



13075 Gateway Drive S, Suite 100
 Seattle, WA 98168
 Phone (206) 309-3507
 Fax (206) 826-1814
 Email: admin@discoveryhealthmd.com
www.discoveryhealthmd.com

DRAFT COVID-19 ONBOARD PROCEDURES: Subject to continuous update.						
Discovery Health MD, PLLC						
Version 1.13						
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Version 1.13 updates

Under ISOLATION, time to discontinue isolation is extended to 10 days from symptom onset.

Temperature cutoff for screening changed from $\geq 100.4^{\circ}\text{F}$ to $\geq 99.6^{\circ}\text{F}$

TREATMENT ON BOARD section added

COVID-19 ONBOARD PROCEDURES

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PURPOSE

These procedures are intended to provide medical guidance to vessels engaged in maritime commerce utilizing guidance provided by the Center for Disease Control (CDC) and the United States Coast Guard (USCG) to control the spread of COVID-19 on board vessels calling upon the United States and to mitigate the risk of potential fines for failure to report COVID-19 symptomatic cases.

These procedures can also be applied as a best practice on vessels engaged in international commerce. For vessels engaged in international trade, many countries around the world have implemented their own protocols which could include an extended quarantine period for the vessel depending upon the last port of call, the travel history of the crew and passengers on board, and may include travel and/or crew change restrictions. Vessels are advised to check with their agent prior to calling upon such ports as protocols are subject to change on a daily basis.

COVID-19 is now classified as a global pandemic, as declared by the World Health Organization. In order to assist in containing the spread of COVID-19 to the extent possible, crew members, other than those signing off, should be restricted to the vessel while in port if feasible.

In the event crewmembers disembark at a port, they should be expected to follow social distancing and other mitigation strategies and wash hands before returning to the vessel.¹

PREPARATION

Crew changes:

Attempt to minimize crew changes as much as possible. The goal is to keep a healthy crew healthy. For any joining crew, strongly consider a 14-day quarantine period prior to arrival with home symptom screening.

Be aware that the State of Alaska has mandated quarantine for 14 days whether resident, worker, or visitor. Fishing is considered part of the critical infrastructure and for workers to enter Alaska, a plan or protocol outlining how you will avoid the spread of COVID-19 is required to be submitted.²

Isolation or Quarantine Rooms:

Identify which rooms will be used for isolation, ideally it should be an airborne isolation room. If this is not available, it should be a private room with a bathroom. If this is not available, designate rooms that will house only sick crew. A separate bathroom should be designated for sick crew. Be aware that bathrooms shared among isolated or quarantined crew pose a potential infection risk. If toilet seats have lids, the lids should be shut before flushing. There is evidence that COVID-19 can be shed in feces and flushing may generate an

¹ <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community-mitigation-strategy.pdf>

² <https://content.govdelivery.com/bulletins/gd/AKDHSS-282d20b>

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infectious aerosol. Bathrooms should not use air hand dryers as these can spread droplets, paper towels should be provided with a designated waste bin. Frequently clean and disinfect bathrooms.

Additionally, identify which rooms will be used to quarantine crew with close contact exposure to a suspected COVID-19 case if necessary. Identify what the minimum safe staffing requirements are for a vessel in case of a widespread isolation or quarantine.

PPE:

Ensure adequate PPE (NIOSH-certified N95 mask or surgical mask, disposable long-sleeved gown, disposable medical gloves, eye protection such as goggles or disposable face shields that cover the front and sides of face) is available on board. The quantity recommended is at the discretion of the operator. Operators should have contingency plans for rapid resupply during outbreaks.

Train responders on appropriate donning and doffing techniques for PPE. Have disposal plans in place.

<https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf>

If N95 masks or surgical masks are not available, the CDC has issued the following guidance:

In settings where facemasks are not available, health care providers might use homemade masks (e.g., bandana, scarf) for care of patients with COVID-19 as a last resort. However, homemade masks are not considered PPE, since their capability to protect health care provider is unknown. Caution should be exercised when considering this option. Homemade masks should ideally be used in combination with a face shield that covers the entire front (that extends to the chin or below) and sides of the face.³

If N95 masks or surgical face masks are not available, but a higher level industrial respirator, such as a half-face or full-face mask with a HEPA filter cartridge is available, this may be an acceptable alternative if an OSHA respiratory protection program is in place, the employee has been fit tested for the specific respirator, and a sanitizing and cleaning program is in place.

Movement on Vessel:

Galley should be prepared to send individual meals to sick crew and clean dishes separately. Eliminate buffet style dining: train galley staff to serve food as crew pass through the line instead of having each crew member touch the serving utensils. Galley crew should practice *meticulous* hand and cough hygiene and should consider masking while serving food. Some considerations include:

- Self-service utensils – to reduce the opportunity for items to be touched by multiple people, set up trays with utensils on them and hand them out;
- Use of single use cups/plates/etc;
- Aggressive sanitizing of push button/lever beverage dispensers, condiments, etc. – areas that people may be touching during the meal service;

³ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/face-masks.html>

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- Stagger meal breaks to reduce the number of people in the galley at one time or reducing the seating capacity in the galley so people are spaced farther apart;
- Ensure people sanitize their hands on the way to the galley.

Restrict access into the ship's accommodation – keep doors locked to restrict unnecessary crew or visitor movement through vessel.

Post hand and cough hygiene posters throughout vessel.

Supplies:

Vessels should have appropriate diagnostic supplies on board including stethoscopes, blood pressure cuffs, pulse oximeters, and thermometers.

Ensure adequate supplies for cleaning, sanitizing, and disinfecting, including PPE and bags for disposal.

Have alcohol-based hand sanitizer (at least 60-70%) ready for use upon entry to ship, in the galley, wheelhouse, and throughout the vessel. Have disposable tissues and waste bins available throughout the vessel.

Vessels should consider carrying Point-Of-Care influenza tests. Per the CDC, vessels should have sterile viral transport media and sterile swabs to collect nasopharyngeal and nasal specimens if COVID-19 is suspected. These specimens must also be refrigerated for up to 72 hours after collection, or frozen.

Vessels should carry appropriate medications and pharmaceutical supplies, based on the level of training of medical responders on board, which may include:

- Antipyretics such as acetaminophen;
- Oseltamivir;
- Oral hydration salts;
- IV fluids and IV administration supplies;
- Oxygen and oxygen administration supplies;
- Airway interventions including oral and/or nasopharyngeal airways;
- Advanced airway support interventions;
- A selection of antibiotics, oral and IV, to treat bacterial respiratory infections and sepsis.

