

Vessel Response Plan: COVID-19

Purpose

The purpose of this document is to provide policies, recommendations and procedures for safely conducting sea-going science on Virginia Institute of Marine Science (VIMS) vessels as it relates specifically to the prevention and control of the Corona Virus (COVID-19). It is recognized that established procedures for addressing the virus can and will change given the steady increase in information and the availability of testing options. As such, this document should be considered dynamic in nature and will be updated as additional guidance and resources become available. This document applies to all non-trailerable vessels operated by VIMS and has been reviewed and approved by the VIMS Emergency Management Team.

Introduction

1. Background

The novel Corona Virus appears to have started infecting people in and around the city of Wuhan China in late 2019. It is presumed that the infection was spread through infected travelers. Patients with the disease have been identified throughout the world, and the infection was declared a pandemic by the World Health Organization on March 2020. The pandemic is being closely monitored by national and international health agencies such as the WHO and the U.S. Centers for Disease Control (CDC). As these organizations gain more understanding about the nature of the disease; how it is transmitted; how to diagnose cases and how to best prevent the spread of illness, they provide updated guidance on these matters. The development of the pandemic is highly dynamic and recommendations on management periodically change.

2. Symptoms

Almost all of the Corona Viruses that infect people cause symptoms similar to a common cold: runny nose, slight fever, mild cough and some aches and fatigue. Most individuals who are infected with the Corona Virus will develop some of these symptoms although some persons exposed to the virus show no symptoms at all (asymptomatic). It is important that embarked scientists and crew continue to be made aware of the latest guidance regarding symptoms associated with the Corona Virus. Based on data from the CDC, the most common presenting symptoms include the following:

- Cough – 68%
- Fever – 44%
- Fatigue – 38%
- Sputum production – 34%
- Shortness of breath – 19%
- Sore throat – 14%
- Headache – 14%
- Loss of smell/taste – often associated with other symptoms

It should be reiterated that while many may view elevated temperatures as the primary method of detecting the virus, this will only identify approximately 44% of those presenting symptoms. It is important for other factors to be considered when evaluating crew and scientist for potentially having the virus.

3. Transmission

According to the CDC, the virus is thought to spread mainly from person-to-person contact as described here:

- Between people who are in close contact with one another (within about 6 feet)
- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs
- Some recent studies have suggested that COVID-19 may be spread by people who are not showing symptoms.

The virus can also be spread by touching surfaces where the virus is present and then touching your face specifically your mouth, nose or eyes. Surfaces become contaminated by those respiratory droplets or by someone who is infected touching their face and then touching those surfaces.

4. Prevention

The best way to manage the COVID-19 virus is to avoid contracting it. Individuals will reduce their chance of contracting the virus or spreading it to others by integrating the following into their daily routine:

- Practice good hand hygiene with frequent and sufficiently long handwashing (see <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html> for further guidance)
- Avoid touching your eyes, nose and mouth with unwashed hands.
- Embrace physical distancing by keeping 6 feet way from others whenever possible.
- Cover coughs and sneezes and wash your hands after episodes as appropriate.
- When practical, wear a mask when you are around other people to prevent infectious droplets from getting into the air or on nearby surfaces.
- Ensure all surfaces, especially hard surfaces, are cleaned frequently with approved bleach, alcohol, or peroxide based solutions. (see <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html> for further guidance)
- Ensure that hand sanitizer is available on the vessel to make it easy to clean hands.
- Consider minimizing any social interaction for a 14-day period prior to boarding a vessel. Corona viruses similar to this have been found to have a 14-day incubation period (the time period with which the disease can be spread while a patient is not showing symptoms).
- If interacting with individuals during the transfer of materials to the vessels, ensure you are wearing a mask and gloves at a minimum, eliminating handshaking and physical contact.

- Any supplies brought on board should be disinfected as best possible. It is believed the virus can live on surfaces for up to 9 days.

