

COVID Mitigation Protocols Established for Safe JR Operations (COPE)

Version 11 November 2022

PREFACE	1
ACRONYMS AND DEFINITIONS	2
INTRODUCTION	2
1. EXPEDITION PLANNING AND RISK ASSESSMENT	3
2. RECOMMENDED PROCEDURES TO FOLLOW PRIOR TO DEPARTURE FOR PORT	4
3. PROTOCOLS IN PORT PRIOR TO MOVING ONBOARD THE JR	6
4. PORT CALLS.....	9
5. SHIPBOARD MITIGATION PERIOD	10
6. DEALING WITH A SUSPECTED COVID-19 CASE ONBOARD	12
7. MEDIVAC OR RETURN TO PORT	14
8. ENSURING A SAFE RETURN HOME.....	15
REFERENCES	16

Preface

This document defines protocols for operating the Research Vessel *JOIDES Resolution* (JR) as safely as possible for International Ocean Discovery Program (IODP) expeditions during a time when the novel Coronavirus Disease 2019 (COVID-19) is present globally and has the potential to cause illness, long-term health complications, and even death, although the advent of vaccines and booster programs has significantly reduced the risk of severe disease. The approach taken here is to mitigate pathways for COVID to get on the JR and, if it does get on the JR, to prevent or limit the spread while caring for those who have become ill. The protocols outlined here will be followed to the extent that is practicable and may have to be modified due to constraints imposed by local authorities or logistical issues.

The protocols outlined in *COVID Mitigation Protocols Established for Safe JR Operations (COPE)* will be updated and revised continually as more is learned about COVID-19, new variants emerge, CDC and/or WHO guidance are updated, travel restrictions change, specific national port requirements are applied, and effective treatments, in particular, vaccines, boosters, and oral antiviral medications, become widely available. A fully vaccinated ship greatly reduces risks to participants and the expedition. Until COVID-19 becomes endemic, the protocol will be adjusted accordingly. There are no perfect solutions and there is no way to ensure that illnesses, COVID-19 or otherwise, never occur on the JR. We therefore seek effective mitigation protocols for protecting the health of those who embark on the JR. In the current stage of the pandemic with increasingly infectious variants and lack of mitigation measures being taken on public transportation, and in society generally, the mitigation steps outlined here are made less effective

and we are faced with the reality that there are increased chances that a number of participants will become infected pre-travel or during travel. In addition, practicable and repeatable quarantines can only decrease the risk that COVID-19 will get onboard, but not eliminate the possibility. This revision to COPE addresses these issues.

Acronyms and Definitions

CDC: Centers for Disease Control and Prevention (US)
COPE: COVID Mitigation Protocols Established for Safe JR Operations
COVID-19: Coronavirus Disease 2019
CSS: *JOIDES Resolution* Crew, JRSO Staff, and Scientists
EPM: Expedition Project Manager
IODP: International Ocean Discovery Program
JR: Research Vessel *JOIDES Resolution*
JRFB: *JOIDES Resolution* Facility Board
JRSO: *JOIDES Resolution* Science Operator
LO: JR Lab Officer
MLC: Marine Logistics Coordinator
PMO: Program Member Office
PPE: Personal Protective Equipment
SBSC: Shipboard Science Complement (scientists and JRSO staff)

Introduction

COPE is a plan for how to conduct IODP expeditions on the *JOIDES Resolution* as safely as possible until we can fully return to normal operations. The health and safety of all those who participate on IODP expeditions—the ship’s crew, the JRSO staff, and the scientists—is paramount. To conduct operations that reduce the risks to crew, staff, and scientists, protocols for COVID-19 mitigation are described in this document for the following eight implementation stages. COPE is summarized in the attached flow chart at the end of the document.

1. Expedition planning and risk assessment
2. Recommended procedures to follow prior to departure from port
3. Protocols in port prior to moving onboard the JR
4. Protocols for port call activities
5. Shipboard mitigation measures
6. Dealing with a suspected COVID-19 case onboard
7. Protocols for medivacs or returning to port, in the event of a diagnosed case or development of serious symptoms onboard the JR
8. Ensuring safe return home

1 Expedition Planning and Risk Assessment

Well before the start of an expedition, the following steps will be taken to ensure the ship is prepared for dealing with COVID-19 and for assessing level of risk, which will then be used to determine what actions will be taken to cope with the risks prudently.