HOW TO HOME SELF-QUARANTINE

A home self-quarantine is an effective way to prevent the introduction of COVID-19 to your vessel or local communities, however the recommendations on how to self-quarantine must be strictly followed to be effective. **If you develop fever or symptoms during the 14-day self-quarantine period you must delay travel and contact your primary care provider for further guidance.**

Self-quarantine means that you select a location, whether your residence or a hotel room or rented lodging, and you do not leave that location for 14 days. This means you do not go to the grocery store or leave your home. If you are self-quarantining with other people in the house, you must stay six feet away from other household members.

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members, or you must all quarantine together. Do not share personal items and be especially careful of the kitchen and bathroom areas, as these are areas of high infection risk. You should clean and disinfect surfaces, doorknobs, computers, phones, etc. frequently. You should wear masks around other people and practice good cough and hand hygiene, washing your hands with soap and water frequently and avoid touching your face, eyes, and mouth. If you need to break quarantine to seek medical care or for any other reason, you have not successfully completed quarantine and should not travel.

Alaska State Health Mandate 010 has further guidance on self-quarantining.⁴ The New York Times has an article on how to self-quarantine accessible here: <https://www.nytimes.com/article/quarantine-coronavirus.html>

PREDEPARTURE SCREENING

We recommend screening of crew at least 14 days in advance of arrival if possible. If a 14-day window is not feasible, screening should begin as soon as possible prior to departure.

All crew should self-quarantine during this 14-day window.

A potential screening process could include the following steps:

1. 14-day Pre-Departure Screening

- a. Have you experienced any difficulty breathing, shortness of breath, loss of smell or taste, unusual fatigue or symptoms of acute respiratory illness in the last 72 hours?⁵
- b. Have you experienced a fever (99.6° F [37.6° C] or greater using an oral thermometer) within the last 72 hours? (A forehead (temporal) scanner is usually 0.5°F (0.3°C) to 1°F (0.6°C) lower than an oral temperature. An ear (tympanic) temperature is 0.5°F (0.3°C) to 1°F (0.6°C) higher than an oral temperature.)⁶
- c. Have you experienced signs of a fever such as chills, aches & pains, etc. within the last 72 hours?
- d. In the past 14 days, have you traveled in an area with widespread COVID-19 transmission without practicing social distancing?
- e. Have you had contact within the past 14 days with a lab confirmed **or suspected** COVID-19 case patient? (contact defined as being within 6 feet of a COVID-19 case for a prolonged period of time (10 minutes) or having direct contact with infectious secretions of a COVID-19 case).

If a crewmember answers “no” to all the above questions, we recommend self-quarantine at home for the next 14 days to minimize the risk of infection prior to travel. If self-quarantine is not possible,

⁴ <https://gov.alaska.gov/wp-content/uploads/sites/2/03232020-SOA-COVID-19-Health-Mandate-010.pdf>

⁵ Difficulty breathing or shortness of breath means the person is

- unable to move enough air into or out of the lungs, or can do so only with an unusually great effort
- gasping for air,
- feeling “short of breath,” or unable to “catch” his/her breath
- breathing too fast or shallowly, or using muscles of stomach, chest or neck to breathe (especially for children).

⁶ <https://www.cigna.com/individuals-families/health-wellness/hw/medical-topics/fever-temperatures-tw9223>

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he or she must practice social distancing, meticulous hand and cough hygiene and minimize interactions.

2. 14-day At Home Monitoring

- a. Crew member should take his or her temperature twice daily and document temperature and any subjective fever or respiratory symptoms.

If crewmember develops fever or symptoms during this time, travel should be delayed.

Crewmembers should carry a copy of this documentation with them on travel to Alaska to demonstrate compliance with screening recommendations.

3. Day Before Departure Screening

- a. Have you experienced any difficulty breathing, shortness of breath, loss of smell or taste, unusual fatigue or symptoms of acute respiratory illness in the last 72 hours?
- b. Have you experienced a fever (99.6° F [37.6° C] or greater using an oral thermometer) within the last 72 hours? (A forehead (temporal) scanner is usually 0.5°F (0.3°C) to 1°F (0.6°C) lower than an oral temperature. An ear (tympanic) temperature is 0.5°F (0.3°C) to 1°F (0.6°C) higher than an oral temperature.)
- c. Have you experienced signs of a fever such as chills, aches & pains, etc. within the last 72 hours?
- d. In the past 14 days, have you traveled in an area with widespread COVID-19 transmission without practicing social distancing?
- e. Have you had contact within the past 14 days with a lab confirmed **or suspected** COVID-19 case patient? (contact defined as being within 6 feet of a COVID-19 case for a prolonged period of time (10 minutes) or having direct contact with infectious secretions of a COVID-19 case).

If crewmember answers no to all questions, travel may continue to the vessel.

4. Vessel Arrival Screening

- a. On arrival to the vessel, crewmember should demonstrate a measured temperature < 99.6 °F (37.6° C). (This reference is for oral temperature, a forehead (temporal) scanner is usually 0.5°F (0.3°C) to 1°F (0.6°C) lower than an oral temperature. An ear (tympanic) temperature is 0.5°F (0.3°C) to 1°F (0.6°C) higher than an oral temperature.) **Anyone performing screening should wear PPE including an N95 mask, face shield, gloves, and gown. If not available, allow the crewmember to take their own temperature.**
- b. Crewmember must be free of fever or respiratory symptoms. A possible exception would be if crewmember has mild symptoms that are clearly attributable to another source (i.e. allergies).

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EDUCATION OF CREW

Ensure your crew members are aware of the⁷:

- Global risk of COVID-19 during international travel;
- Signs and symptoms that may indicate a sick traveler has COVID-19;
- Requirement for the ship's medical unit to report a traveler with suspected or known COVID-19 to CDC, if ship is destined for a US port;
- Importance of not working on a ship while sick with fever or acute respiratory symptoms.

The ship's company should also review their sick leave policies and communicate them to employees.

CDC recommends that crew members who self-report or appear to have fever or acute respiratory symptoms (such as cough or shortness of breath) be immediately evaluated.

Reassure crew that COVID-19 is not thought to spread via airborne transmission. It is thought to spread via droplet transmission, mainly from person-to-person, between persons who are in close contact with one another (within about 6 feet), or through respiratory droplets produced when an infected person coughs or sneezes.⁸

These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

Reassure crew that COVID-19 is unlikely to be spread through onboard ventilation systems. Droplets are too large to be airborne for a prolonged period of time and quickly settle out of air.

Crew should be advised to frequently wash hands with soap and water, use alcohol-based hand sanitizer, mask if coughing or sneezing, and not touch their faces.

