



**WHO Interim technical advice
for case management of
pandemic (H1N1) 2009 on ships**

(13 November 2009)

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1. Introduction

This document is part of a series of guidance documents produced by the World Health Organization (WHO) regarding pandemic influenza A (H1N1) 2009 and the public health emergency of international concern determined by the WHO Director-General on 25 April 2009. These documents are updated regularly and can be accessed on the WHO web site.¹

The target audience for this document includes National IHR Focal Points under the International Health Regulations (IHR (2005)), competent authorities² at ports, national public health officials, as well as ship operators, port administrators, other port personnel, ship crew³ members, and other port authorities and stakeholders involved in ship travel.

WHO consulted with experts to develop emergency guidance for case management of patients on board ships who are suspected to have pandemic (H1N1) 2009 virus infection. These experts included professionals with expertise and experience in the areas of maritime medicine, hygiene and sanitation on ships, occupational health, infection control, and disease prevention. This guidance is intended to support countries in reducing human exposure⁴ to infectious agents at ports and during ship voyages and to improve the response to health-related emergencies by establishing mechanisms for rapid intervention, particularly when suspect cases of pandemic (H1N1) 2009 virus infection are detected during a voyage.

In addition to expert consultations, this document was developed through review of relevant WHO guidance documents on influenza preparedness and response, guidance materials on the current pandemic (H1N1) 2009,¹ and other technical documents related to ship travel and health. Advice from these existing guidance materials is incorporated where relevant.

This guidance may be used in conjunction with the WHO document *Interim technical advice for inspection and issuance of ship sanitation certificates*.⁵

¹ For current information regarding pandemic influenza A (H1N1) 2009, please see: <http://www.who.int/csr/disease/swineflu/en/index.html>. Accessed on November 19, 2009.

² This document uses the IHR definitions for this and additional terms. *Competent authority* means an authority responsible for the implementation and application of health measures under the International Health Regulations (2005) (Article 1, IHR (2005)).

³ *Crew* means persons on board a conveyance who are not passengers (Article 1, IHR (2005)).

⁴ Exposure is defined as proximity and/or contact with a source of a disease agent in such a manner that effective transmission of the agent may occur. For influenza, the main route of transmission is by droplets propelled over a short distance contaminating surfaces; transmission may occur at short distances through inhalation of small-particle aerosols (droplet nuclei), particularly in shared air spaces. See FAQ: *What is the new influenza A (H1N1)?* and FAQ: *What can I do?*. Accessed on November 19, 2009.

⁵ *Interim Technical Advice for Inspection and Issuance of Ship Sanitation Certificates* at: <http://www.who.int/csr/ihr/travel/TechnAdvSSC.pdf>. Accessed November 19, 2009.

All health measures against the spread of disease and applied to international travelers, ships, or other transport must accord with the IHR (2005), which are binding upon all 193 WHO Member States. Further information on application of the IHR (2005) to ports and ships under these regulations can be found in Appendix 1 of this document.

The guidance in this document should be considered within the context of this particular situation and within relevant national and other international regulations and national pandemic preparedness plans. It supports contingency planning and implementation of health measures on board ships or in ports to control public health risks related to suspected cases of pandemic (H1N1) 2009. It is not intended to address all public health issues and related rules and regulations that may arise in relation to ship or port operations.

The use of this document should result in greater predictability of the measures adopted by the various stakeholders (including both public and private sector entities) and should facilitate implementation of appropriate actions in suspected cases of pandemic (H1N1) 2009 related to ship travel.

2. Pandemic (H1N1) 2009 virus infection and ships

The current outbreak of pandemic (H1N1) 2009 has been demonstrated to be spread by human-to-human transmission in the same way as seasonal influenza: mainly through large droplets, as a result of coughing or sneezing by persons infected with the influenza virus. It may also be spread when a person touches respiratory droplets on another person or an object and then touches their own mouth or nose or someone else's mouth or nose, before washing their own hands.

In crowded and semi-closed environments the risk of transmission may be enhanced, such as occurs during a ship voyage, due to proximity and prolonged opportunity to acquire pandemic (H1N1) 2009 virus infection from close contact⁶ with travelers who may be ill in the same space. Individuals that have been identified as “at-risk” of more complicated or severe illness associated with infection by pandemic (H1N1) 2009 influenza virus include:

- women who are pregnant (particularly in the later stages of pregnancy);
- infants and children (<5 years);

⁶ **“Close contact”** A close contact in a ship is considered to be a passenger or crew member who had been in close proximity and in such association with an infected person or enclosed environment for a prolonged period of time to have had opportunity to acquire the infection, such as, sharing a cabin, family members, travel group members, crew working in shifts at the same space and having cared for or had direct contact with respiratory secretions or body fluids of an active influenza like illness case or pandemic (H1N1) 2009. In addition, close contacts may be considered to include other fellow travelers that may have had prolonged close proximity contact with an ill passenger in crowded and semi-closed environment on board (e.g. during collective indoor recreational activities requiring close proximity or regularly having meals together with the infected person), according to case-by-case risk assessment within the previous seven days. In all cases, the ship's medical staff is responsible for listing names these close contacts.

