INTERIM ADVICE
FOR PREPAREDNESS AND RESPONSE TO CASES OF THE NOVEL CORONAVIRUS (2019-nCoV) INFECTION AT POINTS OF ENTRY IN THE EUROPEAN UNION (EU)/EEA MEMBER STATES (MS)

Advice for ship operators for preparedness and response to the outbreak of novel Coronavirus (2019-nCoV) infection

Version 1
27 January 2020

The EU HEALTHY GATEWAYS Joint Action has received funding from the European Union, in the framework of the Third Health Programme (2014-2020). The content of this document represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.
Introduction

This interim advice was prepared after a request from the European Commission’s Directorate-General for Health and Food Safety (DG SANTE). An ad-hoc working group was established with members from the EU HEALTHY GATEWAYS joint action consortium. Names and affiliations of the working group members who prepared this document are listed at the end of the document.

The working group produced the following advice, considering current evidence and travel advice from WHO about the novel 2019-nCoV infection outbreak (as of 27 January 2020), as well as existing guidelines for the maritime transport sector that were published in response to the outbreaks of SARS-CoV and MERS-CoV1-3.

1. Maritime transport – cruise ship travel

1.1. Minimizing the risk for introduction of persons with acute respiratory syndrome due to novel Coronavirus (2019-nCoV) onto the ship

Travel companies and travel agencies may provide pre-travel information to customers about health issues with their travel package. In this context, information regarding the symptoms of novel Coronavirus (2019-nCoV), health risks for vulnerable groups and the importance of preventive measures such as delaying travelling may be provided before the voyage, especially to persons coming from or passing through the affected areas2.

Before boarding, information may be provided to passengers and crew who are coming from affected areas or to all passengers and crew before embarking (e.g. verbal communications, leaflets, electronic posters etc.).

The information should include: symptoms, hygiene rules (hand washing, coughing and sneezing etiquette, disposal of dirty tissues, social distancing, elimination of handshaking events etc.), special considerations for high-risk groups, what to do in case of relevant symptoms, and the potential for an outbreak on board4.

Crew arriving on board from affected areas (as defined by WHO in the website https://www.who.int/health-topics/coronavirus for areas or countries where on-going transmission of 2019-nCoV occur) should be informed about the symptoms of ARI. Further, they should be monitored daily by a health care staff on board for 14 days after leaving the affected area for any symptoms of ARI, and be asked to immediately report to the ship doctor and supervisor any relevant symptoms.

---

2 Affected areas are those defined by WHO as affected or as areas with on-going transmission.
Cruise ships visiting affected areas should provide information to passengers and crew according to the WHO advice (or official country-specific advice) for international travel and trade in relation to the outbreak of pneumonia caused by a new coronavirus in China\textsuperscript{5,6} including: a) frequently clean hands by using alcohol-based hand rub or soap and water; b) when coughing and sneezing cover mouth and nose with flexed elbow or tissue – throw tissue away immediately and wash hands; c) avoid close contact with anyone who has fever and cough; d) if you have fever, cough and difficulty breathing seek medical care early and share previous travel history with your health care provider; e) when visiting live markets in areas currently experiencing cases of novel coronavirus, avoid direct unprotected contact with live animals and surfaces in contact with animals; f) the consumption of raw or undercooked animal products should be avoided. Raw meat, milk or animal organs should be handled with care, to avoid cross-contamination with uncooked foods, as per good food safety practices.

1.2. Education and raising passenger and crew awareness

1.2.1. Raising crew awareness for detection of cases on board

Healthcare staff should be informed and updated about the outbreak of novel Coronavirus (2019-nCoV) and any new evidence and guidance available for health care staff.

Cruise lines should provide guidance to crew regarding recognizing the signs and symptoms of ARI: fever and sudden onset of respiratory infection with one or more of the following symptoms: shortness of breath, cough or sore throat.

Crews should be reminded of the procedures that are to be followed when a passenger or a crew member on board displays signs and symptoms indicative of ARI (for example to inform the designated crew, perform duties according to instructions from supervisors depending on the position etc.). Crews should also be reminded about the procedures to be followed during an outbreak of other respiratory illness such as Influenza Like Illness outbreak management plan, which is available on board the ship\textsuperscript{4}.

Information about reporting immediately to supervisor and medical team compatible symptoms for themselves or other crew or passengers should be provided for all crew.