A video to share with crew to help understand how to recognize and prevent COVID-19 spread, is here:
<https://vimeo.com/398986642>

IDENTIFICATION

Procedure to identify crew with suspected COVID-19⁹

Screen crew for:

- 1) Have you experienced any difficulty breathing, shortness of breath, loss of smell or taste, or symptoms of acute respiratory illness in the last 72 hours?¹⁰

⁷ <https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>

⁸ https://www.cdc.gov/coronavirus/2019-ncov/prepare/transmission.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Ftransmission.html

⁹ <https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>

<https://www.who.int/publications-detail/operational-considerations-for-managing-covid-19-cases-outbreak-on-board-ships>

¹⁰ Difficulty breathing or shortness of breath means the person is

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- 2) Have you experienced a fever (99.6° F [37.6° C] or greater using an oral thermometer) within the last 72 hours? (A forehead (temporal) scanner is usually 0.5°F (0.3°C) to 1°F (0.6°C) lower than an oral temperature.)¹¹
- 3) Have you experienced signs of a fever such as chills, aches & pains, etc. within the last 72 hours?
- 4) In the past 14 days, have you traveled in an area with widespread COVID-19 transmission without practicing social distancing?
- 5) Have you had contact within 14 days of symptom onset with a lab confirmed or suspected COVID-19 case patient? (contact defined as being within 6 feet of a COVID-19 case for a prolonged period of time (10 minutes) or having direct contact with infectious secretions of a COVID-19 case).¹²

unable to move enough air into or out of the lungs, or can do so only with an unusually great effort
gasping for air,
feeling “short of breath,” or unable to “catch” his/her breath
breathing too fast or shallowly, or using muscles of stomach, chest or neck to breathe (especially for children).

¹¹ <https://www.cigna.com/individuals-families/health-wellness/hw/medical-topics/fever-temperatures-tw9223>

¹² The International Chamber of Shipping defines close contact as: <https://safety4sea.com/ics-issues-new-guidance-about-seafarers-protection-amid-coronavirus/>

- Has stayed in the same cabin with a suspect/confirmed COVID-19 case;
- Has had close contact within one metre of was in a closed environment with a suspect/confirmed COVID-19 case (for passengers this may include sharing a cabin);
- Participated in common activities on board or ashore;
- Participated in the same immediate traveling group;
- Dined at the same table (for crew members this may include working together in the same ship area);
- Is a cabin steward who cleaned the cabin;
- Is a staff member who delivered food to the cabin;
- Is a medical support worker or other person providing direct care for a COVID-19 suspect or confirmed case.

The WHO defines close contacts on board a ship (high-risk exposure) as: <https://www.who.int/publications-detail/operational-considerations-for-managing-covid-19-cases-outbreak-on-board-ships>

- Stayed in the same cabin as a suspected or confirmed COVID-19 case;
- Had close contact (within 1 m of) or were in a closed environment with a suspected or confirmed COVID-19 case –
- For crew members, this may include participating in common activities on board the ship or while ashore, being a member of a group traveling together, dining at the same table, working in the same area of the ship as the suspected or confirmed COVID-19 case, for example, cabin stewards who cleaned the cabin or galley staff who delivered food to the cabin
- Healthcare worker or another person who provided care for a suspected or confirmed COVID-19 case..

The European Center for Disease Prevention and Control defines close contact for case surveillance as: <https://www.fhi.no/en/op/novel-coronavirus-facts-advice/advice-to-health-personnel/definitions-of-probable-and-confirmed-cases-of-coronavirus-covid-19-and-con/>

- A person living in the same household as a COVID-19 case;
- A person having had direct physical contact with a COVID-19 case (e.g. shaking hands);
- A person having unprotected direct contact with infectious secretions of a COVID-19 case (e.g. being coughed on, touching used paper tissues with a bare hand);
- A person having had face-to-face contact with a COVID-19 case within 2 metres and > 15 minutes;
- A person who was in a closed environment (e.g. classroom, meeting room, hospital waiting room, etc.) with a COVID-19 case for 15 minutes or more and at a distance of less than 2 metres;
- A healthcare worker (HCW) or other person providing direct care for a COVID-19 case, or laboratory workers handling specimens from a COVID-19 case without recommended personal protective equipment (PPE) or with a possible breach of PPE;

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Action:

If a crewmember screens “yes” to any of the symptom questions (1-3), place a surgical mask on if tolerated.

If a crewmember screens “yes” to BOTH the any of the symptom questions (1-3) and an epidemiological risk factor questions (4 or 5), **place a surgical mask on crewmember if tolerated and isolate per the ISOLATION protocol.**

Evaluating provider to don appropriate PPE and begin to document who has exposure to crewmember from this point forward.

If available, obtain a rapid influenza swab. If positive, and no other reason to suspect COVID-19, treat crewmember as an influenza case, not a COVID-19 case. There can be co-infection with COVID-19 and influenza, if there is any suspicion for COVID-19 exposure in the prior 14 days, continue to treat as a suspected COVID-19 case.

If a crewmember screens “yes” to fever and respiratory symptoms, but does not clearly have an exposure that would qualify for a COVID-19 suspect case, recommend isolation for 72 hours AFTER the fever ends without the use of fever-reducing medications AND an improvement in initial symptoms (i.e. cough, shortness of breath) before returning to work.¹³

Additional Recommendations:

Screen crew daily for:

- New signs of fever, cough, loss of smell or taste, or shortness of breath
- If there is a respiratory illness identified on board, take temperature at least daily of each crewmember

Contact tracing information for departing crew should be maintained for at least one month (name, phone number, home address, email). They should be provided with information on whom to contact if they develop fever, cough, loss of smell or taste, or shortness of breath in the following 14 days.

ISOLATION

Isolation separates sick people with a contagious disease from people who are not sick.

Procedure to isolate crew with suspected COVID-19¹⁴

-
- A contact in an aircraft sitting within two seats (in any direction) of the COVID-19 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated (if severity of symptoms or movement of the case indicate more extensive exposure, passengers seated in the entire section or all passengers on the aircraft may be considered close contacts).

¹³ <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/COVIDcasepositive.pdf>

<https://www.kingcounty.gov/depts/health/emergency-preparedness/preparing-yourself/pandemic-flu/businesses/returning-to-work.aspx>

¹⁴ <https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>

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If a crewmember is identified as a potential COVID-19 case, immediately ask them to wear a facemask (a surgical mask, not N-95) if tolerated.

Place the crewmember in a private room with the door closed, ideally an airborne infection isolation room if available. Place a label on the door indicating no one is to enter the room without proper PPE. This room should have separate toilet and bathing facilities.

Any staff entering the room should use Standard Precautions, Contact Precautions, and Airborne Precautions, and use eye protection such as goggles or a face shield. If N-95 masks are not available, a surgical mask may be considered an acceptable alternative at this time.¹⁵

Access to the room should be limited to personnel involved in direct care. Meals should be delivered to the room and dishes and utensils cleaned separately. Anyone with exposure to the crewmember should document the date and time of exposure, nature of exposure (close contact, same room, secretions), and PPE worn.

Meticulous hand hygiene MUST be performed immediately after doffing PPE.