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- patients with chronic health conditions, such as cardiovascular, respiratory or liver disease, or diabetes;
- patients with immunosuppression related to treatment for transplant surgery, cancer, or due to other diseases.

The elderly (>65) appear less susceptible to infection by pandemic (H1N1) 2009 influenza virus, but are assumed to be at higher risk of more severe or complicated illness if infected.

Maintaining awareness and encouraging a collaborative approach should be the concern of all on board so that symptomatic patients are identified, if they have influenza-like symptoms during a voyage. Efforts should be aimed at providing adequate and timely medical care, while at the same time protecting the health of other passengers and crew.

Once there is evidence of inevitable ship-wide spread, immediate implementation of health control measures and clinical management of cases will be beneficial to minimizing the consequences of rapid spread and mitigating its effects, so as not to have a high incidence of infection (especially on a cruise ship), thereby potentially overloading the on-board health facilities.

Key considerations include the need to have sufficient crew who are fit for work at all times for safe management of ships. Crew members should be considered for vaccination with new pandemic (H1N1) 2009 vaccine when it becomes available. In this regard, States Parties should consider the possibility of providing the crew members of the ship travelling under their flag with new pandemic (H1N1) 2009 vaccine, when it becomes available and according to their national vaccination strategy.

The immediate implementation of this guidance will help to protect passengers and crew members from infection, prevent the spread of disease via ship travel, and mitigate impact. Measures and risk assessment will have to be adapted to the current pandemic situation.

3. Preventive measures and early detection on board ships to be taken by the ship operator

Potential passengers and crew members who are ill prior to the voyage should delay travel plans and not board the ship. If, during embarkation, passengers and/or crew members display signs and symptoms of influenza-like illness⁷ (ILI), they should be referred for medical evaluation to ensure diagnosis, adequate treatment, and health control measures. Crew members who are ill who live aboard a vessel with adequate medical and isolation facilities should be assessed by the infirmary and properly treated and isolated.

According to the type and size of ship, the ship operator needs to have established operational procedures and a sufficient number of designated crew to properly assess and manage health risks during embarkation and disembarkation. In particular, according to the type and size of ship:

⁸ Typical signs and symptoms to watch for are similar to seasonal influenza and include fever, cough, headache, body aches, sore throat, runny nose and sometimes vomiting or diarrhoea.

- Where there has been or there continues to be a number of travelers with influenza-like symptoms on board, efforts should be made by the ship operator to separate sick and suspect passengers leaving the ship from those who are about to board. It may be necessary to use separate halls to prevent human-to-human transmission. If both sets of passengers are obliged to use the same area, it should be effectively cleaned after disembarking passengers have left and before embarking passengers arrive.
- Notify the newly embarking passengers of any influenza outbreak during the previous voyage and what measures were taken to prevent transmission and treat the influenza infection.
- Passengers who are not well enough for travel should be further assessed in a proper medical care facility. The ship operator must notify the competent authority of the port of call and medical care services beforehand to ensure they are aware of the problem and have received information about the situation of influenza-like symptoms.

The transport service provider must be made aware of the occurrence of the communicable disease illness when disembarking an ill passenger or crew member who is to be transported to a health-care facility ashore and have the knowledge, equipment and supplies available (e.g. open all doors and windows for air change in the vehicle, appropriate personal protective equipment (PPE), and cleaning materials) so as to clean the transport vehicle as per the procedures described elsewhere in this document. Further cleaning and disinfection of the vehicle will be required on arrival at the designated health-care facility.

Where there are suspect or confirmed cases on board, passengers and crew should be advised before disembarking to contact their health-care provider, should they become ill within the next 7 days. They should inform their health-care provider about their recent travel history so that the public health authority can be notified to follow up with the ship operator regarding potential close contacts and other suspects or ill travelers on board.

Crew and passengers can protect themselves and others by following simple prevention practices that apply while travelling and in daily life. Thus, passengers and crew members should be informed of basic infection prevention and control measures such as the practice of hand hygiene⁸ and proper cough etiquette.⁹ Other infection prevention and control advice, such as wearing masks by persons who are ill and social distancing measures (such as isolation of those who are ill), should be provided by suitably trained individuals (e.g. medical staff, crew).

Ship operators need to provide training on procedures related to ILI on board ship to all crew members. This should include training on the risk of infection, a protocol to prevent exposure and illness, signs and symptoms of influenza, and what to do if a suspected case of the

⁹ For hand washing guidance see Annex 1 or http://www.who.int/csr/resources/publications/swineflu/AH1N1_clean_hands/en/index.html

¹⁰ For cough etiquette and others recommendations for individuals in community, see http://www.who.int/csr/disease/swineflu/frequently_asked_questions/what/en/index.html

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pandemic (H1N1) 2009 virus infection is identified on board or if symptoms of ILI are experienced.

Rapid implementation of these measures can help to ensure protection of passengers and crew members and help limit the potential spread of the virus during the voyage.

It should be considered that there is a high level of personal contact on board ships and outbreaks of influenza should be expected to occur on ships in a pandemic situation. It is therefore recommended that an active surveillance mechanism be in place for early detection of cases of influenza-like symptoms to reduce its impact and transmission on board. This plan should directly address passengers (e.g., passenger surveys) and crew members (e.g., daily reports) to assess whether they have influenza-like symptoms.