- 1.1. Port call determination: When the JRFB determines the expedition schedule, the JRSO selects ports to maximize logistical efficiencies and operational days on site, which is accomplished by minimizing transit time during expeditions. Moving forward, ports (both scheduled and to be scheduled) will also be evaluated in the light of several COVID-19 factors, including the following:
 - 1.1.1 State of the pandemic in departing and arrival ports
 - 1.1.2 Travel restrictions
 - 1.1.3 Availability of COVID-19 testing in port
- 1.2. The ship will be stocked with sufficient supplies for infection mitigation and treatment, following guidance consistent with [CDC latest information](#).
- 1.3. A possibly reduced shipboard science complement (SBSC):
 - 1.3.1 While COVID remains in the pandemic phase, sufficient berths will remain open to create a minimum of 4 isolation rooms on each expedition.
 - 1.3.1.1 This number of open berths is possible for most expeditions based on standard staffing levels but may need to be adjusted on a case-by-case basis.
- 1.4. Risk assessment: The level of risk will be assessed as high risk or low-to-moderate risk.
 - 1.4.1 The criteria for risk assessment will be based on:
 - 1.4.1.1 Infection rates in departing and arrival ports.
 - 1.4.1.2 Travel restrictions to and from ports.
 - 1.4.1.3 Port call logistical considerations.
 - 1.4.1.4 Distance the ship will be from shore-based medical facilities.
 - 1.4.1.5 COVID-19 test availability in port and on the ship.
 - 1.4.1.6 Number and percent of fully vaccinated/boosted on board.
 - 1.4.1.7 Number of high-risk and unvaccinated participants.
 - 1.4.1.8 Number of isolation berths.
 - 1.4.2 An example of a low-risk expedition would be a tie up in a port with low infection rates, nearby medical facilities, fully or nearly fully vaccinated CSS, abundant COVID-19 tests, and abundantly available isolation rooms on the ship or in hotels.
 - 1.4.3 An example of a moderate-risk expedition would be one with a departure port with low-to-moderate infection rates, operations only a few days from ports with

hospitals, fully or nearly fully vaccinated CSS, sufficient COVID-19 antigen tests for regularly testing, and at least 4 isolation rooms on the ship.

- 1.4.4 An example of a high-risk expedition would be one departing from a port with high infection rates that also has operations several days away from ports with hospitals, and some high-risk or unvaccinated CSS.

- 1.4.4.1 The immediate ship schedule as of November 2022 has only low-to-moderate risk upcoming expeditions, including Expeditions 397, 398, and 398P. Thus, actions to be taken as outlined in this version of COPE pertain only to low-to-moderate risk expeditions. As will be described below, the hotel quarantine and shipboard mitigation period will be shortened for these low-to-moderate risk expeditions. Should risk level increase, the situation will be evaluated and it may be necessary to revert to the COPE protocol (7-day hotel quarantine) outlined in the 18 January 2022 version of COPE.

2 Recommended Procedures to Follow Prior to Departure for Port

- 2.1 Shipboard participants must undergo the JRSO medical exam, which includes a COVID-19 risk assessment for severe illness.
 - 2.1.1 The COVID-19 assessment asks the participant's, or when needed, the ship's physician to determine if the combined known health conditions put the person being examined at a potentially high risk of developing a severe illness from COVID-19, including impact of the participant's vaccination status.
 - 2.1.2 The ship's doctor will evaluate the physicians' assessments to determine if the shipboard medical facilities/capabilities can support care for those individuals deemed to be in a higher risk category.
 - 2.1.2.1 Those scientists deemed at high risk have the option to become part of the science party as a shore-based member (see "Shipboard Science Complement").
- 2.2 All participants are strongly encouraged to get fully vaccinated and to get booster shot(s), as recommended by the CDC. As of September 2022, CDC recommends that people 12 years of age and older receive an updated (bivalent) booster, with exceptions for those who are immunocompromised.
 - 2.2.1 The CDC notes that COVID-19 vaccinations are safe and are effective at reducing the chance of becoming infected and, if you are infected, from getting seriously ill, being hospitalized, and even dying.
- 2.3 Shipboard participants should minimize interactions with others from outside their home for 4 days prior to reduce the risk of testing positive prior to departure for port.
 - 2.3.1 Minimizing interactions can be accomplished by leaving home as little as possible, like only for essential services (e.g., food, healthcare), and avoiding people outside your household. When outside your household, maintain a distance of 2 m (6 ft) and limit time of exposure to others. Wear a face covering when

around others outside your household, especially indoors where social distancing alone does not protect you from infection.

