



INTERTANKO

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Outbreak Management Plan: Covid-19

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Outbreak Management Plan: Covid-19

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Introduction

This document outlines the plans and procedures to be put in place to prepare a ship for shore personnel to come on board and to protect seafarers from the dangers posed by the Coronavirus disease (Covid-19). This includes potential exposure from shore personnel and the actions to take in the event of a suspected case on board.

This guidance should be read in conjunction with the International Chamber of Shipping (ICS) published *Coronavirus (Covid-19) Guidance for Ship Operators for the Protection of the Health of Seafarers*, International Maritime Organization (IMO) published Circular Letter No.4204/Add.16 *Coronavirus (COVID 19) – COVID-19 related guidelines for ensuring a safe shipboard interface between ship and shore-based personnel* and Chemical Distribution Institute (CDI), Oil Companies International Marine Forum (OCIMF), and INTERTANKO published - *Temporary Covid-19 Precautions During an Inspection*. Reference should also be made to additional guidance issued by IMO in the Circular Letter 4204 series:

<http://www.imo.org/en/MediaCentre/HotTopics/Pages/Coronavirus.aspx>

Note on Version 3:

Following updated advice provide by the World Health Organization, the International Maritime Organization, the International Maritime Health Association and work with the International Chamber of Shipping, the guidance has been updated to reflect best practice. The main updates relate to polymerase chain reaction (PCR) testing and the guidance that anyone who is a confirmed or suspected case of Covid-19 must be isolated, not work and be disembarked at the nearest appropriate port. One additional annex has been added. Annex 2 contains Protocols to Mitigate the Risks of Cases On Board Ships consisting of a testing matrix and flow chart for determining what to do with cases on board.

Symptoms of Covid-19 from the World Health Organization

The World Health Organization (WHO) states that the Covid-19 virus affects different people in different ways.

The WHO states that the common symptoms include:

- fever
- tiredness
- dry cough.

Other symptoms can include:

- aches and pains
- sore throat
- diarrhoea
- conjunctivitis
- headache
- loss of taste or smell
- a rash on skin, or discolouration of fingers or toes
- difficulty breathing or shortness of breath
- chest pain or pressure
- loss of speech or movement.

It is believed that many of those infected do not show any symptoms and so cleanliness and social distancing must be maintained.

Basic protective measures against Covid-19

The following advice is derived from general advice provided by the WHO and based upon the ICS guidance:

- Frequent hand washing by crew using soap and water or alcohol-based hand rub for 20 seconds;
- Avoidance of touching the face including mouth, nose and eyes with unwashed hands (in case hands have touched surfaces contaminated with the virus);
- Seafarers should cover their nose and mouth with a disposable tissue when sneezing, coughing, wiping and blowing the nose, then dispose of the used tissue immediately;
- If a tissue is not available, crew should cover their nose and mouth and cough or sneeze into a bent elbow;
- All used tissues should be disposed of promptly into a waste bin;
- Seafarers should aim to maintain social distancing and keep at least one metre (3 feet) distance from other people, particularly those that cough or sneeze or may have a fever. If they are too close, other crew members can potentially breathe in the virus; and
- Meat, milk or animal products should always be handled with care, to avoid cross-contamination with uncooked foods, consistent with good food safety practices.
- The consumption of raw or undercooked animal products should be avoided.
- A medical log should be maintained.

Personal Protective Equipment

Some ports will require all personnel who come into contact with shore workers to wear extensive amounts of personal protective equipment (PPE). Social distancing measures should prevent the need to wear PPE during routine activities. Where social distancing cannot be maintained, all persons should wear a medical mask. For the gangway watch, the use of a N95 respirator mask, or medical mask and gloves is recommended as the watch may come into contact with infected persons. Medical masks should conform to ASTM F2100, EN 14683, or equivalent standards.

The WHO advises the following on the use of face masks:

- In settings where social distancing cannot be achieved, the wearing of non-medical masks can provide a benefit. Additionally, where social distancing cannot be achieved and there is an increased risk of infection and/or negative outcomes (due to vulnerable persons in the area) then medical masks will provide protection.
- Wear a mask if you are coughing or sneezing.
- Masks are effective only when used in combination with frequent hand-cleaning with alcohol-based hand rub or soap and water.
- If you wear a mask, then you must know how to use it and dispose of it properly.
- Make sure there are no gaps between face and the mask.
- Avoid touching the mask while using it; if you do, clean your hands with alcohol-based hand rub or soap and water.
- Replace the mask with a new one as soon as it is damp and do not re-use single-use masks.
- To remove the mask: remove it from behind (do not touch the front of mask); discard immediately in a closed bin; clean hands with alcohol-based hand rub or soap and water.