If a suspect case is detected during a voyage, this information should be relayed immediately to a cabin attendant or person responsible for medical assistance on board and medical advice sought as done with any other communicable disease. If medical care is not available on board, the master of the ship should look for support ashore by the most efficient means of communication available and should follow the guidance in this document.

The ship operator may, if so required by the member states and available on board, appoint a medical officer or trained crew member to bear the responsibility of the basic health preventive and control measures and emergency medical treatment of the passengers, such as:

- initiate active surveillance (case finding) among the passengers and crew members to detect new cases once a person with influenza-like symptoms has been identified and oversee surveillance activities;
- improve awareness of passengers and crew members about the symptoms and signs of pandemic (H1N1) 2009, complications from infection, and infection control measures such as hand hygiene and social cough etiquette;
- promote the practice of hand hygiene and cough etiquette;
- collect the surveillance case data in a timely and appropriate manner and report to the ship operator daily, if so required and possible;¹⁰ and
- review medical log data daily for both passengers and crew members to evaluate illness trends and alert the ship master of the need to take action to investigate and contain the outbreak.

4. Risk assessment on board by port health officer/medical staff (Competent Authority)¹¹

The specific objective of the risk assessment is to guide public health authorities/competent authorities at ports to provide advice to ship operators and take actions for prevention and control activities on ships regarding suspect, probable, or confirmed cases of pandemic (H1N1) 2009 or cases of ILI or pandemic (H1N1) 2009 on board, when the authority considers that risk assessment is needed.

¹¹ A WHO "new" Influenza A(H1N1) Case Summary Form for case-based data collection model can be found at: <http://www.who.int/csr/resources/publications/swineflu/caseformadapted20090508.pdf>

¹¹ Under IHR (2005) a "competent authority" means an authority responsible for the implementation and application of health measures under these Regulations.

Before commencing the assessment, the port health officer/medical staff should typically ensure that the ship operator/agent and captain in command have an awareness of the purpose of the assessment. This should normally include a preliminary discussion with the ship's operator/agent and captain in command on matters relating to assessment procedures, as well as a review of the health-related documentation. The port health officer/medical staff should be informed of all actions that have been taken already by the ship's crew, including the ship operator policy, in order to control the spread of the disease.

Unforeseen potential hazards identified through this assessment can be discussed with the ship's captain in command or representative crew member during or at the conclusion of the visit and confirmed in writing thereafter. Preliminary discussions might include consideration of previous ports' assessment reports, consideration of relevant current documentation, and identification of all health-related activities undertaken on the vessel. On completion of the assessment, the port health officer/medical staff can again discuss with the ship's captain in command or representative crew member a summary of the matters which they found relevant to prevent and control cases of ILI or pandemic (H1N1) 2009 on board and give advice for action, as appropriate.

The main criteria for assessing cases that are to be further investigated are below.

1) Clinical

Presence of signs and symptoms similar to seasonal influenza. These include fever, cough, headache, body aches, sore throat, runny nose, and sometimes vomiting or diarrhoea.

Note: Attention should also be given to underlying conditions of the patients, such as pregnancy, people with chronic cardiovascular disease, diabetes, immunodeficiency, etc.

2) Epidemiological

a) Travel history before boarding the ship:

- Within the last 7 days, did the passenger visit areas where sustained human-to-human transmission of pandemic (H1N1) 2009 is occurring?
- Did the passenger or crew member care for, live with, or have direct contact with a probable or confirmed case of pandemic (H1N1) 2009 before boarding?

b) During voyage:

Has the passenger or crew member been in close proximity or association with an infected person or been in an enclosed environment for a prolonged period of time and have they had the opportunity to acquire the infection, e.g. such as sharing a cabin, interacting with family members, interacting with travel group members, or been a crew member working in shifts in the same space and having cared for or had direct contact with respiratory secretions or body fluids of an active ILI case or pandemic (H1N1) 2009, according to risk assessment case-by-case, all in within the last 7 days.

The specific actions for carrying out a health risk assessment on board ships are laid out in Table 1.

