's condition, TMAS should be contacted. The patient must also have an easy and reliable way to contact others in case of concern.

The port health authority in the next scheduled port should be informed of the suspected COVID-19 case on board as soon as possible. They should then assist in the management of the case once the ship arrives into port and coordinate testing of the patient and others on board in line with local policy. Further guidance can be found at **https://www.who.int/publications/i/item/who-2019-nCoV-surveillanceguidance-2020.8**

Person(s) responsible for on board medical care should:

- Ensure a suspect case is interviewed and provide information about places visited in the last 14 days prior to the onset of symptoms and their contacts, including the period from one day before the onset of symptoms on board the ship or ashore;
- Complete a locator card or Maritime Declaration of Health (MDH);
- Report results of active surveillance; and
- Trace contacts as outlined below.

A full record of the medical assessment and care, isolation and hygiene measures taken, details of the contact tracing carried out and interview should be kept in the appropriate medical log book which should include the patient's temperature and blood oxygen levels if measured.

**Annex A6** is a poster which advises on shipboard care for people with suspected or confirmed COVID-19. It can be downloaded from the ICS website: **www.ics-shipping.org/covid19**.

## 4.2 Identification of Contacts

All seafarers (and passengers) on board should be contacted directly and asked about current and recent illnesses. If any person meets the criteria for a suspect case they should be isolated and managed appropriately with all possible cases recorded in the appropriate medical log book.

A close contact is a person who, for example:

- Has stayed in the same cabin with a suspect/confirmed COVID-19 case;
- Has had close contact within one metre or was in a closed environment with a suspect/confirmed COVID-19 case (for example tank work, shared watch in an engine control room, eaten a meal with);
- Participated in the same immediate travelling group without quarantine before embarking the ship;
- Is a cabin steward who cleaned the cabin; or
- Is a medical support worker or other person providing direct care for a COVID-19 suspect or confirmed case.

If widespread transmission is identified then all persons on board could be considered as close contacts having had high risk exposure. This may also be the case if there are a small number of crew on board in a confined space. Close contacts should be asked to isolate themselves in their cabin if this is feasible, given their role on board and the operational requirements of the ship.

If this is not possible, they must:

- Self-monitor for COVID-19 symptoms, including fever of any grade, cough or difficulty breathing, for 14 days from their last exposure;
- Immediately self-isolate and contact health services in the event of any symptom appearing within 14 days. If no symptoms appear within 14 days of their last exposure, the contact person is no longer considered likely to develop COVID-19; and
- Practise SSD, wear a medical mask, ensure regular handwashing and good respiratory hygiene.

Port State health authorities should be informed of any suspect cases and they may also guide how close contacts and others are managed in line with their national requirements:

Such requirements may include:

- Active monitoring by the port health authorities for 14 days from last exposure;
- Daily monitoring (including fever of any grade, cough or difficulty breathing);
- Avoiding social contact and travel; and
- Remaining reachable for active monitoring.

Quarantine measures should follow WHO guidance of considerations for quarantine of individuals in the context of COVID-19.

Any third party personnel who may have visited or stayed on board the ship during the course of its voyage or operations may also need to be identified as close contacts. Likewise, ships should be informed as part of identification of close contacts and tracing if any of those third party personnel subsequently become unwell with symptoms of COVID-19 after disembarking.

Implementation of specific precautions may be modified following risk assessment of individual cases and advice from port health authorities.

Once the ship has docked, port State authorities will continue the assessment of close contacts and will advise on testing, medical management, further isolation/quarantine, additional contact tracing, etc. Port health authorities will conduct risk assessments to identify all contacts, and issue instructions to follow until laboratory results are available. All persons on board fulfilling the definition of a close contact should be asked to complete a locator card (see **Annex B** for an example) or MDH.

Close contacts should either remain on board the ship in their cabin, or preferably at a designated facility ashore, until the laboratory result for the possible case is available.

Transfer to an onshore facility may only be possible if the ship is at the turnaround port, where embarkation/disembarkation of passengers or transfer of cargo takes place.

Persons on board who do not fulfil the definition of a close contact will be considered as having low risk exposure and should be requested to complete MDHs or locator cards with their contact details and the locations where they will be staying for the following 14 days. They should also receive details of the symptoms of COVID-19 and information on how the disease can be transmitted.