Prior to calling at port

Prior to calling any port of an affected country, the Master should ensure accurate port info and vessel ETA is sent to the office. To gather adequate information and update on the Covid-19 from all concerned parties to mitigate the risk, take appropriate precautions and comply with local requirements, which may include the use of additional PPE.

Ships' crews must alert the authorities in the event Covid-19 is suspected on board. In assessing whether a crew member has been exposed to Covid-19, the exposure history should be looked at, in particular whether anyone has joined the vessel in the previous 14 days and what port calls have been undertaken.

In many countries, local authorities are requiring all vessels to report the temperature and condition of a vessel's crew before entry into the port. IMO CL 4204/Add.14 recommends that all seafarers who are leaving the vessel should check their temperature twice daily and keep records as may be required for a number of days before disembarkation.

The provisions contained in the Ship Security Plan, which provide a framework for establishing preventive measures related to limited and unauthorised access, may also be effective in preventing the spread of the virus to ships and seafarers. These include conducting a risk assessment prior to entry into an affected port, assessing the preventive measures taken by those ports, and diligent application of access controls. Such measures may serve to support other actions aimed at preventing the spread of Covid-19 and thus enhance the safety of seafarers and persons with whom they may come into contact.

Precautions with Pilot on board

In the hour prior to Pilot boarding, wipe down the entire bridge with disinfectant (chart table, instruments, chairs, helm, entire console, windows, etc). The cleaning should be repeated after the departure of the Pilot.

Have disposable gloves readily available in order to supply the Pilot (if required) after their embarkation, which he should wear until their disembarkation. Remote temperature gauging of the Pilot (using a non-contact thermometer) should be undertaken and boarding should not be allowed if the readings are above 37.3 degrees Celsius.

Handshakes and other physical contact must be avoided. Social distancing between Pilot and bridge personnel should be in place at all times. Where social distancing cannot be maintained, all persons should wear a medical mask.

Any crew member entering the bridge including the Pilot should thoroughly wash their hands prior to entering the bridge. To facilitate this the toilet located next to the bridge should have all necessary sanitising materials. Pilots may bring their own sanitising materials, but these should also be provided by the ship and made available for all bridge team members to use frequently.

Throughout the transit, all personnel on the bridge including the Pilots are encouraged to regularly wipe down any surface and equipment they come into contact with, such as pens/pencils, binoculars, radar control panels, Electronic Chart Display and Information System (ECDIS) control panels, Portable Pilot Units (PPUs), VHF radios, chairs, handrails, etc.

If the Pilot is in a non-critical area of navigation and feels that they may need to cough or sneeze then they are encouraged to step to the bridge wing or exterior of the wheelhouse and do so in an open environment away from other individuals. If the area of navigation or layout of wheelhouse does not permit this action, then the individual shall cover their mouth/nose and orient themselves in a direction away from other individuals. When safe to do so, they shall proceed with wiping down of the surfaces in their immediate vicinity. Same applies to all ship's personnel attending the bridge.

Only essential personnel should be allowed in the wheelhouse.

Eating while on the bridge should be prohibited and the Pilot service informed of this prior to their boarding.

Precautions with Private Maritime Security Guards or Ship to Ship personnel on board

The company, when engaging the services of a Private Maritime Security Company (PMSC) or conducting Ship to Ship (STS) operations, should undertake due diligence and ascertain the steps taken by the PMSC or STS provider to ensure their personnel are free of the virus, which may include a negative PCR test or quarantine records..

The vessel should follow the same precautions as for Pilots boarding the ship. However, as the personnel will be sailing with the vessel, social distancing and cleanliness will be key. After the personnel have disembarked, their accommodation should be thoroughly cleaned.

The company must inform the PMSC or STS provider if any seafarer falls ill with a fever, flu-like symptoms or tests positive for Covid-19 within two weeks of the departure of their personnel. Similarly, the PMSC or STS provider must inform the company if any of their personnel fall ill with a fever, flu-like symptoms or test positive for Covid-19 within two weeks of departing the ship and all seafarers on board should have a PCR test at the earliest point..