1.2.2. Personal hygiene measures

Cruise lines should continue to provide guidance and training about of their crews, related to reducing the general risk of ARI:
- Hand washing technique (use of soap and water, rubbing hands for at least 20 seconds etc.)
- When hand washing is essential (e.g. after assisting an ill traveller or after contact with their environment)
- When hand rubbing can be applied instead of hand washing and how this can be done
- Respiratory etiquette during coughing and sneezing with disposable tissues or clothing
- Appropriate waste disposal
- Use of respiratory masks
- Avoiding close contact with people suffering from acute respiratory infections

1.3. Supplies and equipment

Adequate medical supplies and equipment should be available on board to respond to an outbreak as described in the WHO (2007) recommended medicines and equipment by the International Medical Guide for Ships 3rd edition.

Adequate supplies of sample medium and packaging, disinfectants and hand hygiene supplies should also be carried on board.

Adequate supplies of PPE should be carried on board including gloves, impermeable gown, goggles, surgical masks and FFP2/FFP3 masks.

Further details about supplies specific to the novel Coronavirus (2019-nCoV) can be found at: https://www.who.int/internal-publications-detail/disease-commodity-package---novel-Coronavirus-(ncov)

1.4. Management of a suspect case

1.4.1. Definition of a suspect case of novel Coronavirus (2019-nCoV)

According to WHO, the definition of a “suspect case” is the following:

A. Patients with severe acute respiratory infection (fever, cough, and requiring admission to hospital), AND with no other etiology that fully explains the clinical presentation AND at least one of the following: a history of travel to or residence in the city of Wuhan, Hubei Province, China in the 14 days prior to symptom onset, or patient is a health care worker who has been working in an environment where severe acute respiratory infections of unknown etiology are being cared for.

B. Patients with any acute respiratory illness AND at least one of the following: close contact with a confirmed or probable case of 2019-nCoV in the 14 days prior to illness onset, or visiting or working in a live animal market in Wuhan, Hubei Province, China in the 14 days prior to symptom onset, or worked or attended a health care facility in the 14 days prior to onset of symptoms where patients with hospital-associated 2019-nCov infections have been reported.

1.4.2. Definition of a close contact of a suspect case of novel Coronavirus (2019-nCoV)

“Close contact” is defined as a family member or healthcare worker providing direct patient care or anyone who had prolonged (>15 minutes) face-to-face contact with a probable or confirmed symptomatic case (on board ships contact with a suspect case until the laboratory results are available) in any closed setting.
1.4.3. Precautions at the ship medical facility

Based on the uncertainty of the virus transmission dynamics, it is recommended to apply the precautions advised by US CDC for a case under investigation for Coronavirus (2019-nCoV): the patient should be asked to wear a surgical mask as soon as they are identified and be evaluated in a private room with the door closed, ideally at the isolation room if available. Healthcare personnel entering the room should use standard precautions, contact precautions, airborne precautions, and use eye protection (e.g. goggles or a face shield). Detailed information about infection control practices for novel Coronavirus (2019-nCoV) is provided by WHO: [https://www.who.int/publications/detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected](https://www.who.int/publications/detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected)

1.4.4. Isolation

Following preliminary medical examination, if the ship's medical officer determines that there is a suspect case of novel Coronavirus (2019-nCoV) on board that meets the definition described in paragraph 1.4.1, the suspect case should be isolated in an isolation ward, cabin, room or quarters and infection control measures should be continued until respiratory symptoms are absent.

All persons entering the isolation room should apply standard precautions, contact precautions, airborne precautions, and use eye protection. More details for infection control are provided by WHO at: [https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected)

However, if the illness does not meet the suspect case definition (paragraph 1.4.1), but the individual has respiratory symptoms, the person should not be allowed to return to public areas of the ship or interact with the public, but where applicable should be asked to follow the standard procedure for isolation of persons with Influenza Like Illness. Detailed guidance is provided to the European Manual for Hygiene Standards and Communicable Disease Surveillance on Passenger Ships, Part B, Guideline I: [http://www.shipsan.eu/Home/EuropeanManual.aspx](http://www.shipsan.eu/Home/EuropeanManual.aspx)

All contacts to a suspect case on board should be identified and monitored as described in paragraph 2.4.6.