## 4.3 Decision Making for an On Board Possible Case of COVID-19

A flowchart has been produced in **Annex H** identifying the process which should be followed when managing a larger number of potential cases of COVID-19 on board. If COVID-19 cannot be satisfactorily excluded the seafarer must be treated as a positive case until further assessment shoreside or complete resolution of symptoms and a period of isolation for ten days from the onset of symptoms, plus at least three additional days without symptoms.

Isolation is the single most important factor in attempting to control the spread of disease on board.

As the seafarer should not be allowed to work, a risk assessment should be undertaken to ensure that the ship can safely undertake operations. This should include consultation with shoreside management, TMAS, or a company doctor. This should also be done in close liaison with the flag State.

Proceed in accordance with the outcome of the risk assessment conducted by the company/Master which may be to proceed to the next port of call or an intermediate port on the voyage taking into account the medical facilities and capabilities ashore.

If, after such consultation, and if as a last resort, seafarers may have to work within their period of recommended isolation, it is necessary to contact TMAS or a company doctor for appropriate advice.

## 4.4 Reporting to the Next Port of Call

Always inform the competent authority of the next port of call if there is a possible case on board. For ships on an international voyage, the International Health Regulations (IHR) state that the MDH should be completed and sent to the competent authority in time in accordance with local requirements for both seafarers and deceased seafarers.

Equally the Master should determine if the necessary capacity to transport, isolate and care for the individual is available in the next port of call.

The ship may need to proceed, at its own risk, to another nearby port if capacity is not available, or if warranted by the critical medical status of the possible case after consultation with TMAS or the company doctor.

## 4.5 Precautions at the Ship Medical Facility

PPE should be used by person(s) responsible for on board medical care for interview and assessment.

The following precautions should be taken for possible cases:

- All possible cases must be isolated;
- Patients must cover their nose and mouth with a tissue, or a flexed elbow, when coughing or sneezing. They should then clean their hands with an alcohol-based hand rub (at least 65–70%) or soap and water for 20 seconds;
- Careful hand washing should occur after contact with respiratory secretions, e.g. mucus and blood;
- Suspect cases must wear a medical mask once identified and be evaluated in a private room with the door closed, ideally an isolation room;
- Any person entering the room must use PPE that should include a medical mask that covers the mouth and nose, goggles or a visor, a plastic apron or impermeable gown if this is available and disposable, nonsterile gloves; and
- After preliminary medical examination, if the person(s) responsible for on board medical care believes a possible case exists, the patient should remain isolated. Persons with respiratory symptoms not considered possible cases should not return to any places where they will be in contact with others on board.

## 4.6 Cleaning, Disinfection and Waste Management

Maintain high level cleaning and disinfection measures during ongoing on board case management.

Patients and close contacts' cabins and quarters should be cleaned using cleaning and disinfection protocols for infected cabins (as per Norovirus or other communicable diseases).

Environmental surfaces should be cleaned thoroughly with hot water, detergent and applying common disinfectants (e.g. sodium hypochlorite). Initiate routines to disinfect surfaces that many people may touch, e.g. mess areas, door handles, railings, toilet flush buttons, telephones, navigation panels, etc.

Once a patient has left the ship, the isolation cabin or quarters should be thoroughly cleaned and disinfected by personnel (using PPE).

Laundry, food service utensils and waste from cabins of possible cases and close contacts should be treated as infectious, in accordance with procedures for handling infectious materials on board. Use medical/surgical gloves when handling these items and cover them when in transit to the washing machine/ dishwasher/appropriate bin.

There should be regular communications between departments in all ships (medical, laundry, room service, etc.) about the persons in isolation.

**Annex A10** is a poster which advises on how to deal with laundry.

It can be downloaded from the ICS website: **www.ics-shipping.org/covid19**.

## 4.7 Disembarkation of a Possible Case

When disembarking a possible case of COVID-19, taking into account any requirement or guidance of the port health authority, the following precautions should be taken:

- Disembarkation should be pre-planned and controlled to avoid any contact with other persons on board;
- The patient (possible case of COVID-19) should wear a medical mask during disembarkation; and
- Shipboard personnel escorting the patient (possible case of COVID-19) during disembarkation should wear appropriate PPE, which may include a medical mask, apron or impermeable gown (if available), gloves and eye protection (goggles or a visor).

The health authority may wish to determine that public health measures have been completed satisfactorily before the ship proceeds to its next port of call.