- 2.4 A COVID-19 PCR or antigen test is required prior to departure for port. This will help identify infected individuals before they expose others during travel and help avoid that person learning only after they arrive in port that they will not be allowed to sail. The antigen test can be self-administered.
 - 2.4.1 Unless otherwise instructed due to testing requirements of the starting port country, participants should complete the test during the 4-day period of minimizing interactions with others.
 - 2.4.2 If a participant suspects a false positive, then two additional negative tests are required to verify that they are not infected.
 - 2.4.3 JRSO staff will be tested with costs covered by the JRSO.
 - 2.4.4 Costs for scientists are dependent on their respective Program Member Office (PMO) policy.
 - 2.4.5 Anyone who has a confirmed positive test or has COVID-19 symptoms shall not depart for port.
 - 2.4.5.1 Individuals who test positive should immediately notify the following (negative tests do not need to be reported):
 - 2.4.5.1.1 Scientists: their EPM.
 - 2.4.5.1.2 JRSO staff: their supervisor.
 - 2.4.5.1.3 Siem staff: the ODL Crewing Manager.
- 2.5 Before leaving for the airport, participants should prepare to fly safely by following [CDC guidelines for travelers](#). If traveling with any other participants, please note this information because this information may be needed for contact tracing.
 - 2.5.1 Although the CDC can no longer enforce the use of masks for those traveling on public transportation, they recommend travelers wear a well-fitting or respirator style mask (e.g., N95, KN95, KN94, FFP2/P2/KMOEL/DS) to protect themselves and others in travel and transportation settings. Despite decreased use of masks by the general public, as part of the COPE protocols, all CSS should wear a respirator mask during travel to the ship to minimize the risk of infection and testing positive during the hotel quarantine.
- 2.6 Most pathways for COVID reaching the ship are during travel from home to the ship. It is, therefore, essential that participants, whether vaccinated or not, adhere to the COPE protocols and stay particularly vigilant as they travel to the ship. Breakthrough cases are possible and infection rates are still high in many source nations of participants and in the airports, airplanes, local transport, and hotels through which the participants pass on their way to the ship. Because the ship is a congregate setting where social distancing is challenging and because IODP expeditions can operate many days from ports (i.e., critical care to treat severe COVID disease), reducing the risk that COVID infection gets onboard vessel is important for the health of all participants and for successfully implementing the expedition.

3 Protocols in Port Prior to Moving Onboard the JR

- 3.1. The ODL Commercial Operations Manager and a few additional staff from the JRSO and Siem are attending upcoming port calls, contingent on risk levels and travel restrictions. The ODL Commercial Operations Manager will work with the Captain, who will have authority for decisions that need to be made in port, in consultation with the ship's doctor and shore management as appropriate. Should the JRSO Director and any managers be unable to attend port calls, the JRSO Operations Superintendent will be the senior JRSO staff in port. If the Operations Superintendent is unavailable, JRSO port decision-making falls to the shipboard Lab Officer and then EPM, in consultation with shore management as needed.
- 3.2. Transportation from the airport to hotel will be by prearranged transportation if possible.
 - 3.2.1. If prearranged transportation is not possible, the traveler should seek transportation that allows as much social distancing as possible, rather than riding in crowded vans or buses. This approach also allows staggering of check-in at the hotel.
 - 3.2.2. When transportation is arranged for a port, numbers should be limited to allow as much social distancing as possible based on the size of the vehicle. Please note those who travel with you because this information may be needed for contact tracing.
 - 3.2.3. To the degree possible, separate transportation should be arranged for SBSC (JRSO and scientists) and crew to best manage cross-cohort spread.
- 3.3. Upon arriving at the hotel:
 - 3.3.1. Essential items should be acquired before leaving home so that each CSS can check into the hotel, go immediately to their rooms, and begin to quarantine. They should not leave the hotel to purchase items. If an individual has forgotten something crucial, they may request assistance by contacting their supervisor or by directly contacting the JRSO Marine Logistics Coordinator or the ODL Commercial Operations Manager, who may be able to assist. In some cases, the front desk of the hotel may be able to assist directly.
 - 3.3.2. As soon as possible, begin a period of self-isolation in the hotel room.
 - Do not leave the hotel room except for emergencies, minimize personal contact with in-room/delivery food service staff, and otherwise have no personal contact with others except medical personnel conducting testing.
 - Quarantines are very challenging, so all CSS should have a plan for in-room entertainment, exercise, additional preferred amenities (e.g., snacks, etc.), and social support.
 - The selected hotel should have in-room service for meals.
 - Ideally, the selected hotel will have windows that open or balconies to allow access to fresh air, although this may be impossible. Details will need to be worked out for each port.

- Hotels with amenities such as Wi-Fi, phone, TV, refrigerator, microwave, coffee maker, and bottled water will be sought but may not be available.
- The hotel should be instructed that room service personnel should leave food or beverages at the door and not wait at the door to personally handover.