When in port

When entering ports of an affected country, seafarers must refrain from going ashore, with any disembarkation from the vessel avoided where possible and done only where absolutely necessary.

Furthermore, during the port stay there should be minimal interpersonal exchanges with persons from ashore, avoiding contact with people who show symptoms of flu or high temperature and taking care of personal hygiene, including more frequent handwashing, etc. The primary means to prevent transmission of the virus is to maintain social distancing.

Encourage the terminal to use all available electronic and radio controlled devices (Phone, VHF, email) for ship-shore interface.

Key points are:

- Ship's staff exposure on main deck must maintain social distancing. PPE to be worn as required. Care should be taken that the PPE in use must also comply with that needed for the handling of the cargo.
- If any shore person exhibits a fever or flu-like symptoms then they need to depart the vessel at the earliest possible time.

Crew to frequently clean hands by using alcohol-based hand rub or soap and water.

Gangway watch shall have to take remote temperature gauging of those coming on board (using a non-contact thermometer) and should not allow entry if the readings are above 37.3 degrees Celsius¹. Generally thermometers in the hospital on board are of probe type. Every company should make all effort to provide non-contact thermometers for this purpose. Where clinical non-contact thermometers are of a non-intrinsically safe type, those boarding should be escorted to a safe area where their temperature may be monitored. According to the WHO, scanning for temperature is not 100% effective as some infected people show no symptoms initially and some do not develop symptoms for up to 10 days.

In general:

- No handshaking or any physical contact.
- No shore personnel should enter internal spaces of the vessel and accommodation doors should be locked.
- In the event that shore personnel do need to enter the accommodation, then they should be escorted throughout, maintain social distancing and wash their hands frequently.
- Have available at the gangway sanitising and disinfectant material for shore personnel when boarding.
- Food must not be brought on board by shore personnel. Shore personnel should not, where possible, eat on board.
- Have a dedicated space and /or toilet for the use of shore personnel, which should be cleaned and disinfected afterwards upon vessel departure.
- Shore embarkation ladders/gangways: It is recommended that no crew member should come in direct contact with any shore equipment including shore gangways and ladders.

¹ The normal range for human temperature is between 36 and 37 degrees Celsius. The WHO advises that a temperature above 37.3 degrees Celsius is symptomatic of a low fever and is the trigger for the additional steps to be taken. Other administrations apply different temperatures ranging from 37.5 to 38 degrees Celsius. Taking into account the tolerances on the thermometers when used in open spaces subject to the ambient weather conditions, 37.3 degrees Celsius is provided here as it is the lowest temperature and so provides the greatest margin of safety.

Berthing / Unberthing – cargo or bunkering operations:

- Officers and crew involved in such operations must take all precautions relating to wearing the relevant PPE and especially after un-berthing, taking into consideration that the terminal's staff have come in contact with heaving lines, rope lines etc. After sailing, these lines are to be washed down using soapy water and all accommodation, public spaces, corridors, handrails, toilet etc are to be properly disinfected.
- Reduce physical contact with shore personnel and exchange most of the documents as much as possible via email.
- Any produced garbage/litter originated from shore should be disposed of in a dedicated drum and landed prior to departure, if allowed, by shore. Otherwise it should be kept isolated.
- Following departure from port, monitor daily all ship staff's temperature.
- On signing, crew luggage should be handled with gloves and cleaned thoroughly.

Cargo operations

Tanker operations often require loading masters, cargo surveyors and other personnel to be on board. They interact with ship's crew in the following way:

- During the ship-shore safety and cargo meeting.
- The signing and exchange of ship-shore checklist.
- The use of the shore portable radio as part of the ship-shore communication protocol.
- Connection of manifolds.
- The use by the surveyor or the loading master of ship's tank tables and cargo manual.
- Review of cargo monitors and gauging systems.

Similar precautionary measures as mentioned above for bridge procedures shall be exercised in all common / controlled areas such as Cargo Control Room, Meeting Room and Mess Room. Social distancing should continue.

Repair and dry dock operations

During periods in repair yards, shore workers will need to gain access to the ship.