- Maintain a distance of 6 feet from the sick person while interviewing, escorting, or providing other assistance.
- Keep interactions with sick people as brief as possible.
- Limit the number of people who interact with sick people. To the extent possible, have a single person give care and meals to the sick person.
- Avoid touching your eyes, nose, and mouth.
- **Wash your hands often with soap and water.** If soap and water are not available and if hands are not visibly soiled, use a hand sanitizer containing 60%-95% alcohol.
 - Provide tissues and access to soap and water and ask the sick persons to:
 - Cover their mouth and nose with a tissue (or facemask) when coughing or sneezing.
 - Throw away used tissues immediately in a disposable container (e.g., plastic bag) or a washable trash can.
 - Wash their hands often with soap and water for 20 seconds. If soap and water are not available and hands are not visibly soiled, the sick person should use a hand sanitizer containing 60%-95% alcohol.
- If soap and water are not available and hands are not visibly soiled, the sick person should use a hand sanitizer containing 60%-95% alcohol.

Discontinuance of Isolation for crew not requiring care on shore, can be considered, in conjunction with your telemedical advisory service, under the following conditions:¹⁶

¹⁵ https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhpc%2Finfection-control.html

¹⁶ <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/COVIDcasepositive.pdf>
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html>
<https://www.kingcounty.gov/depts/health/emergency-preparedness/preparing-yourself/pandemic-flu/businesses/returning-to-work.aspx>

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- If you had a fever, 3 days after the fever ends without the use of fever-reducing medications AND you see an improvement in your initial symptoms (e.g. cough, shortness of breath);
- If you did not have a fever, 3 days after you see an improvement in your initial symptoms (e.g. cough, shortness of breath);

AND

- 10 days after symptom onset, *whichever is longer*.

Note: discontinuance of isolation for a suspected COVID-19 case should be made on a case by case basis with your vessel telemedical advisory service and does not remove the mandatory USCG reporting requirements.

PROTECTION

Procedure to identify who will have exposure to a potential COVID-19 case, what PPE will be worn, and how PPE will be managed:¹⁷

Once a suspect COVID-19 case is identified and isolated, response team members should be identified who will be the primary contact with the isolated crew. This should be reduced to the absolute minimum number of people.

Proper PPE must be provided:¹⁸

- NIOSH-certified N95 mask or surgical mask;
- disposable long-sleeved gown;
- disposable medical gloves;
- eye protection such as goggles or disposable face shields that cover the front and sides of face.

For N-95 masks, an OSHA respiratory protection program and fit testing should be in place.

Designated responders must be trained in how to appropriately don and doff PPE:

<https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf>

Designate a hand hygiene station for doffing of PPE as close to the exit of the room as possible. Hand washing with soap and water is preferred to hand sanitizer if possible.

A plan for collection and disposal of PPE must be in place.

The amount of PPE provided should be determined by the operator based on the size of the crew, anticipated exposure, and availability of supplies.

<https://acoem.org/COVID-19-Resource-Center/COVID-19-Q-A-Forum/For-healthcare-workers,-should-RTW-recommendations-after-COVID-19-diagnosis-include-other-objective>

¹⁷ <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>

¹⁸ <https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>

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Seattle, WA 98168
Phone (206) 309-3507
Fax (206) 826-1814
Email: admin@discoveryhealthmd.com
www.discoveryhealthmd.com

ASSESSMENT

Procedure on assessing possible COVID-19 cases, on-board diagnostic and treatment recommendations¹⁹

When a potential COVID-19 case is identified, the isolated crewmember should be evaluated by the medical officer on board, wearing appropriate PPE. Attempt to maintain a distance of 6 feet from the sick person while interviewing, escorting, or providing other assistance.

The following historical information should be gathered:

- List of the sick traveler's signs and symptoms, including onset dates. Symptom definitions are available here: <https://www.cdc.gov/quarantine/maritime/definitions-signs-symptoms-conditions-ill-travelers.html>
- The sick traveler's highest recorded temperature;
- The sick traveler's embarkation date and port;
- The ship's ports of call during the 14 days before the person got sick;
- List of ports of call where the sick traveler disembarked during the 14 days before the person got sick;
- Contact with a confirmed or suspected COVID-19 case in the past two weeks;
- Countries visited two weeks prior to onset of symptoms;
- Past medical history;
- Medications taken including dose and frequency;
- Allergies and reactions;
- History of influenza vaccination and if childhood vaccination sequence completed.

The following physical exam information should be obtained:

- Complete vital signs including temperature, blood pressure, pulse, pulse oxygenation, respiratory rate;
- Mental status exam;
- Lung exam;
- Skin/perfusion exam;
- Any other relevant organ system exam based on presenting signs and symptoms.

If indicated, based on medical officer assessment or consultation with medical advisory service, the following diagnostic testing may be recommended:

- Rapid influenza testing;
- Sterile viral transport media and sterile swabs to collect nasopharyngeal and nasal specimens if COVID-19 infection is suspected are recommended by the CDC. Samples must be refrigerated for up to 72 hours after collection or frozen. (<https://www.cdc.gov/coronavirus/2019-ncov/lab/rt-pcr-detection-instructions.html>)

¹⁹ <https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>

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Treatment recommendations should be discussed with a vessel's telemedical providers. Some treatments that may be recommended include:²⁰

- Antipyretics such as acetaminophen;
- Oseltamivir;
- Oral rehydration salts;
- IV fluids and IV administration supplies;
- Oxygen and oxygen administration supplies;
- Airway interventions including oral and/or nasopharyngeal airways;
- Advanced airway support interventions;
- A selection of antibiotics, oral and IV, to treat bacterial respiratory infections and sepsis.

Frequent reassessments of the crewmember's medical status are recommended as symptoms can change rapidly.

TREATMENT ON BOARDⁱ

Treatment at this point remains supportive. Prevention is the best approach and the best strategy is to ensure attention to hand washing, covering cough and sneezes, and practicing social distancing. Eating well, getting plenty of sleep, and stopping smoking are recommended. There is currently no evidence to support the use of supplements such as vitamin C or zinc to prevent COVID-19 specifically, however, if one chooses to use them, some dosing guidelines are:

- Vitamin C: 500-1000 mg/day, do not exceed 2000 mg/day
- Zinc: completely dissolve in mouth one lozenge containing 18.75 mg of zinc acetate every 2 waking hours. Do not exceed 8 lozenges daily, and do not use for more than three consecutive days.

Most cases (about 80%) of COVID-19 are mild without shortness of breath or low oxygen levels and last about 10 days. Risk factors for more severe illness include: age over 60, cardiovascular disease including high blood pressure, respiratory disease including asthma, diabetes, pregnancy or immunosuppression. Smokers are at higher risk. People can become very ill very quickly and must be reassessed frequently. Any potential COVID-19 case should be discussed with your telemedical advisory service.