3.4. Hotel quarantine, testing, and symptom monitoring:

- 3.4.1. All participants will have a 4-day hotel quarantine for full science expeditions. The hotel quarantine may be shortened for tie-ups/transit expeditions, such as for the upcoming Expedition 398P. The length of quarantine and the testing regime will be adjusted in these lowest risk expeditions, and that information will be conveyed to all participants. Testing and symptom monitoring will be required for all personnel as part of the quarantine.
 - 3.4.1.1. For participants with travel delays that impact the start of the quarantine, their boarding date will be adjusted accordingly so that a full quarantine and testing is conducted.
 - 3.4.1.2. In some circumstances, it may be possible for a delayed participant to complete the quarantine and testing period in one of the isolation rooms onboard, if available and deemed an appropriate risk for essential personnel.
- 3.4.2. Prearranged COVID-19 tests will be conducted in the hotel for all CSS before they are allowed to board the ship. For the 4-day quarantine, a PCR test will be done on the morning of day 2 of the quarantine and an antigen test will be done on day 3. Testing regimes will be adjusted as necessary for shorter quarantines.
- 3.4.3. During quarantine, it is critical to report ANY COVID symptoms immediately (see 3.5.2), which can be easily confused with cold or allergy symptoms.
- 3.4.4. The safest method for sample collection for testing is performed at individuals' rooms, if possible. If no company will provide sampling at everyone's room, the procedure and schedule must avoid clustering and long queues with maximum social distancing, masking, and in a well-ventilated environment.
- 3.4.5. Whenever possible, flights will be arranged to attempt to have participants arrive on the same day. Ultimately, the hour the flights arrive will vary. The length of the respective quarantine is, therefore, based on calendar days, reflecting the reality that flight itineraries will vary. The arrival days will be coordinated such that the move onboard date is the same for each group.
- 3.4.6. In most ports where a company is contracted to provide testing, results are communicated in batch to the ship's doctor and the Captain. Results will then be communicated to individuals as well as the ODL Commercial Operations Manager and JRSO expedition leadership (Ops Superintendent, LO, and EPM). If a test result is positive, the individual's supervisor will assist with contact tracing and providing assistance as required via ODL Commercial Operations Manager and/or ship's doctor. In the unusual circumstance that the test results are provided directly to the individual, they should provide those results to their supervisor immediately, who will circulate to the port management team.

- 3.4.7. A positive test during quarantine:
 - 3.4.7.1. Additional testing may be conducted to verify and eliminate the chance of a false positive.
 - 3.4.7.2. Depending on when the ship departs, an individual who is confirmed to have COVID-19 may be able to board the ship and re-join an expedition. A minimum isolation period of 5 days (from first symptoms or positive test, if asymptomatic) is required. Ending isolation requires the individual be fever-free for 24 hrs, with symptoms improving, and have two consecutive negative antigen tests to confirm they are not infectious and to eliminate the chance of a false negative. Masking should continue for 5 days after the second consecutive negative test. The decision on whether the individual will be able to return to the ship will be made on a case-by-case basis to allow associated risks to be assessed.
 - 3.4.7.3. If mission-critical personnel test positive, there are two options:
 - 3.4.7.3.2 Departure will be delayed until they are allowed to board, unless there is a replacement available.
 - 3.4.7.3.2 It may be possible for the ship to depart on time if the infected essential personnel can complete their isolation period onboard before their services are required.
 - 3.4.7.4. Housing arrangements will need to be made for an individual who tests positive and who may not be able to return home until local health authorities clear them to do so and they meet transportation and reentry requirements for the home country.
 - 3.4.7.5. Individuals determined to be in close contact with someone who is infected may have extended hotel quarantines and receive additional testing.
 - 3.4.7.6. Costs for hotel and per diem for JRSO staff will be covered based on the travel policy.
 - 3.4.7.7. Scientists' expenses fall under their respective PMO policy.
 - 3.4.7.8. Any medical care required for scientists or JRSO staff is to be covered by the individual's insurance.
 - 3.4.7.9. Cost for housing and meals for the crew is covered by Siem Offshore (to be reimbursed by JRSO). Medical care, if needed, for the crew is covered by Siem Offshore.
- 3.5. During the time in the hotel:
 - 3.5.1. Protocol for deliveries:
 - 3.5.1.1. To minimize the chance of transmission during the quarantine period, participants should ensure they do not answer the door to receive an in-person hand-off. Remind the hotel staff/delivery person to leave the delivery in front of the door and depart.