Table 1 – Public health risk assessment for ships by a Competent Authority

Actions to be taken for public health risk assessment on board ships	
Pre-boarding arrangements	
Before initiating an activity on board, the public health officials responsible for health assessment should plan in advance and take into account the following:	
<ol style="list-style-type: none">1) Planning in a timely manner and case-by-case the likely flow of assessments on board, according to the size, type and estimated time of arrival of a ship, required personnel available (taking into account knowledge and skills needs) for this activity and its previous record regarding public health risks, based on the information received from the ship master/medical staff or their agent/representatives, such as, but not limited to: information from the Maritime Declaration of Health and its attachment (with health questions, identification of sick persons, age, sex, nationality, port of embarkation and details of illness and treatment given) according to the model provided in IHR Annex 8 (see Appendix 3 to this document).2) Promoting administrative arrangements for appropriate staff identification and security clearance/permission to board ship in order to guarantee adequate, timely, and safe activity on board. Language barriers may be a problem and an interpreter/translator may be part of these arrangements.3) Ensuring that correct forms, unique seals/stamps to authenticate certificates, and other administrative supplies are accessible and in good operational condition.4) Ensuring availability of tools and equipment necessary for assessment and control measures, including PPE, sampling equipment, communications means (such as radio communication), medical devices, etc.	
Once on board	
<ol style="list-style-type: none">1) Begin health assessment in areas where there is limited movement of persons with influenza-like symptoms and then proceed to the “isolated or quarantine areas” which may be occupied by persons with influenza-like symptoms.2) Review necessary documents, such as, but not limited to:<ol style="list-style-type: none">a) Maritime Declaration of Health;b) Medical log book, including information regarding the health status of passengers and crew members, health control measures including medical treatment, and prophylaxis taken on board;c) Ship Sanitation Certificate;d) List of medicine (medicines for pandemic (H1N1) 2009 treatment and prophylaxis) according to national regulations, etc.3) If deemed necessary, for additional information regarding severity and clinical characteristics for each case, ask to complete and review the WHO “New” Influenza A(H1N1) Case Summary Form for case-based data collection. Available, and last accessed on November 19,2009, at: http://www.who.int/csr/resources/publications/swineflu/caseformadapted20090508.pdf)<ol style="list-style-type: none">a) Interview ship master, ship medical staff, passengers and other crew members who are in quarantine or isolation and, eventually, other passengers and crew members on a random basis to obtain detailed information about health status of passengers and crew members on board and event history and severity. Suggested questions:<ol style="list-style-type: none">i) When and where was the first case reported?ii) Are there any other passengers and crew members with symptoms/signals of ILI? If yes, how many cases were reported since the first case (daily cases) and what was the date of	

- last case reported?
- iii) Among all passengers and crew members with symptoms/signals of ILI, what measures were taken, such as, but not limited to, isolation, treatment, and prophylaxis?
 - iv) Were close contacts identified? What measures were taken regarding close contacts (quarantine, prophylaxis, etc.)?
 - v) Has information about preventive and control measures — such as the practice of hand hygiene and cough etiquette — been given to passengers and crew and been adopted on board?
 - vi) Were samples taken and/or lab results available from passengers, crew, and their close contacts with influenza-like symptoms?
- b) Considering information collected, identify control measures necessary to prevent disease spread, including hand hygiene, cough etiquette, cleaning and disinfection, laboratory samples, medical examination, treatment, prophylaxis, isolation, quarantine, and close contact identification, among others.
 - c) Request isolation of passengers and crew members with influenza-like symptoms for either a minimum period of 7 days after the symptoms onset, or until they are symptom-free for 24 hours, whichever is longer. This should be recommended for all on board influenza-like cases,, according to availability of separate space on board (if not consider special arrangements to keep infected persons at least 1 meter away from others, as well as adoption of cleaning, disinfection, and other hygienic procedures.
 - d) Request passengers and crew members who are identified as close contacts to monitor their own health over the next 7 days, avoiding, if possible, close contact with others. Request that if they develop any flu-like symptoms immediately seek for health care and stay in the cabin or at home if disembarking.
 - e) Request other passengers and crew members with a history of high-risk exposure (such as taking care of persons who are ill without using adequate PPE) to have a medical evaluation, including information about medications they are taking and underlying medical conditions or circumstances; counseling for exposure prophylaxis should be available and offered.
 - f) Discuss and develop the communication strategy on board with the Master or designated officer to achieve cooperation among all for accomplishing the risk assessment in a safe and timely manner.
 - g) Keep records of the findings and take note of evidence found (e.g. infection on board) and measures taken at the Ship Sanitation Control Certificate, according to IHR Article 39.5 (see Appendix 4).
 - h) Brief the ship's captain in command/representative crew member; provide a summary of the issues which are deemed relevant to prevent and control cases of ILI or pandemic (H1N1) 2009 on board; give advice for each action, as appropriate, according to WHO Guidance and national protocols and pandemic plan.
 - i) Questionnaires/health declaration forms for all passengers and crew members. In the case of a high number of passengers and crew on board ship, the use of questionnaires/health declaration forms for all passengers and crew members consumes time and resources; however, this helps to identify passengers and crew members with epidemiological risk factors and encourages self-reporting of illness.

5. Case management on board by the ship operator

Once a suspected case is identified on board, clinical management procedures should be adopted in a timely manner. WHO-recommended procedures for clinical management of human infection with pandemic (H1N1) 2009, including infection control, diagnosis, general treatment considerations, oxygen therapy, antibiotic treatment, antiviral therapy, corticosteroids, and advanced respiratory support can be found at:

http://www.who.int/csr/resources/publications/swineflu/clinical_management/en/index.html

Relevant national and international regulations and national guidelines and protocols and pandemic preparedness plans and their implementation should also be taken into consideration with regard to particular situations and in close coordination with competent authority.