CPR guidelines

The American Heart Association released guidelines on CPR and resuscitation for those with suspected or confirmed COVID-19. Since CPR and advanced airway maneuvers such as Bag-Valve-Mask (BVM) ventilation or endotracheal intubation can produce infectious aerosols that can remain in the air for hours and expose

²⁰ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html>
https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf?sfvrsn=bc7da517_2

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responders, the indications for performing these interventions in those with suspected or confirmed COVID-19 have changed.

Before performing resuscitation on a suspected or confirmed COVID-19 patient all responders must don PPE to protect against airborne and droplet particles. This includes N95 masks or those with equivalent protection. For response in a medically austere environment such as a vessel, if appropriate PPE is not available, the risk to responders may outweigh the benefit of attempting resuscitation. While the outcomes for cardiac arrest in COVID-19 patients are as yet unknown, mortality for critically ill COVID-19 patients is high and rises with increasing age and comorbidities, particularly cardiovascular illness. These considerations should be taken into account in determining the appropriateness of attempting resuscitation.

Limit personnel responding to the scene to only those essential for patient care.

For adults:

CPR: if appropriate PPE is available and responders are willing and able, hands-only CPR may be performed after recognition of a cardiac arrest event. A face mask or cloth covering the mouth and nose of the victim may reduce the risk of transmission. Given the poor outcomes with patients with cardiac arrest and COVID-19, CPR is not recommended in a medically austere environment without ready access to advanced medical support.

Defibrillation: because defibrillation is not expected to be a highly aerosolizing procedure, responders should use an automated external defibrillator, if available, to assess and treat victims of sudden cardiac arrest.

Ventilation support: Bag-Valve-Mask ventilation is an aerosolizing procedure with a high risk of producing airborne infectious particles. The use of BVM ventilation in a critically ill patient with confirmed or suspected COVID-19 in a medically austere environment is discouraged. If it is used, all responders must wear PPE appropriate for droplet and airborne exposure. A BVM device with a HEPA filter and tight seal should be used. A preferred method for oxygenation in a critically ill patient in this situation would be to attempt passive oxygenation with a nonbreathing face mask covered by a surgical mask.

Endotracheal intubation: As the majority of vessels will not have access to endotracheal intubation with recommended video laryngoscopy and ventilator filters, and given the high mortality of critically ill COVID-19 patients and evidence of aerosolization of infectious particles, endotracheal intubation is not recommended for suspected or confirmed COVID-19 patients with respiratory failure in a medically austere environment where access to advanced medical care is not readily available. These recommendations apply to the use of supraglottic airways as well. The mortality rate for patients needing intubation is around 80%.

Supplemental oxygen:

Oxygen and Prone positioning (face down): While most studies and experience around proning (meaning lying face down) have been performed in critically ill intubated patients and have shown an improvement in oxygenation and ventilation, there are suggestions that this procedure is beneficial for those with mild disease as well. If a crewmember is short of breath or has a low oxygen saturation, if tolerated, they should lie face

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down for as many hours a day as is possible. They may use supplemental oxygen by nasal cannula or facemask as needed.

Nebulizers:

The use of nebulizers in a suspected COVID-19 patient is discouraged as this is an aerosol generating procedure. A metered dose inhaler would be the preferred method to deliver medication. If a nebulizer must be used, all providers must wear PPE including an N95 mask or equivalent.

IV fluids:

Standard guidelines for IV fluids for sepsis are not applicable to COVID-19 patients. IV fluids should be used for patients with hypovolemia. COVID-19 patients appear to be very sensitive to fluid overload. A low-dose vasopressor would be preferred for hemodynamic support. If a suspected or confirmed COVID-19 patient has a normal blood pressure, the current recommendation is to not give a fluid bolus. If hypotensive, carefully consider a very small fluid bolus or a low-dose vasopressor.

Anti-pyretics:

There has been concern for worsening of outcomes with NSAID use and use of medications such as ibuprofen and naproxen have been discouraged. There is insufficient literature to support or refute that assertion. If appropriate, acetaminophen is the preferred medication to treat fever.

Antibiotics and antivirals:

Antibiotics are not recommended in the treatment of COVID-19. Given the lack of diagnostic accuracy on board, if a patient has symptoms compatible with a bacterial infection, antibiotics may be indicated. Antivirals such as oseltamivir may be indicated if a patient has influenza. The decision to use these medications are best made in consultation with a vessel's telemedical advisory service.

Steroids:

Steroids such as prednisone, methylprednisolone, or dexamethasone are not currently indicated in the routine treatment of patients with suspect or confirmed COVID-19 disease. They may have a role in patients with asthma or COPD and their use should be discussed with your vessel's telemedical advisory service.

Blood clotting:

Be aware of the potential for blood clotting related complications. Assess patient for risk of bleeding or contraindications to anti-coagulation (i.e ulcers, AVM, underlying bleeding disorders or medications that increase bleeding risk). Discuss with medical advisory service if anti-coagulation is indicated and assess frequently for the development of clotting complications (i.e. DVT, pulmonary embolus, stroke, etc.)

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Monitoring:

Patients with confirmed or suspected COVID-19 can deteriorate very quickly. Frequent monitoring and reassessment of these patients is critical.

Disposition:

Vessel medical staff should work with their telemedical advisory service and USCG or shore-based providers if applicable to discuss the appropriate disposition, disembarkation, and transport of patients with suspected or confirmed COVID-19.

COMMUNICATION AND REPORTING

Procedure on communicating possible COVID-19 cases with telemedical providers, shore-based providers, and port and regulatory authorities:

Telemedical providers:

All cases of suspected COVID-19 (based on criteria under IDENTIFICATION procedure), should be communicated with the vessel's medical advisory service. A standard template to include the information on the ASSESSMENT procedure should be used for documentation.

Before arriving at a US port, vessel medical staff and telemedicine providers must discuss the disembarkation of patients suspected of having COVID-19 with the CDC quarantine station having jurisdiction for the port and with state and local health departments.²¹

Shore-based providers:

Shore-based medical providers will benefit from advanced notification of a potential COVID-19 patient. Information should be relayed to the provider by phone, fax or email before the affected crewmember is disembarked. A crewmember should wear a surgical mask during transport.

Port and Regulatory Authorities:²²

Per 33 CFR 160.216, all cases of persons who exhibit symptoms consistent with COVID-19 **or other flu like illness** must be reported **immediately** to the Captain Of The Port (COTP) as a hazardous condition.²³ **42 CFR 71.1 provides the definition of an ill person onboard a vessel. (below)**

Please note 33 CFR 160.216 applies to Jones Act Vessels engaged in domestic trade as well as vessels coming from a foreign port.