The company and repair facilities should ensure that no workers exhibiting symptoms should be allowed onboard. The repair facility is responsible for ensuring that all workers are free of the virus and that they complete a health declaration form prior to being engaged on the ship.

The ship, company and repair facilities should agree on the placement of a monitoring station prior to boarding of the ship where the temperatures of the workers can be monitored. If the temperature readings are above 37.3 degrees Celsius, the worker should not be allowed onboard. Only one gangway or access route should be used.

The following additional measures should be in place:

- No handshaking or any physical contact.
- No shore personnel should enter internal spaces of the vessel and accommodation doors should be locked.
- In the event that shore personnel do need to enter the accommodation, then they should be escorted throughout, maintain social distancing and wash their hands frequently.
- Have available at the gangway sanitising and disinfectant material for shore personnel when boarding.
- Food must not be brought on board by shore personnel. Shore personnel should not eat on board.
- Have a dedicated space and /or toilet for the use of shore personnel, which should be cleaned and disinfected afterwards upon vessel departure.
- Shore embarkation ladders/gangways: It is recommended that no crew member should come in direct contact with any shore equipment including shore gangways and ladders.

Signing off and on seafarers

This section should be read in conjunction with the INTERTANKO Crew Change Management Plan and IMO Circular Letter CL 4204 Add.14. This Circular recommends that all seafarers who are leaving or joining the vessel should check their temperature twice daily and keep records as this may be required for a number of days before embarkation or disembarkation. Prior to entry into port, the crew manager should ensure that crew changes can take place, taking into account local regulations. In considering crew changes, the manager must ensure that flights are operating and this includes transits in third countries. The seafarer signing off or on should keep with them documents showing that they are seafarers whilst transiting borders. Such documents should assist in their transit. The off-signing crew member should complete a health declaration form. A standardised one can be found in Annex 1.

In case of issues passing through borders, the seafarer should have the emergency contact telephone number for the consulate of their nationality for each country they pass through.

It is vital to ensure trust in the crew change arrangements that no crew member joins a ship if they are feeling ill or suffering from flu-like symptoms. While the WHO does not advise routine PCR testing of on-signing seafarers for Covid-19, many countries require one. In complying with such regulations, where a regulation states that a PCR test must be taken a certain number of hours prior to departure, the hours references the time of the test and not the time of the results being issued. A testing matrix has been developed by ICS, IMHA and INTERTANKO with input from WHO and this can be found in Annex 2.

Social distancing procedures should be in place during the hand over between the on and off-signing seafarer and the on-signers should maintain social distancing for 14 days of joining.

The off-signing seafarer must report to the company if during the 14 days following leaving the ship they feel ill or exhibit flu-like symptoms. Similarly, if there is a suspected outbreak on board, the company must inform all off-signers of the situation within 14 days of their departure from the ship.

Suspected case

Seafarer with a positive PCR test or with Covid-19 symptoms

In the event of a seafarer testing positive or showing Covid-19 symptoms the following steps should be taken:

- Isolate the infected person in the hospital, or in a cabin with a separate toilet and bathing facilities, ensure the air-conditioning duct is isolated and the independent ventilation is used but the WHO advises that the door should be closed;

- During isolation, the seafarer should not undertake any duties.
- For a suspected case, seek medical advice to confirm symptoms are consistent with Covid-19.
- Limit the number of carers of the patient, ideally assign one person who is in a good health without risk conditions;
- **No visitors;**
- Carer should wear PPE consisting of N95 respirator masks or medical masks, and disposable gloves;
- For close contact (e.g. to bathe or turn the patient), plastic overalls or aprons are essential;
- All PPE should be disposed of after each contact with the patient;
- Avoid direct contact with body fluids, particularly oral or respiratory secretions, and stools;
- Infected person's cabin and belonging to be sanitised;
- Do not touch an infected person's belongings, clothes, sheets or their bodily fluids.

As soon as a seafarer tests positive, or when a suspected case is discovered, then the company should be informed immediately and medical advice sought. The company should also inform the Flag State of the ship, the nation state of the seafarer and the ship's P&I Club. Due to the risk of deterioration and to reduce the risk of on board transmission, all confirmed and suspected cases should be disembarked at the nearest appropriate port.

