



INTERTANKO

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**Outbreak Management
Plan: Covid-19**

**TWENTY
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INTERTANKO

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*, *Coronavirus (COVID-19): Vaccination for Seafarers and Shipping Companies: A Practical Guide*, *Coronavirus (COVID-19): Roadmap for Vaccination of International Seafarers*, *Coronavirus (COVID-19): Protocols to Mitigate the Risks of Cases On Board Ships*, *Coronavirus (COVID-19): Seafarer Shore Leave Principles*, *Coronavirus (COVID-19): Legal, Liability and Insurance Issues arising from Vaccination 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 IMO published *Industry Recommended Framework of Protocols for Ensuring Safe Ship Crew Changes and Travel During the Coronavirus (COVID-19) Pandemic* MSC.1/Circ.1636/Rev.1. 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 5:

The main updates relate to the revised symptom list, shipboard safe distancing replacing physical distancing, reiteration of principles that the ship should be able to continue operating with positive cases on board, acceptance of an anti-gen test for PMSC and STS operators, and reporting of historical infections and procedures to follow for vaccinated seafarers who test positive.

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 time from the initial contact with the virus until symptoms start can range from 1-14 days and is usually 3-6 days, depending on the variant of the virus. In more severe cases, symptoms usually worsen 5-10 days after the onset of the illness and medical care is required. Many people who are infected do not exhibit any symptoms, or symptoms may only be mild. The two main transmission routes for Covid-19 are respiratory droplets and contact. Respiratory droplets are generated when an infected person coughs or sneezes. Any person in close contact (within 1-2m) with someone with respiratory symptoms (coughing, sneezing) is at risk of exposure to potentially infective respiratory droplets. Droplets may also land on surfaces where Covid-19 could remain viable; thus, the immediate environment of an infected individual can be a source of contact transmission.

The WHO states that the common symptoms include:

- fever
- fatigue
- cough

Other symptoms can include:

- aches and pains
- nasal congestion
- sore throat
- nausea, vomiting or diarrhoea
- conjunctivitis
- headache
- loss or change in taste or smell
- a rash on skin, or discolouration of fingers or toes
- chills or dizziness
- muscle or joint pain

Serious symptoms:

- difficulty breathing or shortness of breath
- chest pain or pressure
- loss of speech or movement

The WHO advises that a person should seek immediate medical attention if they have serious symptoms.

Some seafarers who are infected may not show any symptoms and so cleanliness and shipboard self-distancing (SSD) are key to reducing the spread of the disease. SSD involves keeping at least one metre from another person and maintaining physical and respiratory hygiene.

Basic protective measures against Covid-19

The following protective measures are 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 SSD and keep at least one metre (or three 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
- 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). SSD measures should prevent the need to wear PPE during routine activities. Where SSD 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 SSD cannot be achieved, the wearing of non-medical masks can provide a benefit. Additionally, where SSD 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. They will also be efficient in rooms with poor or unknown ventilation where it is not easy to determine the quality of ventilation, which depends on the rate of air change, recirculation and outdoor fresh air. When in doubt, it's safer to simply wear a mask.
- When choosing a fabric mask, check for filtration, breathability and fit. Fabric masks should be made of three layers of materials. Inner layer – absorbent material, such as cotton. Middle layer – non-woven non-absorbent material, such as polypropylene. Outer layer – non-absorbent material, such as polyester or polyester blend. Checks should be made prior to purchase to make sure that masks also meet national performance standards.
- Perform hand hygiene before putting on the mask.
- Inspect the mask for tears or holes, and do not use a damaged mask.
- Place the mask carefully, ensuring it covers the mouth and nose, adjust to the nose bridge and tie it securely to minimise any gaps between the face and the mask. If using ear loops, ensure these do not cross over as this widens the gap between the face and the mask.
- Avoid touching the mask while wearing it. If the mask is accidentally touched, perform hand hygiene.