Hazardous conditions aboard a vessel must be reported immediately to the COTP per 33 CFR 160.216. A hazardous condition is any condition that may affect the safety of a vessel or a port, including "injury or illness of

²¹ <https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>

²² https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/MSIB/2020/MSIB-02-20_Change-3_Novel-Coronavirus.pdf?ver=2020-03-17-091856-473

²³ https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/MSIB/2020/MSIB-06-20_Reporting-Requirements.pdf?ver=2020-03-13-092336-483

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a person onboard,” per 33 CFR 160.202. COVID-19 has been determined to be a hazardous condition, as it may affect the safety of the subject vessel or the port. These authorities, of course, flow from the COTP’s authority to deny entry or control operation of a vessel when the COTP has objective evidence that the vessel or a condition upon the vessel adversely affects the safety of any vessel or the port, under 33 CFR 160.111(c).

The hazard of COVID-19 adds reporting requirements due to the increased risk to the port, even where a vessel might not have previously deemed a crewmember’s illness reportable because the vessel did not believe that the level of symptoms posed a risk to safe manning requirements or to the port facility. In the current situation, where a person onboard shows symptoms of COVID-19, even where those symptoms may be minor, those cases must be reported to the COTP, per the Novel Coronavirus Marine Safety Information Bulletin MSIB 02-20 (Change 1), as amended and MSIB 06-20. This determination does not reduce or minimize the standing regulatory requirement to report hazardous conditions to the COTP.

Please have the following information available before contacting the nearest CDC Quarantine Station <https://www.cdc.gov/quarantine/quarantinestationcontactlistfull.html>:

- List of the sick traveler’s signs and symptoms, including onset dates;
- The sick traveler’s highest recorded temperature;
- The sick traveler’s embarkation date and port;
- The ship’s ports of call during the 14 days before the person got sick;
- List of ports of call where the sick traveler disembarked during the 14 days before the person got sick.

42 CFR 71.21 requires the master of a ship destined for a US port of entry to immediately report any death or illness among the ship’s passengers or crew.

According to U.S. federal regulations, all deaths and ill persons displaying any of the following signs and symptoms must be reported to CDC:

- 1) Fever (has a measured temperature of 100.4 °F [38 °C] or greater; or feels warm to the touch; or gives a history of feeling feverish) **accompanied by one or more of the following:**
 - a) skin rash;
 - b) difficulty breathing or suspected or confirmed pneumonia;
 - c) persistent cough or cough with bloody sputum;
 - d) decreased consciousness or confusion of recent onset;
 - e) new unexplained bruising or bleeding (without previous injury);
 - f) persistent vomiting (other than sea sickness);
 - g) headache with stiff neck;

OR

- 2) Fever that has persisted for more than 48 hours;

OR

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- 3) Acute gastroenteritis, which means either:
- a) diarrhea, defined as three or more episodes of loose stools in a 24-hour period or what is above normal for the individual, or
 - b) vomiting accompanied by one or more of the following: one or more episodes of loose stools in a 24-hour period, abdominal cramps, headache, muscle aches, or fever (temperature of 100.4 °F [38 °C] or greater);

OR

- c) Symptoms or other indications of communicable disease, as the Director may announce through posting of a notice in the Federal Register (CDC will notify partners in applicable industries as well as posting on the CDC website).

DOCUMENTATION

Procedure on documenting potentially exposed contacts of a suspected COVID-19 patient²⁴

Once a potential case of COVID-19 is identified, there are two important areas of documentation:

- Identification of all potential exposures for the 48 hours before the crewmember began experiencing symptoms
- Documentation of all personnel who have contact with crewmember after isolation is instituted

Once a potential case is identified, interview the crewmember to determine:

The time and date of onset of symptoms

From **48 hours before the symptoms began**, document all people who had close contact with the affected crewmember, defined as:

- 1) being within approximately 6 feet (2 meters) of a COVID-19 case for a prolonged period of time; (close contact can occur while caring for, living with, visiting, or sharing a healthcare waiting area or room with a COVID-19 case)

OR

- 2) having direct contact with infectious secretions of a COVID-19 case; (e.g., being coughed on or shared utensils)

Document the name and contact information, time and date of contact, the nature of contact (close contact, in the same room) and the duration of contact.

High risk close contacts of suspected COVID-19 cases should be quarantined according to the QUARANTINE section of this document.

²⁴ <https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html>

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This includes any people that may have already disembarked the vessel.

Once a crewmember is isolated, maintain a log to document:

All personnel who enter the crewmember's room, the time and date, duration of exposure, type of PPE worn, nature of exposure (close contact, secretions, same room). Provide name and contact information as well.

Other documentation:

Daily logs of temperature and signs or symptoms including fever, cough or shortness of breath on all crew should be maintained and available for inspection.

TRANSPORTATION

Procedure on transportation of suspected COVID-19 cases at disembarkation²⁵

For the crewmember with suspected COVID-19:

A facemask should be worn by the patient for source control. If a nasal cannula is in place, a facemask should be worn over the nasal cannula. Alternatively, an oxygen mask can be used if clinically indicated. If the patient requires intubation, see below for additional precautions on the site above for aerosol-generating procedures.

If ambulance transportation is required

Local EMS should be notified that this is a potential COVID-19 case so that responders may use appropriate PPE and follow their protocols.

If private vehicle transportation is utilized

Anyone who will be driving a crewmember with suspected COVID-19 who will provide direct care (e.g., moving patients onto stretchers) should wear recommended PPE. After completing patient care and before entering a driver's compartment, the driver should remove and dispose of PPE and perform hand hygiene **before** entering the driver's compartment. Windows should be down to allow for air exchange if possible.

All personnel should avoid touching their face while working.

The receiving healthcare facility should be notified that a patient with suspected COVID-19 is being brought in so that they may take appropriate infection control precautions.

²⁵ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html>

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QUARANTINE

Quarantine separates and restricts the movement of people who were exposed to a contagious disease to see if they become sick. Procedure for quarantining crew exposed to a potential COVID-19 case²⁶

Onboard:

Passengers and crew members who have had **high-risk exposures** to a person suspected of having COVID-19 should be quarantined in their cabins. All potentially exposed passengers, ship medical staff, and crew members should **self-monitor under supervision** of ship medical staff or telemedicine providers until 14 days after the last possible exposure.

A high-risk exposure could occur through close contact with the suspected case without PPE. Close contact is defined as:

- 1) being within approximately 6 feet (2 meters) of a COVID-19 case for a prolonged period of time; (close contact can occur while caring for, living with, visiting, or sharing a healthcare waiting area or room with a COVID-19 case);

OR

- 2) having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on)

Self-monitoring with delegated supervision means, for vessel crew members, self-monitoring with oversight by your onboard medical staff and telemedical provider in coordination with the health department of jurisdiction. Points of contact between the self-monitoring personnel, vessel, vessel management, telemedical provider, local and state health departments with jurisdiction for the location where personnel will be during the self-monitoring period should be established. If personnel develop fever, cough, or difficulty breathing during the self-monitoring period, they should undergo medical assessment, isolation, treatment, reporting and transportation as per the other relevant sections of this document. Vessel management and telemedical providers should remain in contact with personnel through the self-monitoring period to oversee self-monitoring activities.