1.4.5. Laboratory testing

Laboratory examination of clinical specimens for the persons who meet the definition of a suspect case should be arranged in cooperation with the competent authorities at the port. The competent authority will inform the ship officers about the laboratory test results.

Guidance for clinical specimens collection are provided by WHO. To increase the likelihood of detecting 2019-nCoV infection, CDC recommends collecting and testing multiple clinical
specimens from different sites, including all three specimen types—lower respiratory, upper respiratory, and serum specimens. Additional specimen types (e.g. stool, urine) may be collected and stored. Specimens should be collected as soon as possible once a suspect case is identified, regardless of time of symptom onset.

1.4.6. Reporting and notification

The competent authority of the next port of call must always be informed if a suspect case of an infectious disease or death has occurred on board (IHR 2005, Article 28). For ships on international voyage, the International Health Regulations (IHR) Maritime Declaration of Health (MDH) should be completed and sent to the competent authority in accordance with the local requirements at the port of call. For example, some ports require the submission of the MDH by all arriving ships.

The officer in charge of the ship should immediately alert the competent authority at the next port of call (and the cruise line head office) regarding the suspected case to determine if the necessary capacity for transportation, isolation, and care is available at the port. The ship may be asked to proceed to another port in close proximity if this capacity is not available or if warranted by the critical medical status of the suspected case of novel Coronavirus (2019-nCoV).

1.4.7. Contact tracing

The passenger or crew member that meets the definition of a suspect case should be interviewed and provide information about the places that the patient visited and about his/her contacts since the onset of symptoms on board the ship or ashore. This information should be recorded and shared with the competent authority at the next port of call.

Contact is defined as: Health care associated exposure, including providing direct care for nCoV patients, working with health care workers infected with novel coronavirus, visiting patients or staying in the same close environment as a nCoV patient. Working together in close proximity or sharing the same classroom environment with a nCoV patient. Traveling together with a nCoV patient in any kind of conveyance. Living in the same household as a nCoV patient. The epidemiological link may have occurred within a 14-day period before or after the onset of illness in the case under consideration.

1.4.8. Management of contacts

In the current absence of adequate evidence for the novel Coronavirus transmission and communicability, it is recommended to follow the protocol for SARS that was developed by WHO for cruises ship travel in the 2003 outbreak.

All contacts (see definition in paragraph 2.4.5) of a suspect case of novel Coronavirus (2019-nCoV) should be provided with information on symptoms and transmission of the infection. They should be placed under active surveillance for 14 days. Designated health staff on board should monitor and record the temperature of contacts daily. They should be advised
to stay in their cabins until the laboratory results for the suspect case are available and until further instructions from the competent authorities at the port.

Both embarking and disembarking ports must be notified immediately of contacts being on board and measures taken. If, after 14 days of monitoring, the contacts do not develop symptoms of ARI, then contacts can be discharged from the follow up.

Contacts should not be allowed to disembark before assessed by the competent authority at the port.

1.5. Disembarkation

If the medical officer for the port determines that the ill crew member or passenger meets the novel Coronavirus (2019-nCoV) suspect case definition, the crew member or passenger shall be removed from the ship, using all necessary precautions, and transported to the nearest medical facility. Contacts should be asked to be under public health observation until 14 days after the contact or as otherwise advised by the competent authority at the port.

The suspect crew member or passenger who fulfills the criteria in paragraph 1.4.1 should disembark in a controlled way to avoid any contact with other persons on board the ship and wear a surgical mask. Personnel escorting the patient during the medical evacuation should wear suitable PPE (gloves, impermeable gown, goggles, mask).

As soon as the suspect case had been removed from the cruise ship, the cabin or quarters where the novel Coronavirus (2019-nCoV) patient was isolated and managed should be thoroughly cleaned and disinfected.

The competent authority should give free pratique when is satisfied that the public health measures have been implemented satisfactorily, including disembarkation of the suspect case or cases, contact tracing, information to all travellers on board about the symptoms and signs of the disease, who to contact in case the relevant symptoms have been developed the following 14 days, cleaning and disinfection, disposal of infectious waste. After measures have been completed, the ship should be allowed to embark or disembark passengers and continue the voyage.

