

2019 Novel Coronavirus

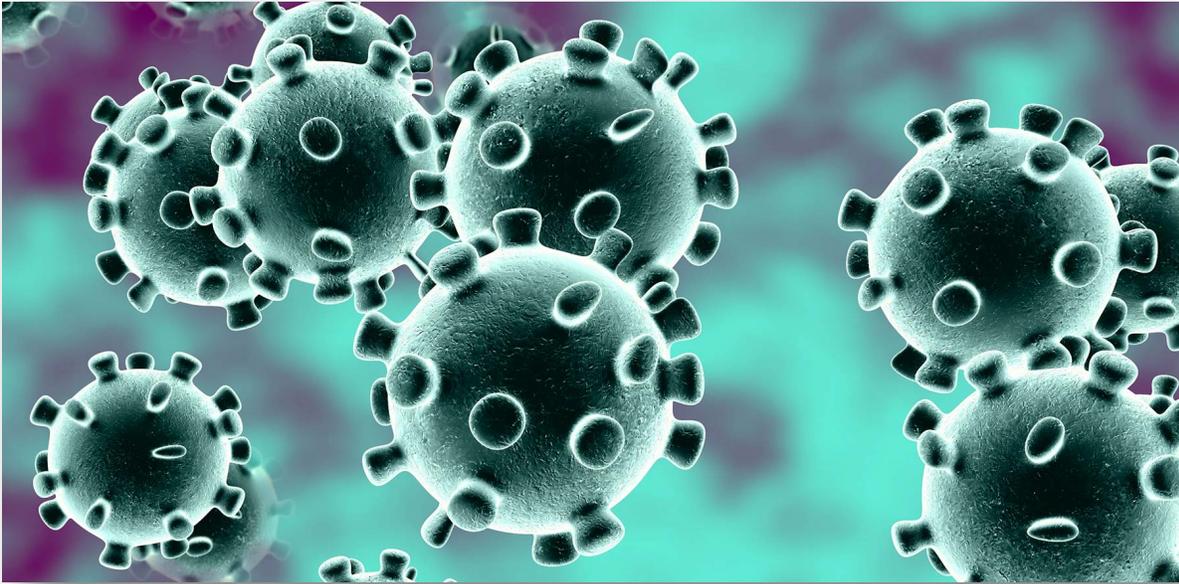
2019-nCoV

A Mariner's Guide

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EXECUTIVE SUMMARY

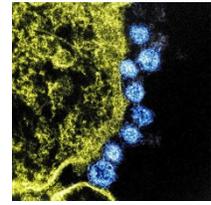
With the recent worldwide outbreak of the Novel Coronavirus (2019-nCoV) and subsequent United States (US) and World Health Organization (WHO) declarations of Public Health Emergencies, Kyrm Hickman, with the support of the Ship Operations Cooperative Program (SOCP) and SOCP Member peer reviewers, produced a short Mariner's Guide of recommendations for Operating Companies (OPCOs), ship's management, and crew, if the ship calls on a port where there is a wide spread outbreak of the Novel Coronavirus 2019-nCoV.

This is only a guide based on research to provide recommendations on what to do if a crewmember shows signs of Novel Coronavirus infection.

Although every precaution has been taken in preparation of this Mariner's Guide, the author, SOCP and SOCP Member reviewers assume no responsibility for errors, or omissions. Nor is any liability assumed for damages resulting from use of the information contained herein.

Keep abreast of the Latest Developments by referring to the CDC website:

<https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>



TRANSMISSION

The coronavirus is transmitted just like any other respiratory virus, and this is through droplet transmission.

“When you are sick with a viral infection, then usually the virus is present in secretions in the nose, mouth and lungs, so when you sneeze, large droplets of liquid will be released into the air, and this is how the virus is transmitted,” Hota said.¹

Because these drops tend to be heavier, they do not travel farther than two metres (6 ft.). The virus can also be contracted if you touch a surface that has been contaminated, then touch your face or eyes.²

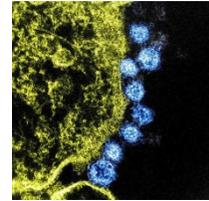
The person-to-person spread of the 2019-nCoV happens when in close contact (about 6 ft.) with an infected person where the contaminated particles are ingested through our respiratory tracks or our eyes.