If private cabins are not available, a cabin should be designated for the quarantine of exposed individuals.

If the volume of quarantined crewmembers would pose a risk of vessel unseaworthiness, it is recommended to work with your medical advisory service, CDC, and port authorities to determine the minimum necessary crew to bring the vessel safely to port, triage quarantined crew to allow the lowest risk contacts to work, and have these crewmembers wear surgical masks and gloves while working.

Onshore:

²⁶ <https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>
<https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html>

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The CDC has responsibility for determining if contacts of a suspected COVID-19 case should be quarantined on land, however the vessel operator may be required to operationally comply with the quarantine.

Companies should have plans in place for locally housing crew. The CDC and USCG would prefer not to quarantine cases on board, but decisions are made on a case-by-case basis. If a small number of people have been exposed, it would be best to have the exposed crew disembarked.

Companies should have plans in place to quickly replace quarantined crew so that the vessel may be cleaned and returned to service.

Refer to the “Management of positive or suspected COVID-19 source patient contacts” flowchart for guidance on quarantine.

First-degree contacts are defined as those that had close contact (defined above) with the suspected COVID-19 source patient from **48 hours before symptoms began or 14 days before the time a positive test sample was obtained**. All first-degree contacts should be quarantined for 14 days with twice daily symptom monitoring or until the source patient’s COVID-19 test comes back negative. If the source patient’s COVID-19 test is positive, all first-degree contacts should be quarantined with twice daily symptom checks for 14 days from the date the test was obtained.

If a first-degree contact has roommates, attempt to move the first-degree contact to a private room or a room with other first-degree contacts for quarantine. If the first-degree contact develops symptoms during the 14 day period, *second-degree contacts* should be quarantined for 14 days or until the first-degree contact’s COVID-19 test result comes back negative. If the first-degree contact’s test result is positive, the second-degree contacts should be quarantined for 14 days with twice daily symptom monitoring from the time of last exposure.

Second-degree contacts are defined as people who had close contact with a first-degree contact who was not having symptoms from the time of contact with the source patient.

Note: discontinuance of quarantine for a suspected COVID-19 case should be made on a case by case basis with advice from a medical provider.

BERTHING, OFFLOAD AND SHORE LEAVE PRECAUTIONS

Aggressive on-board infection control precautions, early identification of possible COVID-19 cases and isolation and quarantine procedures can help prevent the spread of COVID-19 onboard. Port calls present a risk for exposure. Companies should limit the contact of crew with shore personnel as much as possible.

- Have a hand-sanitizer station at the gangway, with tissues and a waste container;
- Do not allow non-essential personnel on board, any communication should be done by phone or radio instead of in person if possible;
- Restrict shore personnel from entering crew quarters and galley;
- Screen any personnel who comes on board for fever, cough or shortness of breath in the prior 72 hours.

If any symptoms present, deny boarding;

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- Wipe down rails, door handles, and surfaces frequently with disinfecting wipes.

Shore leave for crew should be minimized to the extent possible. For crew who do go ashore:

- Follow “social distancing” recommendations (stay at least 6 feet away from people), maintain good cough and hand hygiene, avoid groups of people;
- Wash hands with soap and water or use alcohol-based hand sanitizer frequently. Do not shake hands;
- Crew should be screened for fever, cough or shortness of breath on return to the vessel and isolated if symptoms present.

SANITATION AND DISPOSAL

Procedure to clean, sanitize, and disinfect a vessel and dispose of PPE²⁷

In addition to routine cleaning and disinfection strategies, ships may consider more frequent cleaning of commonly touched surfaces such as handrails, countertops, and doorknobs.

The primary mode of COVID-19 virus transmission is believed to be through respiratory droplets that are spread from an infected person through coughing or sneezing to a susceptible close contact within about 6 feet. Therefore, widespread disinfection is unlikely to be effective.

Clean, Sanitize, And Disinfect Common Areas Daily

Daily disinfection of surfaces that people touch frequently can help decrease the spread of germs. When illness has been identified on board consider disinfecting surfaces multiple times per day.

Cleaning uses soap or detergent to remove dirt and debris from surfaces.

Sanitizing is meant to reduce, but not kill, the occurrence and growth of germs from surfaces.

Disinfection uses a chemical to kill germs on surfaces that are likely to harbor germs.

Disinfectants work best on a clean surface and usually require a longer surface contact period (between 1 - 10 minutes) to work.

Surfaces that people touch a lot (door handles, railings, light switches, chairs, tables) and bathroom and kitchen surfaces should be cleaned, sanitized, and disinfected routinely.

Supplies For Cleaning, Sanitizing, And Disinfection

Ensure supplies are stocked and available for cleaning and disinfecting:

²⁷ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html>
https://www.kingcounty.gov/depts/health/communicable-diseases/disease-control/~/_media/depts/health/homeless-health/healthcare-for-the-homeless/documents/cleaning-disinfection-guidelines-shelters.ashx
<https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html>

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- Personal protective equipment: disposable gloves, eye protection, clothing that covers exposed skin, face mask;
- Properly labeled spray bottles & measuring cups;
- Scrubbing pads/cleaning brushes, paper towels, garbage bags.

How To Select A Sanitizer And/Or Disinfectant

Sanitizing and disinfecting cleaners and wipes are readily available and come in pre-mixed formulas such as kitchen or bathroom disinfectant as well as hospital-grade formulations. These products are effective for cleaning and sanitizing common surfaces. To select the best one for your vessel, read the label for guidance.

Common types of disinfectants to choose from include:

- Bleach/sodium hypochlorite;
- Quaternary ammonias (ammonium chloride formulations);
- Accelerated hydrogen peroxides.

How To Use “Disinfectant Wipes” Effectively

To use wipes for disinfecting, use a “wipe, discard, wipe” technique. Wipe the surface to clean away dirt or debris, discard the wipe, and then wipe again with a fresh wipe and allow the surface to air dry.

Steps For Cleaning, Sanitizing, And Disinfecting Using Spray Solutions

- 1) Clean first:
 Spray your surface with a cleaning solution. Wipe or rinse with water. Use a scrubbing pad or brush to remove debris. If using a disinfectant cleaner, follow the instructions on the product label for cleaning.
- 2) Apply your Sanitizer/Disinfectant:
 Wet the surface and leave solution on the surface for the recommended contact time, generally between 1 - 10 minutes. Dry with a paper towel or let the surface air dry.