A flow chart has been developed by ICS, IMHA and INTERTANKO with input from WHO to assist decision making and this can be found in Annex 2. A testing matrix can also be found in Annex 2 to assist with the testing of those on board.

Medical waste disposal

This form of medical waste is of two categories:

1. infectious and
2. non-infectious.

Infectious medical waste is liquid or solid waste that contains pathogens in sufficient numbers and with sufficient virulence to cause infectious disease in susceptible hosts exposed to the waste.

Non-infectious medical waste includes disposable medical supplies and materials that do not fall into the category of infectious medical waste.

Infectious waste should be safely stored or sterilised, e.g. by steam, and suitably packaged for ultimate disposal ashore. Medical waste should be labelled. Ships properly equipped may incinerate paper- and cloth-based medical waste but not plastic and wet materials. Sharps should be collected in plastic autoclavable sharps containers and retained on board for ultimate disposal ashore. Unused sharps should be disposed of ashore in the same manner as medical waste.

Liquid medical wastes may be disposed of by discharging them into the sanitary system. All sewage should be managed with the assumption that it will contain human pathogens such as thermotolerant coliforms and

therefore be treated through the ship's sewage treatment plant (MEPC Resolution 227 (64) IMO Guidelines for Sewage Treatment Plants).

Non-infectious medical waste may be disposed of as garbage, not requiring steam sterilising or special handling.

Medical waste should be carefully handled and stored with clear labelling. It should be recorded under Domestic Waste – Category C until landed ashore.

Medical repatriation

Various international regulations include requirements for coastal and port states to provide medical assistance for seafarers in need. Regulation 4.1 of the ILO Maritime Labour Convention (MLC), 2006, as amended, requires that seafarers on board ships who are in need of immediate medical care are given access to medical facilities on shore. IMO Circular letter CL 4204 add 10 states: *Port States must ensure that seafarers on board ships in their territory who are in need of immediate care are given access to medical facilities ashore.*

Due to the possibility of deterioration and to prevent onward transmission on board, all confirmed and suspected cases should be disembarked and coastal and port States should comply with IMO CL 4202 add 23 section 7.5 which states: *Arrange for the prompt disembarkation and transfer of the suspected or confirmed case of COVID-19 from the ship to a medical facility ashore for further assessment, testing isolation or medical care, as appropriate.* The company should inform the Port State of the need of urgent medical attention. Local agents and P&I Clubs should be kept informed of all plans

The ship should determine the best evacuation route for the seafarer and a plan should be in place to ensure that the minimum amount of contact is made between the suspected case and those assisting in the evacuation. Social distancing should be in place as much as possible. All involved in the transfer of persons should wear appropriate PPE. Agreement between the Port State and the ship should be achieved on this evacuation plan.

Once the suspected case has been successfully evacuated ashore, the route and accommodation of the seafarer should be thoroughly cleaned and all PPE and bedding disposed of.

Close monitoring of the remaining ship's crew for any signs of infection should be continued for 14 days after the suspected case has been disembarked. The company should keep the ship informed of any test results on the suspected case.

On-going monitoring

Seafarers, port officials, pilot or anyone who has been on board the ship must inform the company if they fall ill with a fever, flu-like symptoms or test positive for Covid-19 within two weeks of departing the vessel.

Crew training

Owners should ensure that all crew on board are well familiarised with the content of the plan and this should be practised prior to entering ports.

Annex 1 – Health Declaration Form



INTERTANKO Seafarer Health Declaration Form

Name:

Ship's name:

1.	Do you have any of the following flu-like symptoms?		
	Fever	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Cough	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Breathlessness	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Sore throat	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Running nose	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Muscle joint pain	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Chest pain	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Others: please specify:		
2.	List the countries that you have been in during the last 14 days	From	To
	1.		
	2.		
	3.		
	4.		
	5.		
3.	Did you come in close contact with any person suffering from COVID-19 in the last 14 days?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4.	Have you ever been admitted to or visited a hospital in the past one month?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If yes, please specify the reason for the admission or visit:		
5.	Have you been in contact with farm or non-domesticated animals in the past one month?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6.	Declaration: I hereby declare that, to the best of my knowledge the information provided is true and correct		
Signature:		Date:	

The personal data contained in this form will be used solely for the purpose of compliance with legal/statutory requirements of port and other authorities. The personal data will be stored and processed by the operator in accordance with any applicable data privacy laws.