In-Port Mitigation

1. Access to Vessels

As noted earlier, the best way to avoid contracting the virus is to be as proactive as possible in keeping it from getting on the vessel in the first place.

a) Testing Prior to Boarding

i. Permanent VIMS Employees

Prior to boarding the vessel for any purpose (mobilization, de-mobilization, cruise departure) a PCR test must be completed no more than seven days prior, accompanied with written documentation of a negative result. For those employees who regularly participate in cruises on a daily or monthly basis throughout the year, a PCR test will be required every 14 days in order to remain compliant with this policy and have access to the vessels.

ii. External Vessel Users (non-VIMS employees)

Prior to boarding the vessel for any purpose (mobilization, de-mobilization, cruise departure) a PCR test must be completed no more than four days prior, accompanied with written documentation of a negative result.

iii. Exceptions

Any exceptions to this policy will be addressed on a case by case basis and must be discussed with the Captain of the vessel and the Director of Marine Operations BEFORE the individual is allowed access to a vessel. Exceptions are not guaranteed and all vessel users should take appropriate actions necessary to ensure compliance with the testing requirements noted above.

b) Additional Pre-Cruise Precautions

The following procedures will be implemented on VIMS vessels to prevent the spread of the virus throughout the vessel before leaving port:

- Access to the vessel will be restricted to crewmembers, other VIMS employees, scheduled contractors, and scheduled science party members
- There will be no tours and no visitors allowed on the vessels.
- Access to the vessel shall be limited to the time and spaces necessary to complete the intended purpose of the visit. The bridge and engineering spaces are deemed critical spaces given their importance and the difficulty involved in sanitizing them. Access to these spaces should be restricted to those personnel required to be in them due to maintenance, repairs or operation.
- In addition to completing a test as noted above, ALL persons stepping on the vessels are required to have their temperature checked by the vessel Master (or designee) and complete

the Self-Assessment Form PRIOR to boarding. This applies to all vendors and includes scientists whether they are planning to sail or not. Self-Assessment forms will be retained on the vessel or at Marine Operations. For those making multiple visits to the vessel, one form is required every seven days.

- Temperature checks will be required for anyone entering the vessel. Actual temperature readings in excess of 99° F will be recorded either in the ship’s log or on a separate spreadsheet and maintained on the vessel. Confirmation that temperatures were taken for each individual will still be noted in the ships log or on a separate spreadsheet for those temperature readings below 99° F although the actual reading may not be recorded.
- If access to the interior of the vessel is required, all personnel must utilize hand sanitizer provided, maintain physical distancing of 6 feet whenever practical.
- All personnel are encouraged to wear masks at all times when entering the interior of the vessel.
- Food, science equipment or other items that need to be brought aboard must be handled with particular care. All plastic containers should be wiped down with disinfectant and rags prior to use or stowage. Produce to be handled with disposable gloves and rinsed according to standard food preparation practices.
- Prior to heading to sea, every effort must be made to reduce the number of science personnel to only those required to complete the science objectives.
- Consideration must be given to optimizing the time spent at sea in order to reduce the overall duration of a cruise (i.e. exposure to personnel). Daily cruise schedules cannot exceed the USCG required manning requirements for crew and rest.

Any person looking to board a VIMS vessel who refuses any aspect of the pre-boarding screening or temperature check will not be allowed on board.

At-Sea Mitigation

Procedures for mitigating the COVID-19 virus will remain the same as the in-port mitigation procedures and other recommendations contained in the prevention section of this document. For repeated day cruises, every effort should be made by the science group to retain consistency in personnel. For the consideration and safety of all on board, personnel should limit their exposure in the community while repeat day-cruises are in progress or during weather delays. *As a crew member or cruise participant, if you are not comfortable with any aspect of the procedures associated with this response to the COVID-19 virus on our vessels, it is your responsibility to communicate your concerns to your supervisor and/or the Master of the vessel.*

1. Cruises in excess of 12 hours

Cruises are generally considered to be “extended cruises” when crew and participants are required to sleep on the vessel. Every effort will be made to assign personnel to individual staterooms when possible however there still remains inherent risk when required to share a stateroom. Additional procedures for these cruises are as follows:

- On the day of departure, all embarked personnel (crew and scientists) will have their temperatures taken and recorded by the Master or their designee at least once daily, typically in the morning. Actual temperature readings in excess of 99° F will be recorded either in the ship’s log or on a separate spreadsheet and maintained on the vessel. Confirmation that temperatures were taken for each individual will still be noted in the ships log or on a separate spreadsheet for those temperature readings below 99° F although the actual reading may not be recorded.
- If a vessel is required to make port during a cruise for any reason, all personnel shall remain on the vessel for the duration of the port call.
- Unless deemed an emergency by the Chief Scientists and agreed to by the Master, the science party will not change personnel during a cruise. For repeated day cruises, serious consideration should be given to retaining the same personnel throughout the series of cruises.
- Face coverings are recommended to be worn at all times when physical distancing is not possible.
- Additional Personal Protective Equipment (PPE) may be required by a COVID-19 Response Plan specific to a science group, lab or external user. These plans are encouraged but may not in any way reduce the personal awareness of the individual or hamper their ability to complete a task safely. The Master retains the ultimate responsibility for all embarked personnel and will have the final word regarding the use of PPE on the vessel while it is at sea.
- Every effort will be made to reduce the number of people in the galley at any single time. This may require eating in shifts or in other parts of the vessel. This will be addressed on a case-by-case basis given the unique crewing requirements of each cruise.
- Consideration will be given to providing snacks in individually wrapped packages when possible.
- Shared-use condiments will be eliminated whenever possible and replaced with single use items.
- Both a coffee mug and drinking glass will be provided to all embarked personnel at the beginning of a cruise. Each person is responsible for retaining these cups for the duration of a cruise.
- All dishes and cutlery to be washed in the dishwasher with the temperature set as high as possible to ensure sterilization. Disposable paper plates may also be utilized.
- Any person involved in the preparation of food shall wear a mask and gloves.

Keeping the living spaces and work areas clean and safe is the responsibility of everyone on board.

2. Cleaning and Disinfecting

It is critical to keep the vessel clean at all times. To help accomplish this, the following policies and procedures, at a minimum, will apply:

- High traffic and common areas will be cleaned at least daily by crew member(s) designated by the Master. These areas include but are not limited to:
 - a) Gangway Railings

- b) All Ladderway and railings on the ship
- c) All door handles on the Main Deck, O-1 deck, Engineering Spaces, Heads/Showers
- d) Any occupied Science Staterooms.
- e) Work Surfaces in the Wet Lab, and galley.
- f) Bridge door handles, keyboards, mice, and chair arms to be cleaned once daily.
- Areas where maintenance or other work is being performed are to be cleaned by the crew member(s) using the area.
- Work benches, tools, etc. are to be wiped down with disinfectant and rag prior to use and again when the work task is completed (or the end of the work-day whichever comes first).
- Disinfectant in spray bottles, paper towels and/or disinfecting wipes will be provided on the ship.
- Colored “arrows” will be located in the heads of the vessels indicating the need for the user to disinfect a particular area after using the space. These will provide a reminder to all of specific areas that must be cleaned prior to leaving the space.

Outbreak Management Plan and Reporting at Sea

Should a crewmember or scientist become suspected of having the COVID-19 virus while at sea, they should immediately bring these symptoms to the attention of the Master.

If the individual is deemed to be a potential risk of having the virus, the Master will quarantine the individual to a stateroom and make the appropriate entries in the ships log. The designated person ashore (DPA) will be notified by the Master and a decision will be made regarding the termination of the sampling and a return to the nearest port. This decision to terminate a cruise ultimately rests with the Master with input from the DPA.

USCG Marine Safety Information Bulletin 06-20 published in March 2020 was a reminder that “the illness of persons on board a vessel must be reported to both the Coast Guard and the Centers for Disease Control and Prevention (CDC).” Illness of a person onboard a vessel that may adversely affect the safety of a vessel or port is a hazardous condition per 33 CFR 160.216 and the master, operator, or person in charge **must immediately** notify the nearest Coast Guard Captain of the Port (COTP). It is critical to report persons who exhibit symptoms consistent with COVID-19 or other illness to the COTP. It was also noted that failure to do so may result in the vessel or Master being “subject to Coast Guard enforcement action, which include civil penalties, vessel detentions, and criminal liability.

Given that VIMS vessels primarily operate coastally, it is highly practical to isolate an embarked scientist or crewmember in an available stateroom or portion of the vessel for the duration of the time required to return to port.

References:

- ABS Guidance Notes on Response Measures to COVID-19 for the Marine and Offshore Industries (May 2020) – based primarily on WHO, CDC, and EPA guidance.
- CDC web site: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- USCG Marine Safety Information Bulletin 02-20 “Novel Coronavirus”.
- WHO Operational Guidance for Managing COVID-19 cases or outbreaks on board ships.
- Virginia Department of Health: VDH Interim Guidance on Screening, Monitoring and Testing Employees Returning to Work: Non-Essential Workforce.
- George Washington University – Maritime Medical Access Coronavirus Guidance (provided by the UNOLS office to the Academic Research Fleet).

Revision Log		
Revision number	Date	Description
1.1	11-Jun-20	Original document
1.2	15-Jun-20	Added revision log, minor edits
1.3	11-Aug-20	Included pre cruise testing requirement
1.3 .1	2-Sept-20	Modified pre-cruise testing requirement