## 4.8 Management of a Possible Case Once the Ship Arrives in Port

Any seafarer requiring medical attention, whatever the possible diagnosis, must be allowed to receive the necessary medical care including allowance to disembark the ship.

The management of seafarers who are suspected of having COVID-19 but are not in need of further medical care must be discussed with local port health authorities.

As a minimum, all seafarers with symptoms suggestive of COVID-19, and identified close contacts, should be tested by PCR on arrival in port. Ideally all seafarers on board will be tested. Once the test results are available, those with a positive test result should be separated from those who are negative. Either the 'positives' or the 'negatives' can remain on board the ship while the others are managed ashore in appropriate accommodation, or both groups can be managed ashore in separate areas/facilities. Those with an initial negative test should be quarantined, monitored closely and a repeat test taken if they develop symptoms or as per the recommended testing schedule in **Annex I.**

Additional steps to clean the ship, etc., should be taken as outlined in **Annex H** and in line with the requirements of the port health authority.

The US CDC recommends that:

- All seafarers disembark for 14-day shoreside quarantine or isolation in a facility approved by the local health authority;
- A private company disinfects the ship; and
- New seafarers embark ship to resume operations.

Alternatively:

- Seafarers without signs or symptoms remain on board for a 14-day "working quarantine" with strict safety precautions and frequent testing, as per the suggested schedule in **Annex I**;
- Seafarers or a private company disinfects the ship;
- Ship operations resume with the ship remaining close to shore (for potential medical evacuations of seafarers); and
- Any symptomatic seafarers to be isolated in their cabins.

See the US CDC *Interim Guidance for Ships on Managing Suspected or Confirmed Cases of Coronavirus Disease 2019 (COVID-19)* for more detail: **https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html.**

Once the port health authority considers the measures applied have been completed satisfactorily, the ship should be allowed to continue its voyage. Measures taken should be recorded in the valid ship sanitation certificates. Both embarking and disembarking ports must be notified of contacts on board and any measures taken.

### 4.8.1 Release from quarantine or isolation

If all of the tests are negative, the seafarer can be released from quarantine 14 days after the last contact with a confirmed case of COVID-19 or sooner according to local protocols. Seafarers who have tested positive for COVID-19 can be released from isolation according to the WHO updated recommendations: **https://www.who.int/news-room/commentaries/detail/criteria-for-releasing-covid-19-patients-from-isolation**

Seafarers should be released from isolation and be granted shore leave, air and ground travel or return to work on board without another test under the following criteria:

- For those with symptoms: 10 days after symptom onset, plus at least 3 additional days without symptoms (fever and respiratory symptoms); and
- For those without symptoms at any point: 10 days after a positive test for COVID-19.

This reflects recent findings that people whose symptoms have resolved may still test positive for COVID-19 by PCR for many weeks. Despite a positive test result, these patients are not likely to be infectious.

| Positive PCR Test | Procedure | Isolation | Discharge to Leave Isolation | Minimum Isolation Period |
|---|---|---|---|---|
| No COVID-19 symptoms | PCR test positive on Day 1 | 10 days from the day of the positive PCR test | Day 11 | 10 days |
| COVID-19 symptoms up to 10 days | PCR test positive on day 1 with symptoms lasting up to 10 days | 13 days from the day of the positive PCR test | Day 14 | 13 days |
| COVID-19 symptoms for more than 10 days | As for first 10 days and continue isolation while symptoms continue | A further period of 3 days | On the fourth day after any symptoms | Varies depending on when symptoms cease |

*COVID-19 timeline for discharge from isolation following a positive PCR test*

### 4.8.2 Return to duty

After asymptomatic infection or recovery from mild COVID-19, seafarers are fit for duty without further medical examination.

After severe COVID-19 requiring prolonged hospitalisation, intensive care and ventilation, or if the seafarer is suffering with ongoing symptoms, renewal of the medical fitness examination is recommended.

## 4.9 Supplies and Equipment

Flag States regulate the carriage of medical supplies in accordance with the requirements stipulated in the MLC 2006. Plentiful supplies and equipment as described in the *International Medical Guide for Ships*, Third Edition, should be available on board.

WHO has published a list of suggested medical supplies for COVID-19. IMHA has advised that most of this equipment should already be on board and has suggested that any other equipment that is unlikely to be on board should be provided by a port health authority.