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IMHA



INTERTANKO

Coronavirus (COVID-19)

Protocols to Mitigate the Risks of Cases On Board Ships



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The International Chamber of Shipping (ICS) is the global trade association representing national shipowners' associations from Asia, the Americas and Europe and more than 80% of the world merchant fleet. Established in 1921, ICS is concerned with all aspects of maritime affairs particularly maritime safety, environmental protection, maritime law and employment affairs. ICS enjoys consultative status with the UN International Maritime Organization (IMO).

1. Introduction

As we progress through the COVID-19 pandemic, it is vital to keep trade moving. To do that, we must ensure that crew can embark and disembark safely and efficiently.

ICS, IMHA and INTERTANKO have created two tools to help ship operators manage cases on board: a flowchart to help identify the process to follow when managing a larger number of suspect cases of COVID-19 on board; and a PCR testing procedures matrix to help identify what to do and when prior to boarding and if a suspect case is identified on the ship.

2. Decision Making for On Board Suspected or Confirmed COVID-19 Cases

A flowchart attached at Annex A identifies the process to follow when managing a larger number of potential cases of Coronavirus (COVID-19) on board. If COVID-19 cannot be satisfactorily excluded, seafarers must be treated as positive cases until further assessment shoreside or complete resolution of symptoms and isolation for 14 days. Isolation is critical in attempting to control the spread of disease on board. During the isolation period the seafarers should not work and should be disembarked at the nearest appropriate port. In deciding on the nearest appropriate port, medical facility capabilities ashore should be considered.

Affected seafarers should not be allowed to work and a risk assessment should be undertaken to ensure that the ship can safely undertake operations. Due regard should be taken of the safe manning certification and close liaison with the flag State must be maintained.

Isolate all patients in the sickbay, or in their own cabins, and ensure they wear medical face masks when mixing with other people. Patients should have access to bathrooms not used by others.

3. PCR Testing Procedures Matrix

A PCR testing procedures matrix attached at Annex B identifies what to do and when prior to boarding and also if COVID-19 is identified on board a ship.

Evidence suggests that asymptomatic persons still carry COVID-19 and transmit it to others. Testing:

- Can identify persons not identified by other screening measures;
- Should ideally be conducted on embarkation in ports or terminals, where tests are available by port health authority representatives; and
- Should currently be conducted using polymerase chain reaction (PCR) tests, which involve a swab of the nose or throat. This recommendation may change once new tests are available.

Any seafarers testing positive should not board the ship and should receive further medical assessment or tests.

A negative PCR test does not guarantee seafarers are not infected with COVID-19 and could still potentially carry it on board the ship.

Any seafarers about to join the ship developing any symptoms should not be boarded and should receive further medical advice.

The ability to test seafarers before embarkation depends on many factors including testing availability in ports and terminals.



Seafarers may become infected while travelling to a ship, so the best time to test for COVID-19 to reduce infection risks on board ship is in the port or terminal before embarkation, by isolating the seafarer ashore while awaiting the test result.

Testing before deployment to travel to a ship:

- Can reduce risks associated with COVID-19;
- May be a pre-requisite for travel by relevant authorities; and
- Avoids seafarers travelling to the ship who might not be allowed to board due to a positive test or screening upon embarkation and transmission to others during travel.

Early testing of seafarers suspected of having COVID-19 can help to mitigate spread to others on board ship and identify who else needs to be tested.



Legend:

- Safe (Green box)
- Not Safe (Red box)
- Advice (Blue box)
- Question (Orange box)
- Information (Yellow box)

Flowchart Steps:

- Seafarers with COVID-19 symptoms** (Advice) leads to **Do seafarers meet clinical/epidemiological criteria of suspect cases?** (Question).
- Symptoms of Suspect Cases:** (Information)
 - ***Seafarers with acute onset of fever AND cough; OR acute onset of ANY THREE OR MORE of the following signs or symptoms: fever, cough, general weakness/fatigue, headache, muscle ache, sore throat, runny nose, problems with breathing, loss of appetite/nausea/vomiting, diarrhoea, reduced mental alertness. Self-assessment tool covid19atsea.no can be used. Company doctor/TMAS may also be consulted. However, many who test positive may not show any symptoms.
- Do seafarers meet clinical/epidemiological criteria of suspect cases?** (Question)
 - YES:** Leads to **Immediately isolate the suspect cases in hospital/cabin with separate toilet/AC duct of the cabin shall be isolated. Suspect cases shall be kept off work.** (Advice).
 - NO:** Leads to **No action required for COVID-19. Consult and follow up with shore-based doctor/TMAS for other diagnosis.** (Safe).
- On board monitoring and precaution for suspect cases/close contacts/care givers shall be strictly in compliance with ICS Coronavirus (COVID-19): Guidance for Ship Operators for the Protection of the Health of Seafarers A6/A7/A9.** (Information) leads to **Immediately isolate the suspect cases...** (Advice).
- Immediately isolate the suspect cases...** (Advice) leads to **Is ship within port limit?** (Question).
- Is ship within port limit?** (Question)
 - YES:** Leads to **Inform port authority/port health officer.** (Advice).
 - NO:** Leads to **Contact shore-based doctor/TMAS and seek medical advice to ascertain suspected crew diagnosis.** (Advice).
- Inform port authority/port health officer.** (Advice) leads to **Does the port have sufficient facility to test/treat COVID-19?** (Question).
- Does the port have sufficient facility to test/treat COVID-19?** (Question)
 - YES:** Leads to ******Shore-based medic to conduct PCR tests for all on board.** (Advice).
 - NO:** Leads to **Risk assessment to be conducted by the company/Master, which after consulting with the company doctor or TMAS regarding the suspect cases, should take account of, inter alia, the ship's outbreak management plan, location at sea, voyage length, facilities on board to safely isolate the suspect cases, and the condition of the suspect cases.** (Advice).
- ****Shore-based medic to conduct PCR tests for all on board.** (Advice) leads to **Are any tests positive?** (Question).
- Are any tests positive?** (Question)
 - YES:** Leads to **Seafarers with positive tests to safely disembark from ship for further treatment at shore-based hospital/safe quarantine location.** (Advice).
 - NO:** Leads to ***Seafarers with negative tests should if possible be verified by a second PCR test, conducted 3-5 days after the first test.** (Advice).
- Seafarers with positive tests to safely disembark...** (Advice) leads to ****Conduct cleaning/disinfecting of relevant areas on board after disembarkation of infected seafarers.** (Advice).
- *Seafarers with negative tests...** (Advice) leads to **Risk assessment to be conducted by the company/Master...** (Advice).
- Risk assessment to be conducted by the company/Master...** (Advice)
 - Leads to **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 to proceed to an intermediate port on the voyage.** (Advice).
 - Leads to **In compliance with ISM requirement, company to develop and implement its procedure for sailing with suspect cases including procedure for dealing with an outbreak of infection on board.** (Information).
- Proceed in accordance with the outcome of the risk assessment...** (Advice) leads to **Master/company to ensure safe operation of the ship and mental well-being of seafarers are maintained.** (Information).
- In compliance with ISM requirement...** (Information) leads to **Risk assessment to be conducted by the company/Master...** (Advice).
- **Conduct cleaning/disinfecting...** (Advice) leads to **Port health authority satisfied with public health measures implemented?** (Question).
- Port health authority satisfied with public health measures implemented?** (Question)
 - YES:** Leads to **Ship considered safe and allowed to depart. Port clearance issued.** (Safe).
 - NO:** Leads to **Ship considered affected and cannot depart, until the port health authority is satisfied with preventive measures implemented.** (Not Safe).
- Measures taken should be noted in the ship sanitation certificate by the port health official.** (Information) leads to **Port health authority satisfied with public health measures implemented?** (Question).
- Follow reporting criteria to all concerned parties such as flag State/port authority/P&I club/charterers.** (Information) leads to **Ship considered affected and cannot depart...** (Not Safe).