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- Remove the mask using the appropriate technique. Do not touch the front of the mask, but rather untie it from behind.
 - Replace the mask as soon as it becomes damp with a new clean and dry mask.
 - Either discard the mask or place it in a clean plastic resealable bag where it is kept until it can be washed and cleaned. Do not store the mask around the arm or wrist or pull it down to rest around the chin or neck.
 - Perform hand hygiene immediately after discarding a mask.
 - Do not re-use a single-use mask.
 - Discard single-use masks after each use and properly dispose of them immediately upon removal.
 - Do not remove the mask to speak.
 - Do not share your mask with others.
 - Wash fabric masks in soap or detergent and preferably hot water (at least 60° Centigrade/140° Fahrenheit) at least once a day. If it is not possible to wash the masks in hot water, then wash the mask in soap/detergent and room temperature water, followed by boiling the mask for one minute.
 - Masks with exhalation valves should not be used. These masks are intended for industrial workers to prevent dust and particles from being breathed in as the valve closes on inhale. However, the valve opens on exhale, which may allow any virus to pass through the valve opening. This makes the mask ineffective at preventing the spread of Covid-19 or any other respiratory virus.

Prior to calling at port

Prior to calling any port of an affected country, the Master should ensure that accurate port information and vessel Estimated Time of Arrival (ETA) is sent to the office to gather adequate information and update on 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 and declaration requirements. For ships interfacing with port facilities such as having shore-based personnel from cargo terminals to come onboard, some ports may require additional requirements such as having the ship remain anchored for a period of observation or Covid-19 testing for the crew before the ship can commence with its intended activities in port.

Declaring Covid-19 infections

Ships should comply with the International Health Regulations (2005) and complete the Maritime Declaration of Health form prior to arrival. This form states the following:

Are you aware of any condition on board which may lead to infection or spread of disease?

Masters should declare active Covid-19 infections and unless local rules require, there should be no need to report historical infections where the seafarer has fully recovered. The period of reporting is missing from this question, but the form is for the last voyage and this should be taken as the time period. Where the voyage has lasted for longer than 30 days, then the reporting period should not be more than 30 days. Ships may also report the vaccination status of the seafarers on board.

Ships with suspected or confirmed cases on board

The Master must alert the authorities in the event that Covid-19 is suspected on board and seek professional medical advice. 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.

If a seafarer is found to be infected with the virus on board, the ship should still be allowed to undertake routine operations. Article 28, paragraph 2 of the WHO's International Health Regulation (2005), states that ships or aircraft shall not be refused free pratique by States Parties for public health reasons; in particular, they shall not be prevented from embarking or disembarking, discharging or loading cargo or stores, or taking on fuel, water, food and supplies. Article 43 of the International Health Regulations further reinforced this such that local health measures shall not be more restrictive for ships.

The IMO reiterates this principle in Circular Letter No.4204/Add.23 where it states:

When a ship reports a suspected or confirmed case of COVID-19 onboard, the relevant authorities in the port or coastal State are recommended to:

- .1 Permit ship operations to commence and proceed as planned and in accordance with the relevant procedures of the port or terminal.

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 they 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.

Ensure that new disposable gloves and masks are readily available in order to supply the Pilot (if required) after their embarkation, which should be worn 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. 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 may apply different temperature values as the trigger, 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.

Handshakes and other physical contact must be avoided. SSD between Pilot and bridge personnel should be in place at all times. Where SSD 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, 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. The 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 prevent onward transfer of the virus. Prior to joining a ship, the PMSC or STS provider should provide the following for each of their personnel:

- A certificate attesting to a medically supervised negative polymerase chain reaction (PCR) test with a negative result issued 48 hours prior to joining; or
- A certificate attesting to a medically supervised anti-gen test with a negative result issued 48 hours prior to joining; or
- Record of quarantine for 14 days before joining; or
- A vaccination certificate and associated booster dose.

The vessel should follow the same precautions as for Pilots boarding the ship. However, as the personnel will be sailing with the vessel, SSD 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 consequently all seafarers on board should have an anti-gen test at the earliest point.