Depending upon what the material of the surface is. “It could be hours, or it could be days, depending on what we are dealing with,” Hota said.³

¹Van Hoepen, Corne. Global News. *We sent your unanswered coronavirus questions to an expert – and we have answers*, 28 Jan 2020 <https://globalnews.ca/news/6468695/coronavirus-questions-expert-answers/>

²ibid

³ibid



TRANSMISSION *(continued)*

Transmission may occur during the incubation period before a person shows signs of sickness. The virus's incubation period is the time between when you were exposed, and you begin to display symptoms. All information we have has shown this period to be between 1 – 14 days, with the majority of people getting physically sick between the 3 – 6 day range. Generally, it is at the onset of symptoms that marks the beginning of when a person can infect others,⁴ but not always.

⁴ibid



SIGNS AND SYMPTOMS

The Center for Disease Control and Prevention (CDC) believes that the following symptoms of the 2019-nCoV may appear in as few as 2 days or as long as 14 days after exposure.⁵ The signs and symptoms of the 2019-nCoV closely mimic common flu symptoms⁶ of:

- Fever
- Chills
- Body aches
- Sore throat
- Headache
- Diarrhea
- Nausea / Vomiting
- Runny nose
- Acute respiratory symptoms⁷
 - Cough
 - Shortness of breath
 - Difficulty breathing
 - Pneumonia

Since the signs and symptoms are exactly the same as the flu, a study of where the patient has been or the people the patient has had contact with will give clues as to whether the patient may have been exposed to 2019-nCoV. But we should always err on the side of caution.

⁵Center for Disease Control and Prevention (CDC). *2019 Novel Coronavirus. Symptoms. 31 January 2020* <https://www.cdc.gov/coronavirus/2019-ncov/about/symptoms.html>

⁶Ellern, Todd, MD. Harvard Health Publishing, Harvard Medical School. *The new coronavirus: What we do – and don't – know.* 25 January 2020 <https://www.health.harvard.edu/blog/the-new-coronavirus-what-we-do-and-dont-know-2020012518747>

⁷International Maritime Health Association. *Reducing the Risk of Infection from 2019 new Coronavirus (2019-nCoV) Information to shipping companies.* Dated 26 January 2020 <https://www.imha.net/sites/default/files/2020-01/20200126%20CORONA%20advice%20shipping%20comp.pdf>



PREVENTION

There is no vaccine for the 2019-nCoV virus. There is no absolute protection. The following guidelines are general guidelines and are meant for mariners who go ashore in ports or regions of the world where the 2019-nCoV is present.⁸

- Avoid close contact with anyone who has a fever and/or cough.
- Avoid sick people.
- Wash your hands frequently in hot water for at least 20 seconds with soap and water or an alcohol-based hand rub.
- Wear a simple surgical mask.
- Avoid confined spaces such as buses, subways, clubs, bars, etc.
- Consider disinfecting the pay phones or other items you might handle ashore.
- Avoid direct unprotected contact with live animals or surfaces in contact with animals.
- Eating local cuisine, in local markets should be avoided.
- For Galley: Observe strict food hygiene to avoid cross-contamination.
- Ensure, whether aboard ship or ashore, eat only fully cooked meats and fish.

⁸Center for Disease Control and Prevention. 2019 Novel Coronavirus. *Prevention & Treatment*
<https://www.cdc.gov/coronavirus/2019-ncov/about/prevention-treatment.html>



PROTECTION GUIDELINES

Operating Companies (OPCO)

Recommended guidelines for OPCO ships in ports with 2019-nCoV active cases:⁹

- Follow directive and procedures from local health authorities and recommendations from the U.S. Government.
- Create policies and procedures for interfacing with port personnel, such as, but not limited to:
 - Pilots
 - Longshoremen
 - Line handlers
 - Cargo surveyors
 - Port agents
 - Chaplains
- Consider restricting crewmembers to ship carefully, taking into consideration:
 - Union agreements
 - Crew morale and welfare
 - All other mariner rights and privileges
- Provision ship with at least five (5) sets of protective N95 NIOSH masks and gloves for each crewmember.
- Do *not* provision the ship with food stuffs from the port.

⁹ibid International Maritime Health Association. *Reducing the Risk of Infection from 2019 new Coronavirus (2019-nCoV) Information to shipping companies.*

Ship's Management

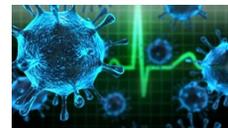
Recommended guidelines for OPCO ships in ports with 2019-nCoV active cases:

- Follow the policies, guidelines and procedures directed by your OPCO, local health authorities and the US Government.
- Implement shipboard policies for interaction with port personnel
- Mask and glove crewmembers when working in close proximity with port personnel (6 ft.).



Ship's Crew

Follow the recommendation under PREVENTION above.