Additional Information:

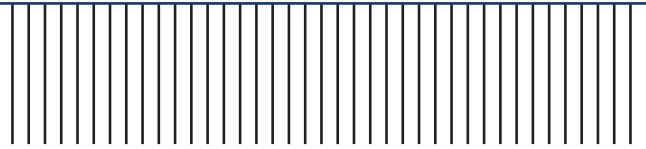
- * Reference information from Centers for Disease Control and Prevention.
- ** For guide to cleaning refer to <https://www.who.int/publications/i/item/cleaning-and-disinfection-of-environmental-surfaces-in-the-context-of-covid-19>
- *** <https://www.who.int/publications/i/item/who-2019-nCoV-surveillanceguidance-2020.7>
- **** Specifically for non-passenger ships
- Epidemiological criteria: Residing or working in an area with high risk of transmission of the virus: for example, closed residential settings and humanitarian settings, such as camp and camp-like settings for displaced persons, any time within the 14 days prior to symptom onset;
- OR Residing in or travel to an area with community transmission anytime within the 14 days prior to symptom onset;
- OR Working in health setting, including within health facilities and within households, anytime within the 14 days prior to symptom onset.



Annex B
PCR Testing Procedures Matrix

	PCR Testing Requirements for Travel to and from the Ship			Suspect Case PCR Testing Requirements as Directed by the Port Health Authority (PHA)	
	Pre departure from home to ship location	On arrival in country of embarkation of the ship	On arrival in the country of disembarkation from the ship for repatriation	Initial tests	Repeated testing of crew/close contacts
				Conduct a PCR test for suspect case, crew and close contacts as directed by the procedures of the PHA.	The PHA may require a further test if the initial test gives a different result.* Where a country does not have sufficient testing capacity the PHA may recommend an accredited private testing facility to do this.
Required	Test to be taken according to the rules of the country of arrival before leaving the seafarer's country of origin. * Due diligence should be conducted by the company to ensure the certificate is valid and not fraudulent.	Verification by officials in the country of arrival of the seafarer's test certificate. If the certificate is not valid retesting will need to be conducted whilst isolating the seafarer ashore. When there is no testing by the State Authority, the company should use due diligence to ensure the certificate is valid and not fraudulent.	To avoid quarantine some countries of arrival require a negative PCR test result prior to arrival of a returning seafarer. Where required the test should be available to the seafarer in the port where they sign off the ship.	On arrival in port.	Repeated tests are taken 3–5 days after the second test.
If negative	Seafarers may travel from the country of origin with the testing certificate to ship.	Board ship after agreed quarantine if required and/ or repeat testing if required.	Leave the ship with testing certificate.	Remain in isolation for the period of time required by the PHA. Seek medical advice.*	Remain in isolation for the period of time required.*
If positive	Seafarers should not leave country of origin.	Seek medical assistance and do not board ship.	Do not leave the ship and advise port health authorities.	Seek medical assistance and disembark for quarantine or isolate onboard.	Seek medical assistance and disembark for quarantine or isolate.
References / comments	* E.g. 48 hours for Singapore	Testing requirements for travel to and from the ship		*Testing Strategy for Coronavirus (COVID-19) in High-Density Critical Infrastructure Workplaces after a COVID-19 Case is Identified https://www.cdc.gov/coronavirus/2019-ncov/community/worker-safety-support/hd-testing.html	*Testing Strategy for Coronavirus (COVID-19) in High-Density Critical Infrastructure Workplaces after a COVID-19 Case is Identified https://www.cdc.gov/coronavirus/2019-ncov/community/worker-safety-support/hd-testing.html





International
Chamber of Shipping

Shaping the Future of Shipping

International Chamber of Shipping
38 St Mary Axe London EC3A 8BH

Telephone + 44 20 7090 1460
info@ics-shipping.org
www.ics-shipping.org

INTERTANKO London
St Clare House
30-33 Minories
London EC3N 1DD
United Kingdom
Tel: +44 20 7977 7010
Fax: +44 20 7977 7011
london@intertanko.com

INTERTANKO Oslo
Nedre Vollgate 4
5th floor
PO Box 761 Sentrum
N-0106 Oslo
Norway
Tel: +47 22 12 26 40
oslo@intertanko.com

INTERTANKO Asia
70 Shenton Way
#20-04 Eon Shenton
079118
Singapore
Tel: +65 6333 4007
Fax: +65 6333 5004
singapore@intertanko.com

INTERTANKO North America
801 North Quincy Street - Suite 200
Arlington, VA 22203
USA
Tel: +1 703 373 2269
Fax: +1 703 841 0389
washington@intertanko.com

INTERTANKO Athens
Karagiorgi Servias 2
Syntagma
Athens 10 562
Greece
Tel: +30 210 373 1772/1775
athens@intertanko.com

www.intertanko.com



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