- 3.5.1.2. Wear a mask when opening the door for any reason (hanging the mask on door has been an effective measure so you don't forget).
- 3.5.1.3. After handling/removing packaging, hands should be washed/disinfected prior to eating.
- 3.5.2. Although the quarantine and testing protocol reduces post-quarantine transmission risk, it cannot completely eliminate the risk (i.e., false negatives of asymptomatic or pre-symptomatic individuals). Therefore, it is critical that all CSS monitor for and report any of the following to their supervisor for assessment by the ship's doctor:
 - Fever or chills
 - Cough
 - Shortness of breath or difficulty breathing
 - Fatigue
 - Muscle or body aches
 - Headache
 - New loss of taste or smell
 - Sore throat
 - Itchy or scratchy throat
 - Congestion or runny nose
 - Nausea or vomiting
 - Diarrhea
- 3.5.3. Expedition preparation should be conducted.
 - 3.5.3.1. Scientists are expected to use Zoom to start preparation activities and training with JRSO staff.
 - 3.5.3.2. JRSO staff and crew conduct crossover remotely (Zoom or phone).
 - 3.5.3.3. Stagger checking out at the hotel to prevent clustering in a line at the front desk and remain socially distanced in the lobby while preparing to go to the ship.

4 Port Calls

- 4.1 Off-going CSS will depart the vessel prior to the oncoming CSS arriving, except for essential personnel for which in-person crossovers are required.
- 4.2 When feasible, all sailing personnel board on the same day.
 - 4.2.1 The transition from the hotel to the ship (sometimes via immigration) poses a potential risk of infection post-quarantine.
 - 4.2.2 All participants will wear respirator style masks (e.g., N95, KN95, KN94, FFP2/P2/KMOEL/DS), which will be provided if needed, from exiting the hotel room through arrival on the ship. Masks with exhaust valves are not acceptable.
 - 4.2.3 Participants should attempt to keep socially distant as much as possible during check out and transportation to the ship.

- 4.2.3.1 Management in port will work with hotel staff to determine if remote/electronic check out is possible, which would reduce exposure that otherwise could occur during checking out in the lobby.
- 4.2.3.2 If remote check out is not supported by the hotel, avoid bunching up in the lobby, maintain social distance, and wear a respirator style mask.
- 4.2.4 The shipboard complement will move onboard after being screened on the dock. Screening requires that all CSS complete Siem Offshore form FO-630, which asks the individual if they are experiencing COVID-19 symptoms and requires that the individual's temperature be taken. If the individual has no symptoms and a normal body temperature, they may board the ship. If not, then the individual returns to the hotel to see if symptoms resolve and to be tested again for COVID-19.
- 4.3 Once on board, all personnel are restricted to the vessel, except for those who must work on the dock.
- 4.4 Minimize interactions of staff with port personnel.
- 4.5 The decision to remove anyone from the ship once the oncoming CSS has boarded the vessel will require another quarantine period in the hotel for that individual, which may result in them missing the expedition.
- 4.6 Minimize interaction between SBSC and crew and within each group when possible.
- 4.7 Gangway security and safety measures include the following:
 - 4.7.1 Siem Offshore Form FO-630, available at the gangway, must be completed before boarding the ship.
 - 4.7.2 Only shipboard personnel can come onboard (with exception of visitors/vendors as required by Siem Offshore or the JRSO, and the normal required government officials and technical personnel associated with vessel coming in and out of port), and only authorized personnel can leave the vessel.
 - 4.7.2.1 Prior to boarding the vessel, visitors/vendors will be given antigen tests, which must be confirmed negative for boarding.
 - 4.7.3 A sanitization station is available on the gangway with extra masks, work gloves, hand sanitizer, and disposal bin.
 - 4.7.4 Any staff going from the vessel to the dock must wear masks and eyewear.

5 Shipboard Mitigation Period

This period begins from the day of crew change and lasts for 6 days, assuming there are no suspected COVID-19 cases identified during that time. If any COVID-positive cases are identified onboard, the 6-day mitigation period will be extended from the last positive case. Each department needs to strictly adhere to the shipboard mitigation protocol and stay vigilant. Depending on circumstances, the shipboard mitigation period may be adjusted upon request from Captain, Drilling Supervisor, LO, and/or Operations Superintendent and approval by JRSO and Siem Management. The goal of the mitigation period is to reduce the potential of exposure to

COVID-19 that may not have been identified during the quarantine and testing period or during the transition from quarantine to the ship by having staff take the following steps:

- 5.1 Shipboard mitigation testing
 - 5.1.1 To detect possible infections that may not have been identified during the hotel quarantine or that possibly were acquired during the transition from quarantine to the ship, a testing protocol will be initiated after moving onboard until the end of the mitigation period.
 - 5.1.2 Daily antigen testing will be conducted starting from the day the CSS move onto the ship until the end of the mitigation period. Testing may include a PCR test instead of an antigen test while in port, typically 2 days prior to departure for science expeditions.
- 5.2 **Wear masks in indoor laboratories and common areas, including passageways, and outdoors when working in close quarters.** This is a critical mitigation measure to prevent spread of COVID-19.
 - 5.2.1 Masks should cover mouth and nose and fit snugly.
 - 5.2.2 [Public health guidance](#) on masking with the prevalence of the more infectious Omicron variant recommends use of quality, well fitted masks, preferably high-filtration respirators (e.g., N95, KN95, KN94, FFP2/P2/KMOEL/DS). Masks with valves are not acceptable.
 - 5.2.3 High-filtration masks will be provided onboard with some options on mask type. Face fit and comfort are key to effective mask use. If you have a preferred mask, you are welcome to bring your own supply.
 - 5.2.4 Surgical masks have better filtration efficiency than cloth and are *acceptable if properly fitted with a good face seal*. Surgical masks that do not fit well can be improved by double masking with a cloth mask on top.
 - 5.2.5 Cloth masks, gaiters, and similar masks are much less effective against Omicron and should not be used without the addition of another approved type of mask.
- 5.3 Be ready to work assigned shifts upon boarding the ship.
- 5.4 Work in small groups when possible.
- 5.5 Minimize mingling with/in large groups.
- 5.6 Where practicable, galley use will be regulated as follows:
 - 5.6.1 Galley access will be scheduled to minimize interaction between shifts and groups.
 - 5.6.2 Scheduling will be used to minimize the number of people in the galley at a time.
 - 5.6.2.1 This number should be small enough to allow diners to socially distance as much as possible.
 - 5.6.2.2 Taking meals to other locations to eat, when available, is encouraged.
 - 5.6.2.3 If eating in the mess hall, please depart when finished and do not linger for conversations, etc.

- 5.6.3 Enhanced barriers will be used between the food-serving line and diners.
- 5.6.4 Galley restrictions during the mitigation period require that individuals wear masks when using self-service items.
- 5.7 Use of some common areas should be minimized:
 - 5.7.1 Meetings in the conference room should be minimized. When meetings are held, individuals should mask.
 - 5.7.2 Gym usage will be restricted to one maskless person at a time, implemented as 30 min slots, maximum two slots in a row.
 - 5.7.3 Movie room and lounges may be scheduled for small groups from the same shift with all participants masked.
- 5.8 Shift crossovers:
 - 5.8.1 During the mitigation period, no room or office cleaning by Entier staff should occur. Cleaning supplies, towel, and bed linen replacement will be provided to each room occupant as needed.
 - 5.8.2 Following the mitigation period, CSS will ensure their cabin is vacant during scheduled times to allow Entier staff to clean and replace linens.
 - 5.8.3 Those sharing a common room will leave their rooms before their shift starts and not return to their room until after their shift to minimize contact between roommates.
 - 5.8.4 Where practicable, exchange of information during crossovers should be done remotely during the mitigation period, and when not possible, social distance as much as possible and wear masks.

6 Dealing with a Suspected COVID-19 Case Onboard

Everyone onboard will follow Siem Offshore's procedures:

- 6.1 Predefined isolation cabins or other rooms (at the Captain's discretion) will be available for housing suspected cases of COVID-19.
 - 6.1.1 For each expedition, the ship's doctor, Captain, and JRSO LO will develop a plan to redistribute personnel to make isolation rooms available, if needed. Redistribution that results in double occupation of rooms should be with personnel on opposite shifts.
 - 6.1.1.1 The vessel's air handling system includes MERV 13 hospital-grade filtration and ultraviolet light disinfecting systems in the accommodations. These systems provide assurance that isolating an individual in a cabin protects the other crew and scientists onboard.
 - 6.1.2 All designated isolation cabins should have a hand sanitizer dispenser and designated lined disposal bin with cover outside the door.