How To Mix A Bleach Solution

- Identify the bleach/sodium hypochlorite % on the label and prepare your sanitizing or disinfecting solution based on the surface or area you are cleaning (see table below).
- Use cool water, not warm or hot water, for mixing.
- Mix fresh solutions for sanitizing and disinfecting. If using a spray bottle, mix daily, and if using a bucket with rags, make a new batch every 2-4 hours.
- Always add the bleach to the water.
- Do not mix liquid bleach with other cleaning products.

	To one gallon of water, add:	
	8.25% bleach/sodium hypochlorite	5.25% bleach/sodium hypochlorite

Note: these are draft guidelines only, developed in conjunction with industry stakeholders in order to assist companies in developing their own internal procedures related to the evolving pandemic. This is not intended as a standard of care or as an industry standard and does not constitute independent legal or regulatory authority or mandate.



13075 Gateway Drive S, Suite 100
 Seattle, WA 98168
 Phone (206) 309-3507
 Fax (206) 826-1814
 Email: admin@discoveryhealthmd.com
www.discoveryhealthmd.com

Sanitizing (100 PPM)	1 teaspoon	1 teaspoon
Disinfecting (600 PPM)*	2 tablespoons	¼ cup
Special disinfecting (5000 PPM): vomit, diarrhea, blood	1 cup	1 ½ cups

*Contact time: Wet for 10 minutes or as specified on the label when used as a disinfectant.

Cleaning a vessel after a suspected COVID-19 exposure

Cleaning recommendations are based on existing [CDC infection control guidance](#) for preventing COVID-19 from spreading to others in homes.

STEP 1: Restrict access to rooms used for isolation or quarantine for at least 2 hours after the sick person has left the room/cabin

Standard practice for pathogens spread by air (such as measles, tuberculosis) is to restrict people unprotected (for example, no respiratory protection) from entering a vacated room/cabin until sufficient time has elapsed for enough air changes to remove potentially infectious particles (more information on [clearance rates under differing ventilation conditions](#) is available).

We don't yet know how long COVID-19 remains infectious in the air.

In the interim, it is reasonable to apply a similar time period before entering the sick person's room/cabin without respiratory protection as used for other pathogens spread by air (for example, measles, tuberculosis), **restrict access for two hours after the sick person has left the room/cabin.**

STEP 2: Clean surfaces infected by the respiratory secretions of a sick person suspected with COVID-19 (for example, in the sick person's living quarters or work area, and in isolation rooms) while wearing appropriate PPE and maintaining awareness of OSHA Bloodborne Pathogen Standard.

Use disinfectant products against COVID-19 with Environmental Protection Agency (EPA)-approved emerging viral pathogens claims. These products can be identified by the following claim:

- [Product name] has demonstrated effectiveness against viruses similar to COVID-19 on hard non-porous surfaces. Therefore, this product can be used against COVID-19 when used in accordance with the directions for use against [name of supporting virus] on hard, non-porous surfaces.
- Specific claims for "COVID-19" will not appear on the product or master label.
- More information about EPA-approved emerging viral pathogens claims can be found here: <https://www.epa.gov/pesticide-registration/emerging-viral-pathogen-guidance-antimicrobial-pesticides>
- If there are no available EPA-registered products with an approved emerging viral pathogen claim for COVID-19, use products with label claims against human coronaviruses according to label instructions.
- This claim or a similar claim, will be made only through the following communications outlets: technical literature distributed exclusively to healthcare facilities, physicians, nurses, and public health officials, "1-800" consumer information services, social media sites and company websites (non-label related).

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- Products with EPA-approved emerging viral pathogens claims are recommended for use against SARS-CoV-2. Refer to List N on the EPA website (<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>) for EPA-registered disinfectants that have qualified under EPA's emerging viral pathogens program for use against SARS-CoV-2.
- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly, to include the provision of adequate ventilation when chemicals are in use.
- **In addition to wearing disposable gloves during routine cleaning, wear disposable gowns when cleaning areas suspected to be contaminated by COVID-19.** Wear PPE compatible with the disinfectant products being used and approved for use onboard the ship. Remove carefully gloves and gowns to avoid cross-contamination and the surrounding area. Procedures for proper removal of gloves are reviewed here: <https://www.cdc.gov/vhf/ebola/pdf/poster-how-to-remove-gloves.pdf>
- A face shield or facemask and goggles should also be worn if splashes or sprays during cleaning are anticipated.
- Perform hand hygiene (<https://www.cdc.gov/handwashing/when-how-handwashing.html>) upon removing and disposing gloves by washing hands often with soap and water for at least 20 seconds or using an alcohol-based hand sanitizer that contains 60 to 95% alcohol.
- Clean all "high-touch" surfaces in the sick person's room/cabin (for example, counters, tabletops, doorknobs, light switches, bathroom fixtures, toilets, phones, keyboards, tablets, and bedside tables) according to instructions described for the above EPA-registered product. Wear disposable gloves and gowns during cleaning activities.
- If visible contamination (for example, blood, respiratory secretions, or other body fluids) is present, the basic principles for blood or body substance spill management are outlined in the United States Occupational Safety and Health Administration (OSHA Bloodborne Pathogen Standard: <https://www.osha.gov/SLTC/bloodbornepathogens/standards.html>) CDC guidelines recommend removing bulk spill matter, cleaning the site, and then disinfecting the site with the above EPA-registered disinfectant. For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present, and wash according to the manufacturer's instructions. Clean and disinfect unremovable materials with products mentioned above and allow to air dry.

STEP 3: Launder soiled textiles, linens and dispose of PPE appropriately.

- When cleaning is completed, collect soiled textiles and linens in sturdy leak-proof containers; these can be laundered using conventional processes following your standard operating procedures.
- Follow standard operating procedures for containing and laundering used linen. Avoid shaking the linen.
- PPE should be removed and placed with other disposable items in sturdy, leak-proof (plastic) bags that are tied shut and not reopened. The bags of used PPE and disposable items can then be placed into the solid waste stream according to routine procedures. Follow your standard operating procedures for waste removal and treatment.

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- No additional cleaning is needed for the ship's supply-and-return ventilation registers or filtration systems.
- No additional treatment of wastewater is needed.

STEP 4: Clean and disinfect any reusable equipment that may have been exposed.

Clean and disinfect reusable patient-care equipment before use on another patient, according to manufacturer's instructions.

¹ <https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.120.047463>

<https://www.thoracic.org/professionals/clinical-resources/disease-related-resources/covid-19-guidance.pdf>

<https://covid-19.uwmedicine.org/Pages/default.aspx>

<https://jamanetwork.com/journals/jama/fullarticle/2763879>

<https://www.hippoed.com/em/ercast/episode/covid19fluids/covid19fluids>

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