1.6. Record keeping in the medical log

Records should be kept about the following:

a) any person on board who has visited the medical facility and meets the definition of a suspect case of novel Coronavirus (2019-nCoV) described in paragraph 1.4.1. and the isolation and hygiene measures taken at the isolation place.

b) any person meeting the definition of a close contact described in paragraph 1.4.2 and the results of monitoring of his/her health.

c) Results of active surveillance.
1.7. Active surveillance (case finding)

Case finding among passengers and crew should be initiated by the ship’s medical staff in order to detect any new suspect cases. Case finding should include directly contacting passengers (e.g. passenger surveys) and crew, asking about current and recent illness, and checking if any person meets the criteria of a suspect case. Findings should be recorded.

1.8. Cleaning and disinfection

The time of environmental survival of 2019-nCoV is currently unknown. SARS-CoV may survive in the environment for several days. MERS-CoV may survive >48 hours at 20°C, 40% relative humidity comparable to an indoor environment, on plastic and metal surfaces[^14].

While case management is in progress on board a cruise ship, a high level of cleaning and disinfection measures should be maintained on board as per the outbreak management plan available on the ship.

Cabins and quarters occupied by patients and contacts of novel Coronavirus (2019-nCoV) should be cleaned and disinfected according to cleaning and disinfection protocols of infected cabins.

Thorough cleaning of environmental surfaces with water and detergent and application of common disinfectants (such as sodium hypochlorite) used during outbreak procedures should be applied.

Laundry, food service utensils and waste from cabins of suspect cases and contacts should be handled as infectious in accordance with the outbreak management plan provided on board for other infectious diseases.
2. Maritime transport – Cargo ship travel

2.1. Minimizing the risk for introduction of persons with acute respiratory syndrome due to novel Coronavirus (2019-nCoV) onto the ship

Crew arriving on board from affected areas or crew on ships visiting affected areas should be informed about the symptoms of ARI (fever and sudden onset of respiratory infection with one or more of the following symptoms: shortness of breath, cough or sore throat). Further, they should be asked to immediately report to the designated officer any relevant symptoms.

Ships visiting affected areas should provide information to crew according to the WHO advice for international travel and trade in relation to the outbreak of pneumonia caused by a new coronavirus in China including: a) frequently clean hands by using alcohol-based hand rub or soap and water; b) when coughing and sneezing cover mouth and nose with flexed elbow or tissue – throw tissue away immediately and wash hands; c) avoid close contact with anyone who has fever and cough; d) if you have fever, cough and difficulty breathing seek medical care early and share previous travel history with your health care provider; e) when visiting live markets in areas currently experiencing cases of novel coronavirus, avoid direct unprotected contact with live animals and surfaces in contact with animals; f) the consumption of raw or undercooked animal products should be avoided. Raw meat, milk or animal organs should be handled with care, to avoid cross-contamination with uncooked foods, as per good food safety practices.

2.2. Education and raising crew awareness

2.2.1. Raising crew awareness for detection of cases on board

Shipping companies should inform crew on recognizing the signs and symptoms of ARI: fever and sudden onset of respiratory infection with one or more of the following symptoms: shortness of breath, cough or sore throat. Any person symptoms of ARI should inform the supervisor immediately.

2.2.2. Personal hygiene measures

Shipping companies should refresh training of their crews about hygiene measures:
- Hand washing technique (use of soap and water, rubbing hands for at least 20 seconds etc.)
- When hand washing is essential (e.g. after assisting an ill traveller or after contact with their environment)
- When hand rubbing can be applied instead of hand washing and how this can be done
- Respiratory etiquette during coughing and sneezing with disposable tissues or clothing
- Appropriate waste disposal
- Use of respiratory masks
- Avoiding close contact with people suffering from acute respiratory infections.

Infographics from WHO are available at: https://www.who.int/health-topics/coronavirus
2.3. Supplies and equipment

Adequate medical supplies and equipment should be available on board as described in the WHO (2007) recommended medicines and equipment by the International Medical Guide for Ships 3rd edition.

Adequate supplies of PPE should be carried on board including gloves, impermeable gown, goggles and surgical masks.

Further details about supplies specific to novel Coronavirus (2019-nCoV) can be found at: https://www.who.int/internal-publications-detail/disease-commodity-package---novel-Coronavirus-(ncov)

2.4. Management of a suspect case

2.4.1. Isolation

If any person on board fulfils the following criteria, he/she should be isolated immediately and the next port of call should be informed:

A) Symptoms of fever and sudden onset of respiratory infection with one or more of the following symptoms: shortness of breath, cough or sore throat AND
B) Travel-history to affected areas defined by WHO as affected or as areas with on-going transmission in the 14 days before the onset of illness, or, any person being in close contact with a person who had been infected with the novel Coronavirus (2019-nCoV).