When in port

The social and personal benefits of shore leave to seafarers cannot be understated. Shore leave allows seafarers to be, temporarily at least, physically and mentally detached from their work environment and to access items and services that are not normally available on board. Seafarers should enjoy their right to shore leave subject to strict respect of any public health measures applicable to the local population and following all precautionary measures including PPE & Sanitation. INTERTANKO, working with other industry associations, has developed shore leave guidance in compliance with regulation 2.4.2 of the Maritime Labour Convention (MLC) and this guidance should be followed.

Where ports prevent shore leave, alternative means for bringing relief items or services from shore to the ship should be considered. However, efforts should be made to work with shore authorities to allow shore leave, particularly for vaccinated seafarers.

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 SSD.

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

The key points are:

- Ship's staff exposure on main deck must maintain SSD. 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 Celsius. Generally, thermometers carried on board are of the probe type. Companies should make every 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. SIRE inspectors have issued observations when non-intrinsically safe equipment is used in non-gas safe environments and so it is important to conduct temperature readings in a safe area. 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 SSD 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.

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 into contact with heaving lines, rope lines etc. After sailing, these lines should not be used again for 72 hours or should be washed down using soapy water and all accommodation, public spaces, corridors, handrails, toilet etc are to be properly disinfected.

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- Reduce physical contact with shore personnel and exchange documents via email wherever possible.
 - 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 the ship's crew in the following ways:

- 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 with the Pilot on board shall be exercised in all common/ controlled areas such as cargo control room, meeting room and mess room. SSD should continue.

Some ports may require the cargo and bunkering operations to be carried out in a "contactless" manner. Exchange and transmission of information and documents will be required to be done electronically via email or telephone. For transferring and operation of physical equipment such as transfer hoses, connections etc. and other situations where shore-based personnel must board the ship, the ship may be required to set up a segregation protocol to minimise interactions. This may involve providing the layout of the ship with clear demarcation of work areas for shipboard personnel and shore personnel that allow both groups to work without the need for them to interact with each other.

The International Safety Guide for Tankers and Terminals (ISGOTT) Ship-Shore Safety Checklist should also be thoroughly reviewed and implemented in view of such a situation where no terminal personnel are allowed to board the ship for the cargo operations. This ISGOTT checklist should best be countersigned by a terminal representative with a note that they did not board the ship. The ship operator may also like to consider consulting their P&I Club to seek its views on the operator's Risk Assessment addressing the potential hazards and mitigation measures for this situation. A Letter of Protest may also be prepared beforehand for issuance as appropriate.

In addition, some ports may require shore workers to be on a regular testing programme or to be fully vaccinated before allowing them to commence work onboard ships. Ship operators may be required to keep full and proper records of all shore personnel embarking and disembarking the ship, for the purpose of contact tracing by local authorities.

Repair and dry-dock operations

During periods in repair yards, shore workers will need to gain access to the ship. Some countries may impose the requirement for all crew on board the ship to take Covid-19 tests before departure from the last port of call and also additional Covid-19 tests on arrival before the ship can be allowed to enter the shipyard.

The company and repair facilities should ensure that no workers exhibiting symptoms 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. A one-way system should be in use and where possible two gangways should be used, one for boarding, another for disembarkation. If only one is available, then flow should be carefully managed.

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 SSD 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.
- If eating onboard cannot be avoided, then an area where the shore personnel can consume their food with their own utensils should be set up and shore personnel should remove their waste from the ship.
- 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.

If it is intended for crew change to take place as part of the ship repair, dry docking or newbuilding schedule, the circumstances and requirements may differ from that of a crew change during normal port calls. For example, some ports impose a strict timeline requiring new crew to depart with the ship within a certain number of days of joining. A ship that has been delayed in its drydocking or delivery schedule may face challenges to meet such tight timelines.

Signing off and on seafarers

This section should be read in conjunction with MSC.1/Circ.1636/Rev.1. Seafarers joining or departing ships should comply with the protocols contained in this circular. 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.

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 that they are passing 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' is in reference to the time of the test and not the time the results are issued.

SSD procedures should be in place during the handover between the on and off-signing seafarer. It is recommended that seafarers be expected to practise SSD for the period of time defined by the Flag State or Port State or state of nationality of the seafarer after joining the ship.

The off-signing seafarer must report to the company if during the 14 days after leaving the ship, they become 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.