SYMPTOMATIC CREWMEMBERS

The following are recommended guidelines for ship's management and crew, once underway, if a crewmember starts to show signs and symptoms of 2019-nCoV infection.¹⁰

- Ship's management shall fill out a Maritime Declaration of Health and notify the OPCO and all appropriate authorities that you have a potentially infected crewmember aboard.
- Relieve them of their shipboard duties.
- Isolate crewmember(s) to their staterooms and do not allow close contact with other crewmembers.
- If possible, Assign a single bathroom for the infected crewmember(s) usage.
- Stateroom doors should be kept closed except when entering or leaving the room; minimize entry and exit.
- Only essential personnel should enter with proper Personal Protective Equipment (PPE), including respiratory protection.
- Consider using ship's phone, walkie-talkie, or other form of aural or visual communication, if possible, versus entering the stateroom.
- Have food brought to their room.

¹⁰Center for Disease Control and Prevention (CDC). *2019 Novel Coronavirus, Interim Infection Prevention and Control Recommendations for Patients with Known or Patients Under Investigation for 2019 Novel Coronavirus (2019-nCoV) in a Healthcare Setting. 28 January 2020*
<https://www.cdc.gov/coronavirus/2019-ncov/about/prevention-treatment.html>



SYMPTOMATIC CREWMEMBERS *(continued)*

- All dishes, drinking glasses, cups, eating utensils need to be washed thoroughly with soap and hot water.
- All towels, bedding, or other items need to be washed thoroughly with soap and hot water.
- Thoroughly disinfect all surfaces where the crewmember was working, particularly telephones, radios, consoles, workbenches or other surfaces used near the person's mouth.
- Symptomatic crewmembers:
 - Wear simple surgical masks
 - Cover the nose and mouth when coughing and sneezing.
 - Wash hands with soap and hot water for 20 seconds or use an alcohol-based hand sanitizer
 - Avoid touching their eyes, nose and mouth
 - Ensure any tissues or other disposable items that have been used are placed in a plastic biohazard trash bag or 1.5 mil garbage trash bag and have the crewmember clean up after themselves, if they can.
 - Follow the recommended disposal protocol listed under "Disposal of Infectious Waste."



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Any crewmember that must enter the symptomatic crewmembers room shall receive training¹¹ on and demonstrate an understanding of when to use PPE; what PPE is necessary; how to properly don, use, and doff PPE in a manner to prevent self-contamination; how to properly dispose of or disinfect and maintain PPE; and the limitations of PPE. Any reusable PPE must be properly cleaned, decontaminated, and maintained after and between uses.¹²

Gloves

- Perform hand hygiene, then put on clean, non-sterile gloves upon entry into the patient room or care area. Change gloves if they become torn or heavily contaminated.
- Remove and discard gloves when leaving the patient room or care area, and immediately perform hand hygiene.



¹¹https://www.cdc.gov/vhf/ebola/hcp/ppe-training/n95respirator_coveralls/doffing_16.html

¹²Ibid <https://www.cdc.gov/coronavirus/2019-ncov/about/prevention-treatment.html>

PERSONAL PROTECTIVE EQUIPMENT (PPE)

(continued)



Gowns

- Put on a clean disposable gown upon entry into the patient room or area. Change the gown if it becomes soiled. Remove and discard the gown before leaving the patient room or care area.



Shoe Covers

- Place shoe covers on prior to entry or have boot wash upon exit of stateroom.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

(continued)



Respiratory Protection

- Use respiratory protection (i.e., a respirator) that is at least as protective as a fit-tested NIOSH-certified disposable N95 filtering face piece respirator before entry into the patient room or care area. The N95 NIOSH will adsorb the respiratory particles, where a regular surgical mask will not.
- Disposable respirators should be removed and discarded after exiting the patient's room or care area and closing the door. Perform hand hygiene after discarding the respirator.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

(continued)



Eye Protection

- Put on eye protection (e.g., goggles, a disposable face shield that covers the front and sides of the face) upon entry to the patient room or care area. Remove eye protection before leaving the patient room or care area. Reusable eye protection (e.g., goggles) must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use. Disposable eye protection should be discarded after use.





DISPOSAL OF INFECTIOUS WASTE

Place all used disposable gloves, gowns, facemasks, shoe covers and other contaminated items (including tissues and other disposable items) in a biohazard trash bag, or 1.5 mil garbage bag.

All trash bags should be stored in a secure biohazard area to prevent further transmission of infectious items, until proper disposal can be affected in accordance with company and port regulations.