When an outbreak of influenza is confirmed or considered probable, patients can be diagnosed on clinical and epidemiological grounds. Although rapid test kits may be available, in no circumstance should influenza diagnostic testing delay initiation of infection control practices or antiviral treatment and a negative result with a test kit or laboratory test should not be relied on to exclude a diagnosis of influenza as many factors contribute to false negative results. If a passenger or a crew member is feeling ill and/or has any influenza-like symptoms, they should be advised as follows:

- report to the medical staff or crew member in charge of health matters on board;
- provide personal identification data, such as name, age, gender and cabin number;
- provide a description, date and time of onset of signs and symptoms, including presence of any underlying medical conditions, and follow instructions from medical staff or other crew members;
- provide necessary information for health assessment such as travel history, details of close contacts during the last 7 days (identifying family members or group members, if part of a group travelling on board and, if a crew member, the actual duty station on board), including known previous contact with a confirmed case within at least the last 7 days.

Any confirmed, probable or suspected cases detected on board should be advised immediately to avoid close contact with others and be relocated to a separate cabin or to a more isolated area as soon as possible. The isolation period should be for a minimum of 7 days or until 24 hours after resolution of symptoms, whichever is longer. It should be applicable for all influenza-like cases on board (see WHO guidance on infection control).¹²

Ill person(s) should be cared for by designated caregivers and care should be taken to limit the number of personnel exposed to the ill person(s).

¹² WHO Interim guidance for infection prevention and control in health care for confirmed or suspected cases of pandemic (H1N1) 2009 and influenza-like illnesses can be found at:

<http://www.who.int/csr/resources/publications/swineflu/swineinflcont/en/index.html>

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The antiviral medicines oseltamivir and zanamivir may reduce the symptoms and duration of illness; they also may contribute to preventing severe disease and death, therefore it would be advisable to have a quantity of antiviral medicines available on board according to national pandemic influenza preparedness plans. WHO guidelines for use of antiviral medicines, other case management guidance, and information on antiviral drug resistance are available from the WHO web site¹³

Crew members and passengers who may have been exposed to an influenza case should monitor their health for 7 days after the exposure. Any signs or symptoms of influenza-like illness should be reported immediately. In addition, crew members should be placed on active medical surveillance and assessed daily during the monitoring period.

The following measures should be recommended to passengers and crew members that are feeling ill and/or have any influenza-like symptoms:

- i. avoid unnecessary close contact with others on board or keep contact to a minimum;
- ii. avoid touching the mouth and nose;
- iii. when coughing or sneezing, cover the mouth and nose with tissues and dispose of used tissues properly and immediately after use;
- iv. wash hands frequently using soap and water for a sufficient period of time (20 to 30 seconds) to remove any infectious matter during and after enhanced sanitation activities; use alcohol based hand sanitizers when in areas not equipped with hand washing facilities;
- v. if possible, improve airflow in your living space by opening windows;
- vi. if it can be tolerated, wear a surgical face mask under medical recommendation. If a person is wearing a medically-recommended mask (e.g. during transport ashore or in transit in crowded common areas), replace mask as soon as it becomes damp/humid. Surgical face masks should not be reused. After touching a used mask, (e.g. for disposal), hand hygiene must be practiced immediately (see Appendix 1);
- vii. when disembarking the ship, a cruise ship passenger who is still symptomatic or still within the isolation period at the termination of the cruise should be advised to wear a facemask. The same procedure should apply for crew members, when disembarking the ship in a port of call;
- viii. for patients with ILI, but who are not in any of the known risk groups for complications or severe illness, antiviral medicines may be administered after a medical assessment;
- ix. for patients within any of the known risk groups for complications of influenza infection or in whom the illness worsens, antiviral treatment should be administered as early as possible following symptom development. For further details of treatment recommendations see WHO Guidelines for Pharmacological Management of Pandemic (H1N1) 2009 Influenza and other Influenza.
- x. (http://www.who.int/csr/resources/publications/swineflu/h1n1_use_antivirals_20090820/en/index.html); and

¹³ http://www.who.int/csr/resources/publications/swineflu/h1n1_use_antivirals_20090820/en/index.html
http://www.who.int/csr/resources/publications/swineflu/clinical_management/en/index.html
<http://www.who.int/wer/2009/en/> 30 October 2009

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- xi. when taking care of ill passengers or performing cleaning and disinfection procedures, follow the recommendations for use of PPE and infection prevention measures.

Actions to be taken for case management of pandemic (H1N1) 2009 on ships by the medical officer/designated crew member on board and public health/competent authority at the port of call are set out in Box 2.