A table is attached in **Annex D** which outlines the supplies and equipment required in a situation of COVID-19. This is based on the latest information provided by WHO and IMHA: **https://www.who.int/publications/i/item/disease-commodity-package---novel-coronavirus-(ncov)**

# 5 Myth Busting

The internet contains lots of unproven advice about the transmission, diagnosis and treatment of COVID-19. Seafarers want to protect themselves and their families from becoming unwell with COVID-19 and if they are infected, they want to get better as quickly as possible. It is understandable that people turn to the internet to research information about how the virus spreads, ways to prevent infection and 'guaranteed' cures. But it is vital to check the facts and follow medical advice. Natural, herbal or antiviral products or practices are not necessarily safe and using these in large doses, or misusing them, to prevent or fight infection can be dangerous.

Some claims and practices that have been discredited by the World Health Organization include:

- Adding copious pepper to food;
- Eating garlic;
- Ingesting disinfectant;
- Excessive alcohol consumption; and
- Exposure to excessively high or low temperatures.

None of these will kill the virus and may cause serious harm. Such misinformation can be very hazardous so always be suspicious of claims that are not made by public health bodies. Further information on many myths circulating on the internet is available at: **https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters**

There is currently no specific medical treatment for COVID-19, although many medicines are currently under trial in different countries. Symptoms can be improved using standard medical treatments for mild to moderate illness. Plenty of sleep, eating healthily and managing stress levels can help the body fight the infection. Some general evidence suggests that nutrients from food can support the immune system generally, helping to prevent infection and aid recovery, but there is currently no evidence of vitamin supplements being effective against COVID-19. Further information about the management of a possible case of COVID-19 can be found in Section 4.1.

# 6 COVID-19 Vaccination

## 6.1 COVID-19 Vaccination

To date, around 830 million people have received one dose of a COVID-19 vaccine.

ICS has recently produced a vaccination leaflet; *Coronavirus (COVID-19) Vaccination for Seafarers and Shipping Companies: A Practical Guide (Your Questions Answered)*. This will be updated on a regular basis and should be used as the primary reference source for seafarer vaccinations. The latest version of the leaflet can be accessed here: **https://www.ics-shipping.org/publication/coronavirus-covid-19-vaccination-practical-guide/**

COVID-19 vaccines reduce the severity of symptoms or prevent symptoms completely in a vaccinated person. However, it is currently unknown if they prevent an individual carrying the virus and passing it on to others and mild symptoms may still occur.

Physical distancing, washing hands with soap and water or the use of hand sanitiser, good respiratory hygiene, and use of a mask remain the main methods to prevent spread of COVID-19 and seafarers should continue these practices once vaccinated.

Currently over 50 vaccines are in clinical trials and many more are in the pre-clinical stages. Many COVID-19 vaccines authorised for use in different countries are reported to be more than 50%, and often over 90%, efficient in preventing disease in those vaccinated. However, in some cases, efficacy data is not yet published or peer reviewed. Different countries authorise different vaccines and this changes on a regular basis.

The WHO Status of COVID-19 Vaccines within WHO EUL/PQ evaluation process provides the latest information on vaccine approvals in a pdf and can be found here: **https://extranet.who.int/pqweb/sites/default/files/documents/Status_COVID_VAX_01March2021.pdf**

## 6.2 Types of COVID-19 Vaccines

COVID-19 vaccines target the spike protein (the part of the virus that allows it to bind to, and then enter, human cells). There are four main types of COVID-19 vaccines:

**Nucleic acid (mRNA or DNA):**
**Pfizer BioNTech; Moderna**

These contain genetic material from the virus that instructs human cells to make the spike protein. Once made, the viral genetic material is destroyed. The body then recognises the protein produced as foreign and stimulates an immune response. This type of vaccine is safe and does not affect the person's genes in any way. It is easy to develop and the technology has been used in cancer patients for many years.

**Viral Vector:**
**Oxford/AstraZeneca; Sputnik V/Gamaleya; Johnson & Johnson; CanSinoBIO**

These contain a safe version of a live virus that does not cause harm, with genetic material from the COVID-19 virus inserted. Hence the first virus becomes a viral vector. Once inside the cells, the genetic material carried gives cells instructions to make a protein, usually the spike protein, unique to the COVID-19 virus. Using these instructions, the cells make copies of the protein that are recognised as foreign and stimulate an immune response. This technology has been successfully used in the Ebola vaccine and gene therapy.