The patient should be isolated in an isolation ward, cabin, room or quarters with infection control measures should be continued until respiratory symptoms are absent.

All persons entering the isolation room should apply gloves, impermeable gown, goggles, surgical masks.

2.4.2. Reporting to the next port of call

The competent authority of the next port of call must always be informed if a suspect case of an infectious disease or death has occurred on board (IHR 2005, Article 28). For ships on international voyage, the International Health Regulations (IHR) Maritime Declaration of Health (MDH) should be completed and sent to the competent authority according to the local requirements at the port of call. Some ports require the submission of the MDH by all arriving ships.

The officer in charge of the ship should immediately alert the competent authority at the next port of call regarding the suspected case to determine if the necessary capacity for transportation, isolation, and care is available at the port. The ship may be asked to proceed to another port in close proximity if this capacity is not available, or if warranted by the critical medical status of the suspected case of novel Coronavirus (2019-nCoV).
2.4.3. **Disembarkation**

No one may leave the ship until the health authority has conducted a risk assessment, the suspect case or cases have determined all possible contacts on board and the possible contacts have been examined.

Disembarkation of the sick person should take place in a controlled way to avoid any contact with other persons on board the ship and the sick person should wear a surgical mask. Personnel escorting the patient during the medical evacuation should wear suitable PPE (gloves, impermeable gown, goggles, surgical mask).

2.4.4. **Cleaning, disinfection and waste management**

As soon as the suspected case had been removed from the ship, the cabin or quarters where the suspect case with the novel Coronavirus (2019-nCoV) was isolated and managed should be thoroughly cleaned and disinfected by staff who is trained to clean surfaces contaminated with infectious agents using PPE.

Laundry, food service utensils and waste from cabins of suspect cases and contacts should be handled as infectious in accordance with procedures for handling infectious materials available on board.

2.4.5. **Management of contacts**

The local public health authority should provide information on symptoms and transmission of novel Coronavirus (2019-nCoV) to all crew and supervise all measures taken on board.

All crew members will be under public health observation or other measures may apply as instructed by the competent authority at the port.

The ship may be allowed to proceed to its next port of call after the health authority has determined that public health measures have been completed satisfactorily.
Working group members

Barbara Mouchtouri¹, Martin Dirksen-Fischer², Maria Ander Heiden³, Mauro Dionisio⁴, Miguel Dávila-Cornejo⁵, Brigita Kairiene⁶, Janus Janiec⁷, Sotirios Tsiodras⁸, David Schwarz⁹, Peter Otoñezⁱ⁰, Boris Kopilovic¹¹, Aura Timen¹², Corien Swan¹³, Sotirios Plenge-Bönig¹⁴, Areti Lagiou¹⁵, Jan Heidrich¹⁶, Agoritsa Baka¹⁷, Pasi Penttinen¹⁸, Paul Riley¹⁹, Matthias Boldt²⁰, and Christos Hadjichristodoulou²¹.

1. Laboratory of Hygiene and Epidemiology, Faculty of Medicine, University of Thessaly, Larissa, Greece
2. Institute for Hygiene and Environment of the Hamburg State Department for Health and Consumer Protection, Hamburg, Germany
3. Robert Koch Institute, Berlin, Germany
4. Italian Ministry of Health, Rome, Italy
5. Ministry of Health, Social Services and Equality, Madrid, Spain
7. National Institute of Public Health – National Institute of Hygiene, Warsaw, Poland
8. National and Kapodistrian University of Athens, Medical School, Athens, Greece
9. Public Health Agency of Sweden, Stockholm, Sweden
10. National Institute of Public Health, Ljubljana, Slovenia
11. National Institute for Public Health and the Environment, Bilthoven, the Netherlands
12. Laboratory of Hygiene and Epidemiology, University of West Attica, Athens, Greece
13. Institute for Occupational and Maritime Medicine, Hamburg, Germany
14. European Centre for Disease Prevention and Control, Stockholm, Sweden

The working group thanks the Cruise Lines International Association and its members for their input to the chapter about cruise ship travel.

For any questions or support related to the points of entry, please email info@healthygateways.eu
References