- 6.1.3 If a confirmed case onboard occurs while the vessel is in port, it may be possible to move the case to a hotel, if allowed by the health and port authority, to provide additional isolation flexibility for preventing additional spread of the virus.
- 6.2 If it is determined that there is a suspected case of COVID-19 onboard, the patient will be isolated immediately in a predefined isolation cabin with the door closed and implement the following measures:
 - 6.2.1 The patient will be given a rapid antigen test. If positive, a second test will be administered to confirm the result. Additional tests may be necessary if conflicting results are obtained. Even when the results are negative, if the patient has other COVID-19 symptoms, they will be treated as a suspected case.
 - 6.2.2 Instruct the patient to wear a mask and regularly wash hands with soap and water and use alcohol-based hand sanitizer.
 - 6.2.3 Make sure all persons entering the isolation room wear proper PPE and perform hand hygiene using the hand sanitizer outside the room after removal of PPE.
 - 6.2.4 Perform hand hygiene following all contact with ill person's immediate environment.
 - 6.2.5 PPE used by the care provider should be disposed in a designated double-lined bin with cover outside the isolation cabin. Do not re-use. Tissues, masks, and other waste generated by ill persons or in the care of ill persons should be placed in a double-lined container in the ill person's room and treated as biological waste and incinerated.
 - 6.2.6 Limit the number of persons entering the isolation room to Medic or Medical Person-in-Charge or two other crewmembers (AM/PM shifts), in charge of cleaning the cabin and/or delivering food. They should use proper PPE when entering the patients' cabin. Ideally, assign one who is in good health without risk conditions. Visitors are not allowed.
 - 6.2.7 If patient is strong enough, their food tray can be placed in front of their door cabin on a table for pick up. This way, the crew member delivering food need not wear PPE. Full PPE is required to retrieve food tray.
 - 6.2.8 Food to the patient can be served using single-use utensils and disposed of and incinerated afterward.
 - 6.2.9 Master shall consider implementing more frequent cleaning and sanitizing regime than usual (disinfecting tables/handrails/door knobs/soles, etc.).
 - 6.2.10 Limit the movement and transport of the patient from the isolation room for essential purposes only. If transport is necessary, the patient should wear a mask and any surfaces touched by the patient should be cleaned and disinfected.
- 6.3 Individuals who had close contact with the symptomatic person should be notified and closely monitor themselves for possible onset of symptoms and isolate as necessary.
 - 6.3.1 Contact tracing will be used to identify individuals that they came into close contact recently.

- 6.3.1.1 Masking, if not already in effect, and testing will be required.
- 6.3.1.2 These individuals may need to isolate.
- 6.4 Other actions that may be taken on the ship to reduce the potential spread of COVID-19, particularly in the event of suspected or confirmed COVID-19 cases, include
 - 6.4.1 Limiting self-serve food stations with unwrapped food items during the first week of the mitigation period.
 - 6.4.2 Wrapping individual food items, like desserts and cheeses.
 - 6.4.3 Providing individually wrapped cutlery.
 - 6.4.4 Using only bottle spigots on water fountains.
 - 6.4.5 Being proactive in reminding coworkers to wear masks fitted properly when they forget or have masks positioned inappropriately.
- 6.5 Report suspected cases to the JR's Vessel Manager, Crewing Manager, and the JRSO.
- 6.6 Release from isolation will follow Section 7.6 and medical history of the individual.

7 Medivac or Return to Port

- 7.1 If shore-based medical treatment is needed for a positive or suspected case(s) of COVID-19 onboard, the Master should report the event as soon as possible to the next port of call to allow the competent authority at the port to arrange, depending on the situation, medical evacuation or special arrangements for disembarkation and hospitalization of the patient.
 - 7.1.1 The ship may be asked to proceed to another nearby port if this capacity is not available, or if warranted by the critical medical status of the suspect case of COVID-19.
- 7.2 Disembarkation of the patient should take place in a controlled way to avoid any contact with other persons on board the ship, and the patient should wear a medical mask.
- 7.3 Personnel escorting the patient during the medical evacuation should wear suitable PPE. All equipment used for transporting the patient must be cleaned and disinfected after use or disposed of if relevant.
- 7.4 The cabin or quarters where the suspected case of COVID-19 was isolated and managed should be thoroughly cleaned according to current best practices.
- 7.5 If the return to port is related to COVID cases that are not severe, arrangements should be made with the port authority via the agent for isolation period in a suitable hotel.
- 7.6 Isolation and resumption of duties
 - 7.6.1 An individual who is confirmed to have COVID-19 will be able to return to work 5 days after testing positive (or first symptom) once they are fever-free for 24 hrs, with symptoms improving, and have two consecutive negative antigen tests to confirm they are not infectious and to eliminate the chance of a false negative. The two tests may be conducted on the same day. If the individual tests positive

on either test, antigen tests should be continued daily until two consecutive negative results are obtained.

- 7.6.1.1 Isolation begins on the day of first symptoms (day 0) or positive test if asymptomatic. The isolation clock restarts if symptoms appear after a positive test.
- 7.6.1.2 Masking by the individual should continue for an additional 5 days after their second consecutive negative test or when they are released from isolation.
- 7.6.1.3 The isolation period will be capped at 10 days.
- 7.6.1.4 For individuals that continue to test positive in the 5-10 day window, which data show is possible, an hour outdoors daily, masked and socially distanced, will be allowed, weather permitting, and as practicable.
- 7.6.1.5 The Captain will have the flexibility to allow an infected person(s) to do essential tasks (masked, and isolated from others, as possible) for operations to continue, or to safely transit to port, as required.
- 7.6.2 Once an individual has been confirmed as a positive case, antigen tests rather than PCR tests should be used for assessing if the individual is still infectious, with the caveat that false negatives may occur. PCR tests should not be used to confirm that the individual is infectious because it has been demonstrated that some people can continue to test PCR-positive for as much as 60–90 days.
- 7.6.3 The port health authority/public health department may have different requirements for isolation, which we are obligated to follow. The exception would be if the COPE protocol is more conservative, which would then govern return to the vessel and resumption of duties.