Wear protective gloves when handling and wash your hands immediately **after handling these items.**



INFECTION CONTROL

Surface Disinfection¹³

Clean all “high-touch” surfaces, such as counters, tabletops, doorknobs, bathroom fixtures, toilets, phones, keyboards, tablets, and bedside tables, every day. Also, clean any surfaces that may have blood, body fluids and/or secretions or excretions on them.

Use a diluted bleach solution bleach solution by adding ¼ cup of bleach to 1 gallon (16 cups) of water.

Bleach Solution	
5.25-6.15% sodium hypochlorite	
Dilution	Chlorine (ppm)
None	52,500-61,500
1:10 or 1 ½ cup:1 gallon	5,250-6,150
1:20 or ¾ cup:1 gallon	2,625-3,075
1:100 or ¼ cup:1 gallon	525-615

¹³Center for Disease Control and Prevention. 2019 Novel Coronavirus. *Interim Guidance for Preventing 2019 Novel Coronavirus (2019-nCoV) from Spreading to Other in Homes and Communities.* <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread.html>

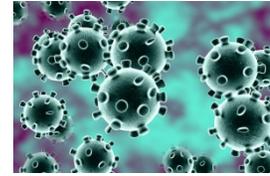


INFECTION CONTROL *(continued)*

Laundry¹⁴

- Wash laundry thoroughly.
- Wear disposable gloves while handling soiled items. Wash your hands immediately after removing your gloves.
- Immediately remove and wash clothes or bedding that have blood, body fluids and/or secretions or excretions on them.
- Wash and dry with the hottest temperatures of the laundry facility.

¹⁴ibid



BACKGROUND

Overview

The Novel (New) Coronavirus (2019-nCoV) is a very serious public health risk, that has warranted the World Health Organization (WHO) to issue a *Global Public Health Emergency of International Concern* (PHEIC)¹⁵ and the United States has declared the 2019-nCoV a *Public Health Emergency*¹⁶ on 29 January 2020 and for the US Department of State to issue a Level 4 Travel ban¹⁷ to China on 31 January 2020.

Travel Advisory Levels

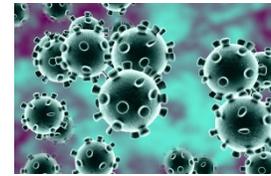
- 1** Exercise normal precautions
- 2** Exercise increased caution
- 3** Reconsider travel
- 4** Do not travel

In December 2019 China reported a cluster of cases of pneumonia in people associated with the Huanan Seafood and live animal Wholesale Market in Wuhan, Hubei Province. In January 2020, China confirmed the Coronavirus.

¹⁵Kennedy, Merrit, National Public Radio, *WHO Declares Coronavirus Outbreak a Global Health Emergency*, 30 January 2020. <https://www.npr.org/sections/goatsandsoda/2020/01/30/798894428/who-declares-coronavirus-outbreak-a-global-health-emergency>

¹⁶U.S. Department of Health and Human Services (HHS), *Secretary Azar Declares Public Health Emergency for the United States for 2019 Novel Coronavirus*, Press release of 31 January 2020, <https://www.hhs.gov/about/news/2020/01/31/secretary-azar-declares-public-health-emergency-us-2019-novel-coronavirus.html>

¹⁷U.S. Department of State; International Travel Advisory; dated 31 January 2020. <https://travel.state.gov/content/travel/en/international-travel/International-Travel-Country-Information-Pages/China.html>



BACKGROUND *(continued)*

The WHO states the people of all ages can be infected by the new coronavirus (2019-nCoV). Older people, and people with pre-existing medical conditions (such as asthma, diabetes, heart disease) appear to be more vulnerable to becoming severely ill with the virus.¹⁸

Communicability

The 2019-nCoV has now spread worldwide in 30 days.



John Hopkins University's Center for Systems Science and Engineering (CSSE) has a website that tracks the worldwide spread of the 2019-nCoV on a daily basis.¹⁹

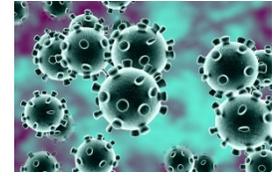
R naught Value

Disease are given an R_0 value that is used to measure any contagious disease that may spread in the susceptible population. Three possibilities for the potential spread or decline of a disease, depending on its R_0 value.²⁰

¹⁸World Health Organization (WHO), *Novel Coronavirus (2019-nCoV) advice for the public: Myth busters: Does the new coronavirus affect older, or are younger people also susceptible?* dated January 2020. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters>