Vaccinated seafarers

Many seafarers will have been vaccinated and boosted and should carry proof of vaccination with them whilst travelling. It is recommended that vaccinations which are administered should be on the WHO list of vaccines which are under review for Emergency Use Listing (EUL).

Vaccinated persons backed up with a booster dose should either be immune from the virus or the effects of catching the disease are greatly reduced. Only a small percentage of those fully vaccinated have required hospital treatment. SSD and the use of PPE should continue to be used when in close proximity to shore workers.

It is now clear that being fully vaccinated does not stop a person from transmitting the virus and unvaccinated seafarers should maintain SSD from any new joiner for up to 10 days.

Further guidance can be found in the IMO published Circular Letter No.4204/Add.41 Coronavirus (COVID-19) Roadmap for Vaccination of International Seafarers and the industry guidance *Coronavirus (COVID-19) Vaccination for Seafarers and Shipping Companies: A Practical Guide Your Questions Answered*.

Suspected case

Seafarer with a positive test or with Covid-19 symptoms

Any seafarer with a positive test should isolate in their cabin or the sick bay. Fully vaccinated seafarers, or those who have had Covid-19 confirmed on a PCR test within the last 90 days and who have a negative test and have minor or no symptoms, may continue to work as normal provided they have no underlying conditions, maintain SSD and keep a twice daily temperature log. They should repeat the rapid test five days after contact with the case and report the result to the officer responsible for medical care.

Unvaccinated or partially vaccinated seafarers should be asked to isolate and quarantine themselves in their cabin for five days if this is feasible, given their role on board and the operational requirements of the ship. They should take a further test on day five before leaving isolation. This may be a rapid test or PCR test as available or required by relevant authorities when in port.

If isolation of all unvaccinated or partially vaccinated seafarers is not possible, they should take a rapid test every day and report the result to the officer responsible for medical care.

For Seafarers requiring medical attention, tele-medical advice should be sought and 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 that independent ventilation is used (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. If assistance is denied by a port, the Master should immediately identify if there are other ports in the immediate vicinity to provide the necessary help. Where multiple ports refuse for seafarers to be disembarked, this should immediately be reported to the international shipping organisations so that diplomatic requests can be made to the UN agencies.

Test validity

Very occasionally, seafarers have tested positive to tests when in circumstances where the seafarers are unlikely to be exposed. All tests contain a confidence level and some are more reliable than others. Whilst the PCR test is considered the gold standard, it does have a confidence level. When a result is provided, it should contain a Cycle threshold (Ct) value. All patients with a Ct value less than 35 may be considered as positive while those with a Ct value above 35 may be considered as negative. It should be noted that whilst false positives may occur, so can false negatives. Therefore, SSD should continue to be practiced.

Questions have been raised as to whether a vaccine can trigger a positive test result. None of the vaccines will cause a positive Covid-19 test result for the PCR or antigen test. This is because the tests check for active disease and not whether an individual is immune or not. The proteins produced following the vaccination are not expressed in the respiratory (i.e., nasal) tract, which is sampled during Covid-19 PCR or antigen testing. In the case of an antibody test, however, it may be possible to test positive. The serology test measures a person's Covid-19 immunity. Since the vaccine prompts an immune response, some antibody tests might show the result as positive.

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.

WHO advises that pulse oximeters should be carried onboard to assess oxygen saturation in the blood. A medical log book which should include the patient's temperature and blood oxygen levels shall be maintained so that it can be shared with Telemedical Maritime Assistance Service (TMAS) for its assessment of the patient condition.

If there is any deterioration in the patient's condition, the patient should be assessed in person if not already done so and TMAS should be contacted. More regular assessments are then likely to be necessary. Medical oxygen and other treatments, if necessary, as advised by TMAS can be administered. Any additional medication should be discussed with a doctor ashore before being prescribed to a sick seafarer until disembarkation. Ship owners may want to do a risk assessment and place additional or alternative forms of oxygen supplies on board in the event that multiple crew members concurrently require oxygen therapy and medical care ashore cannot be reached immediately.

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 4204 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. SSD 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.

Ongoing 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.

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