8 Ensuring a Safe Return Home

- 8.1 When entering a port at the end of an expedition or for a tie-up period after a long transit, shipboard mitigation procedures should not be needed if contact is limited, as when the harbor pilot interacts with the Captain and a few others on the Bridge. If extensive contact with shore personnel occurs, then additional procedures like those outlined for the beginning of an expedition should be followed (see Section 5).
- 8.2 Extended stays in port after the expedition unrelated to an expedition or travel other than to an individual's home base will be considered personal travel, for which the traveler is responsible. Personal travel should follow local laws, as well as laws and travel restrictions imposed by destination countries, and may be further limited by travel restrictions imposed by the individual's employer. If the individual's country requires a negative COVID-19 test to return home, obtaining the test during or following personal travel will be the responsibility of the individual.
- 8.3 Upon returning home from an expedition, all CSS must be prepared to follow local laws, guidance, or employer requirements on self-isolating/quarantining.

References

- Bays, D., et al., 2021. Mitigation isolation: The use of rapid antigen testing to reduce the impact of self-isolation periods. *medRxiv* preprint. <https://doi.org/10.1101/2021.12.23.21268326>
- Boucau, J., et al., 2022. Duration of viable shedding in SAR-CoV-2 micron variant infection. *medRxiv* preprint, <https://doi.org/10.1101/2022.03.01.22271582>
- Brandal, L.T., MacDonald, E., Veneti, L., Ravlo, T. Lange, H., Naseer, U., Feruglio, S., et al., 2021. Outbreak caused by the SARS-CoV-2 Omicron variant in Norway, November to December 2021. *Eurosurveillance*, 26(50). <https://doi.org/10.2807/1560-7917.ES.2021.26.50.2101147>
- Cevik, M., Tate, M., Lloyd, O., Maraolo, A.E., Schafers, J., and Ho, A., 2021. SARS-CoV-2, SARS-CoV, and MERS-CoV viral load dynamics, duration of viral shedding, and infectiousness: a systematic review and meta-analysis. *The Lancet Microbe*, 2(1). [https://doi.org/10.1016/S2666-5247\(20\)30172-5](https://doi.org/10.1016/S2666-5247(20)30172-5)
- CDC information on COVID-19, at <https://www.cdc.gov/coronavirus/2019-ncov/>
- CDC: Types of Masks and Respirators. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html>
- CDC: International Travel: <https://www.cdc.gov/coronavirus/2019-ncov/travelers/international-travel-during-covid19.html>
- CDC: Optimize PPE Supplies: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html>
- CDC: Symptoms of COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- Cosimi, L.A., et al., 2022, Duration of symptoms and association with positive home rapid antigen test results after infection with SARS-CoV-2. *JAMA Network Open*, 5(8). <https://doi.org/10.1001/jamanetworkopen.2022.25331>
- Gardner, B.J., and Kilpatrick, M., 2021. Third doses of COVID-19 vaccines reduce infection and transmission of SARS-CoV-2 and could prevent future surges in some populations. *medRxiv* preprint. <https://doi.org/10.1101/2021.10.25.21265500>
- Ke, R., Martinez, P.P., Smith, R.L., Gibson, L.L., Mirza, A., Conte, M., Gallagher, N., Luo, C.H., et al., 2021. Daily sampling of early SARS-CoV-2 infection reveals substantial heterogeneity in infectiousness, *medRxiv* preprint. <https://doi.org/10.1101/2021.07.12.21260208>
- Kissler, S.M., Fauver, J.R., Mack, C., Tai, C.G., et al., 2021. Viral dynamics of SARS-CoV-2 variants in vaccinated and unvaccinated persons. *N. Engl. J. Med.*, 385:2489-2491. <https://doi.org/10.1056/NEJMc2102507>
- Shamier, M.C., Tostmann, A. Bogers, S., de Wilde, J., Ijpelaar, J., van der Kleij. W.A., et al., 2021. Virological characteristics of SARS-CoV-2 vaccine breakthrough infections in health care workers. *MedRxiv* preprint. <https://doi.org/10.1101/2021.08.20.21262158>
- UK Health Security Agency: Using lateral flow tests to the reduce the self-isolation period. <https://ukhsa.blog.gov.uk/2022/01/01/using-lateral-flow-tests-to-reduce-the-self-isolation-period/>