¹⁹<https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>

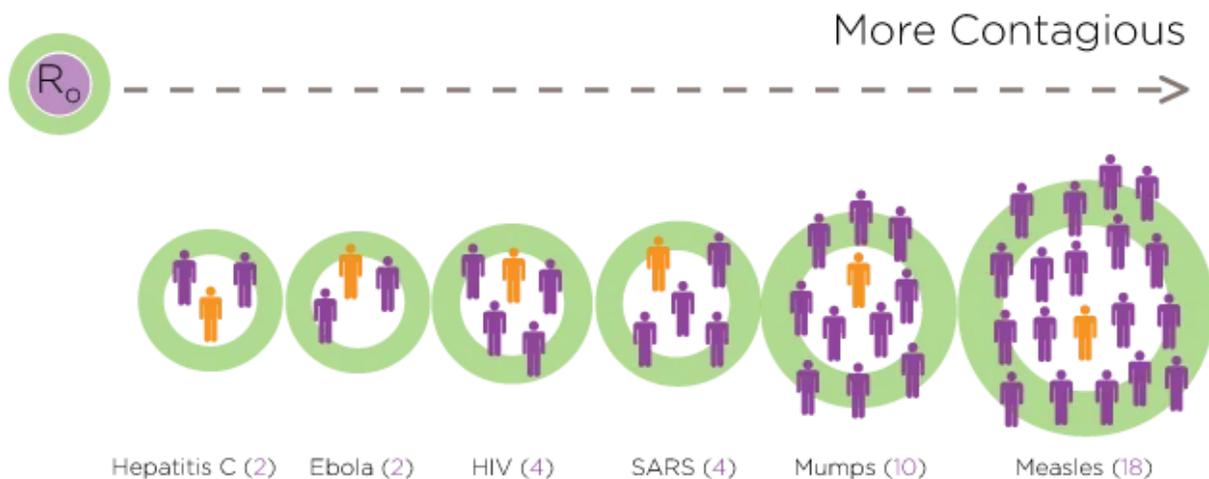
²⁰Ramirez, Vanessa Bates, Healthline. *What is R_0 ?: Gauging Contagious Infections*. Medically reviewed by University of Illinois-Chicago, College of Medicine on 24 June 2016. <https://www.healthline.com/health/r-nought-reproduction-number>

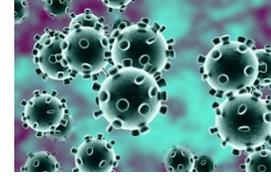


BACKGROUND *(continued)*

- If R_0 is less than 1, each existing infection causes less than one new infection. In this case, the disease will decline and eventually die out.
- If R_0 equals 1, each existing infection causes one new infection. The disease will stay alive and stable, but there won't be an outbreak or an epidemic.
- If R_0 is more than 1, each existing infection causes more than one new infection. The disease will spread between people, and there may be an outbreak or epidemic.

This illustration shows some commonly known diseases and their estimated R_0 values.





BACKGROUND *(continued)*

The R naught value for the 2019-nCoV is in dispute among the world scientists.²¹

WHO	$R_0 > 1.4 - 2.5$
Lancaster University, England	$R_0 > 3.6 - 4.0$
University of Bern, Switzerland	$R_0 > 1.4 - 3.8$
Majumder & Mandl	$R_0 > 2.0 - 3.3$

Average 2019-nCoV R_0 value is 2.76

Even though there is some disagreement as to the actual R value, it should be pointed out that any R value above indicates that the virus is infectious.

²¹Saey, Tina Hesman. ScienceNews. *How the new coronavirus stacks up against SARS and MERS*. 24 January 2020. <https://www.sciencenews.org/article/how-new-wuhan-coronavirus-stacks-up-against-sars-mers>

AUTHOR POSTSCRIPT

The 2019-nCoV virus is still spreading in China and throughout the world and it appears that it has not run its course yet.

Every passing week we are better able to understand the routes of transmission, communicability, and how best to treat those infected.

There is so much we do not know about the 2019-nCoV virus and the international community is struggling to grasp the extent.

As mariners plying the waters of the world, we might come in contact with the virus in the various ports we visit in the normal course of our profession.

This document is intended to provide mariners some basic guidelines to keep us from being infected or spreading the disease to our ship mates if we do become infected.

Remember, if the ship's crew is infected and the ship is held in quarantine unable to off load its cargo, it could be a significant impact to you and your shipping company. So, we have to work together to ensure we do our best to protect ourselves and our ship mates from this virus.

Keep Abreast of the Latest Development by referring to CDC's website:

<https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>

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