Box 2 - Case management on ships

Actions by medical officer/designated crew member on board	Actions by public health/competent authority at port of call
Pre-arrangements	Pre-arrangements
<ol style="list-style-type: none"> 1) Provide health information for passengers and crew members regarding ILI and pandemic (H1N1) 2009, such as but not limited to: symptoms and signs, preventive measures (e.g. hand hygiene and social etiquette), etc. 2) Establish operational procedures for early detection, notification and monitoring of illness on board 3) Develop and implement channels and tools for communication with passengers and crew members on board and with public health authorities on shore. 4) Develop operational procedures for first aid, assessment and care of ill passengers and crew members and management of suspected cases on board, including for applying isolation and quarantine, as required. 5) Develop operational procedures for crew members' mobilization to ensure safe sailing and business continuity, in the event crew members become ill on board. 6) Provide a stockpile of hygiene products and medical supplies on board, such as: appropriate antiviral (oseltamivir and/or zanamivir), intravenous fluids, antibiotics, antipyretics (paracetamol or acetaminophen), oral rehydration salts, oxygen, gloves, face masks, thermometers, adequate laboratory sample medium and packaging (specimens should be collected and transported in a suitable transport medium, on ice or in liquid nitrogen) ¹⁴, disinfectants; and hand hygiene supplies. The quantities on board will depend on the duration of the voyage and on the number of crew members and passengers. 	<ol style="list-style-type: none"> 1) Establish means of communication and procedures for receiving and assessing health information, documents, and/or reports from ships regarding public health events or cases of illness on board, including ILI or pandemic (H1N1) 2009, and to provide advice and advance notice of application of control measures, as applicable; 2) Identify and update contact details of authorities and establish means of communication and procedures to report all available essential information to the health authority at local, intermediate, or national levels, including communicating with the National IHR Focal Point -- for public health assessment, care, and response. 3) Establish means of communication and procedures for communication with competent authorities at other points of entry, nationally and internationally, to provide relevant information regarding evidence found and further control measures needed on arrival of the affected ship at the next port. 4) Identify and update contact details of conveyance operators, including agents or legal representatives at shore, and provide them with current contact details for the public health/competent authority for accurate and timely communication. 5) Establish all necessary administrative arrangements and necessary procedures for the issuance of <i>free pratique</i> ¹⁵ to ship and health documents, as required. 6) Establish administrative arrangements for transporting ill passenger to appropriate medical facilities at shore, as appropriate. 7) Identify medical facilities/service providers and establish administrative arrangements for access to medical and diagnostic facilities for assessment and care of ill or suspect travelers, as appropriate and according to national plans and protocols. 8) Establish arrangements for follow up on passengers and crew members who have disembarked and are sent for treatment either in isolation units, at health care facilities or are under quarantine on shore for advice and/or adoption of

¹⁴ WHO guidance for Instructions for shipments of swine influenza A(H1N1) specimens and virus isolates to WHO Collaborating Centres for influenza can be found at:

<http://www.who.int/csr/resources/publications/swineflu/instructions-shipments/en/index.html>

¹⁵ *Free pratique* means permission for a ship to enter a port, embark or disembark and discharge cargo or stores. See Article 1, IHR (2005).

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	further health control measures regarding potential close contacts and other suspects or ill travelers left on board, as applicable and according to national plans and protocols.
Procedures on board by ship operator once a suspected, probable, or confirmed case of pandemic (H1N1) 2009 case is detected.	Management and support at port of call for a ship with a suspected, probable, or confirmed case of pandemic (H1N1) 2009 on board.
<ol style="list-style-type: none"> 1) Initiate procedures to detect other persons with ILI symptoms and to monitor health among the passengers and crew members. 2) Inform public health/competent authority at next port of call, using the Maritime Declaration of Health Form (See Appendix 2 of this doc.) and keep it updated. 3) If medical staff are on board, conduct medical examinations, epidemiological investigations, and treatment of the suspected cases. 4) Seek medical advice from health authorities at nearest port or at the next port of call. 5) Record in the medical log book all actions taken on board regarding first aid, history of treatment, prophylaxis and laboratory samples results. 6) Implement isolation measures on confirmed, probable, and suspected cases (symptomatic persons) detected. 7) Issue quarantine for close contacts for up to 7 days. People who have been exposed to an infected person and are at a higher risk of developing severe or complicated illness should be closely monitored for symptoms and antiviral treatment should be initiated promptly, if symptoms develop. 8) Issue alerts and advice to passengers and crew members for raising awareness regarding prevention and control measures, as well as procedures for self monitoring health and reporting, as appropriate. 9) Request and promote arrangements for adequate disembarkation of ill passengers and crew as deemed necessary, with appropriate biosafety procedures to prevent transmission from disembarking to embarking passengers and crew. 10) Before disembarking, advise other travelers to contact their health care provider, should they become ill within the next 7 days. 11) Adopt and ensure cleaning and disinfection procedures are in place. 12) Review medical log data for both passengers and crew members daily to evaluate illness trends and alert ship master to the need to take further action to investigate and contain the outbreak. 13) Provide updated information on health situation on board ship for notifying competent authority/port health authority via appropriate channels and means. 	<ol style="list-style-type: none"> 1) Prior to arrival of the ship or at port: assist ship medical officer/designated crew member to manage cases on board, such as, but not limited to, collecting health information for epidemiological and clinical assessment, identifying measures necessary to prevent disease spread and providing necessary first medical aid, including hand hygiene, cough etiquette, cleaning and disinfection, laboratory samples, medical examination, treatment, prophylaxis, isolation, quarantine and close contact identification, among others. 2) Conduct further public health risk assessments on board, identify, advise and/or request implementation of prevention and control measures for pandemic (H1N1) 2009 on board, according to recommendations in this document (see page 14, item 4.2. Risk assessment on board by port health officer/medical staff). 3) Supervise disembarking of ill and suspect passengers and crew members, as appropriate, and identified close contacts, ensuring they receive information about national health measures, recommended procedures, and other requirements. 4) Promote and ensure that the patient transport service provider has received information about prevention and control measures when transporting suspect cases. 5) Establish communication immediately within the national surveillance system to inform National IHR Focal Point of existing suspect, probable, or confirmed case(s) of pandemic (H1N1) 2009 on board a ship, according to national plans and protocols. 6) Establish communication, nationally or internationally, with competent authorities at the next known port, to inform in a timely manner if unable to carry out the required control measures at the port.

6. Cleaning and disinfection

Since hand transfer of the influenza viruses to the mucous membrane of eyes, nose and mouth may occur and influenza viruses transferred to inanimate non-porous objects can persist for 24 to 48 hours, routine cleaning and disinfection practices can play a role in minimizing the spread of influenza.¹⁶

It is advised that the following cleaning and disinfection procedures be performed in response to a suspect case of pandemic (H1N1) 2009 on a ship:

The basic principles for cleaning and disinfecting are:

- clean all areas (no disinfectant)
- apply disinfectant **ONLY** on surfaces/items with direct patient contact, especially the areas which may have been occupied by the suspected cases, etc. **NO** disinfection to the areas which are not relevant to potential transmission, such as floor, carpet, walls, etc.

Clean the hard, non-porous surface first with detergent and water, then apply disinfectants according to the product instructions. Ensure correct concentrations and sufficient contact time for effective disinfection. Carefully remove porous materials, where possible, such as upholstery, rugs, and carpeting that have been in contact with the suspect case. Launder in accordance with the product instructions or dispose of the materials as described below. Materials that cannot be removed may be initially cleaned with detergent and warm water. The material should be allowed to air dry for a minimum of 5 minutes or as per manufacturer's instructions.

Empty waste disposal containers in the contaminated area prior to starting surface cleaning and disinfection. Waste disposal containers located in contaminated areas should be emptied by workers wearing PPE.

Crew or personnel on board in charge of cleaning and disinfection should:

- i. have knowledge of how to prepare correct dilutions and the contact time for the disinfectant being used;
- ii. limit hand contact with the face, especially the nose and eyes;
- iii. use PPE (disposable gloves, mask, gown) to protect the user from direct contact with chemicals and against direct contact with secretions/blood/body fluids. Change PPE frequently, especially if they become damaged during cleaning and disinfection; use eye protection apparatus, if splashing is expected, prior to entering the contaminated areas;
- iv. used PPE should be disposed of in plastic bags, tied up, and labeled with a biohazard symbol; do not shake the PPE while handling to prevent producing aerosols; and

13 See CDC Influenza Guidance for Cleaning Passenger and Cargo Vessels during an Influenza Pandemic at: www.pandemicflu.gov/travel/cleaning_vessels.html

- v. if PPE are not provided, then wash hands frequently using proper hand washing techniques. Hands must be washed using soap and warm water for a sufficient period of time (20 to 30 seconds) to remove any infectious material. Hands must be washed during and after enhanced sanitation activities. Use alcohol-based hand sanitizers containing a minimum of 60 to 90% ethanol concentration when working in areas not equipped with hand-washing facilities.

7. Roles and responsibilities

All involved agencies and the various stakeholders, including both public and private sector entities, should facilitate implementation of appropriate actions in suspected and confirmed cases of pandemic (H1N1) 2009 virus infection related to ship travel. Roles and responsibilities should be well defined regarding the application of the health measures. Some guidance regarding the roles and responsibilities can be found below and are aimed at ensuring a coordinated and effective response to an event on board ship and at the port.

7.1 Role of the ship master

- i. Ascertain whether or not the presence of ILI disease or conditions are liable to lead to spread on board before arrival at its first port of call in the territory of a state and, upon arrival or in advance of the ship's arrival, deliver a complete Maritime Declaration of Health¹⁷ to the competent authority, as requested. If the case is detected after the Maritime Declaration of Health has been delivered, the master shall report to the competent authority the supplementary information of ill persons, which have occurred on board.
- ii. The master of a ship or the ship's medical staff, if one is on board, shall provide relevant public health information required by the competent authority so as to assess the health conditions on board during the voyage.
- iii. Methods of notification include telephone, facsimile, email or radio by the ship direct to the competent authority or via the ship's agent.
- iv. Provide and arrange a place for the medical examination, quarantine, isolation, and treatment of passengers and crew members, as applicable (i.e. preferably in cabins or spaces which are ventilated by fresh air and where air conditioning may be switched off, if necessary).
- v. Following the recommendations of the WHO International Medical Guide for Ships (WHO, 2007) most international sea-going ships carry gloves, face masks, disinfectants, thermometers, intravenous fluids, antibiotics, oxygen, and antipyretics. Further, consider stocking extra quantities and check medical supplies such as adequate laboratory sample medium and packaging (specimens should be collected and transported in a suitable cooled transport medium),¹⁸ gloves, masks, disinfectants, and

¹⁴ Please see Appendix 3 – IHR (2005) Annex 8 -Model of maritime declaration of health.

¹⁸ WHO guidance for Instructions for shipments of swine influenza A(H1N1) specimens and virus isolates to WHO Collaborating Centres for influenza can be found at:
<http://www.who.int/csr/resources/publications/swineflu/instructions-shipments/en/index.html>

hand hygiene supplies are appropriate for use with influenza viruses. Consider providing extra quantities of antipyretics (paracetamol or acetaminophen), oral rehydration salts, and quantities of antibiotics and oxygen sufficient to treat secondary bacterial pneumonia, as well as oseltamivir and zanamivir for treatment and prophylaxis of crew members and passengers. The quantities needed on board will depend on the duration of the voyage, the number of crew members, and the number of passengers.

- vi. Assure operational procedures are in place for adequate cleaning and disinfecting on the ship.

7.2 Role of medical staff, if available on board

- i. Perform relevant medical assessment and containment activities.
- ii. Evaluate health of travelers who are ill and keep medical log data updated daily for both passengers and crew members.
- iii. Perform supportive clinical care for persons who are ill and health monitoring for other passengers.¹⁹
- iv. Develop and implement an integrated preparedness approach to address underlying conditions (e.g. weak immune system, diabetes, cardiovascular disease, asthma) and women who are pregnant, as well increased severe illness and complications that require hospitalization, such as pneumonia.
- v. Supervise other crew members involved with the care of travelers who are ill.²⁰
- vi. Provide advice for infection prevention practices (e.g. hand hygiene, cough etiquette, mask wearing, and isolation).

7.3 Role of other crew members involved with travelers who are ill

- i. Relocate passengers or crew members who are ill to a separate or more isolated area/room with good ventilation, as soon as possible. If their medical condition is stable and space is limited, travelers who are ill may be isolated in their cabin. The traveler should remain isolated for at least 7 days after onset of symptoms or until 24 hours after resolution of symptoms, whichever is longer.
- ii. When possible, designate a specific lavatory for the exclusive use of person(s) who are ill. If not possible, commonly touched surfaces in lavatories (faucet, door handles, waste bin cover, counter top, etc.) must be cleaned and disinfected after each use.
- iii. If there is a risk of direct contact with body fluids the crew member should wear impermeable disposable gloves. Gloves are not intended to replace proper hand hygiene²¹ and should be carefully removed, safely disposed of, and not be washed

¹⁶ WHO recommended procedures for clinical care for inpatient treatment can be found at: http://www.who.int/csr/resources/publications/swineflu/clinical_management/en/index.html

¹⁷ For further information see WHO patient care check list http://www.who.int/csr/resources/publications/swineflu/patient_care_checklist/en/index.html

¹⁸ Proper hand hygiene: A general term referring to any action of hand cleansing, performed by washing one's hands for at least 15 seconds or, if hands are not visibly soiled, applying an antiseptic hand rub (i.e., an alcohol-based hand rub). Touching the face with hands should be avoided (see Appendix 1).

- or reused. After the removal of gloves, strictly apply hand hygiene instruction (see Appendix 2 to this document).
- iv. Ask persons who are ill to wear a surgical face mask, if it can be tolerated. Single-use face masks should not be reused. Replace masks with a new clean, dry mask as soon as they become damp/humid. Discard single-use masks after each use and dispose of them immediately upon removing.
 - v. Crew should receive information on how to use a mask to ensure that risk is not increased by more frequent hand-face contact or adjusting and removing the mask.
 - vi. Store soiled items (used tissues, disposable masks, tubing, linen, pillows, blankets, seat pocket items, etc.) in an impermeable plastic bag labeled *biohazard*. The bag should be tied up, not reopened and disposed of according to the solid waste regulations of the State Party.
 - vii. Monitor the health of person who is ill continuously for 7 days after the last exposure to a passenger or coworker suspected of having pandemic (H1N1) 2009 virus infection and immediately notify their supervisor and report to the medical staff or crew member in charge of health matters on board.

7.4 Role of the port health office/competent authority

- i. Coordinate with port administration and relevant authorities, where applicable, to provide administrative and logistics arrangements to facilitate adequate embarkation and disembarkation of travelers suspected of carrying illness, such as, but not limited to:
 - a. proper transportation of persons displaying symptoms suggestive of influenza from the port of entry to the designated health care facilities, under competent authority supervision;
 - b. in agreement with port health/competent authority, designate an area for the assessment of suspected passengers and crew members in private. The area should have access to good lighting and ventilation, good hygiene conditions, and designated toilet facilities and telecommunications;
 - c. cleaning and disinfection procedures for port terminal areas used by travelers, such as waiting rooms and boarding areas.
- ii. Coordinate masters of ships, their agents, and port operators to ensure they are familiar with legislative and local requirements, the methods of communication of available notifications, contact details, and systems for receipt of notifications at all times which will ensure the timely transfer of messages to appropriate persons.
- iii. Agree and document with port operators the provision of maintenance, cleaning and disinfection of on-shore facilities and amenities.
- iv. Ensure that a procedure is developed, in agreement with other port authorities, that separates potentially infectious disembarking and embarking passengers through separate routes or time separated with enhanced cleaning and disinfection procedures in the case of serious incidents/outbreaks.
- v. Facilitate and supervise the implementation of arrangements for the management of arriving traveler(s) displaying influenza-like symptoms, including agreements or

- memoranda of understanding with appropriate agencies, health-care units, port authorities and service providers, and coordination of customs and immigration clearance.
- vi. Work with local health authorities, medical services and other agencies to assist in the care of passengers and crew housed at temporary health-care or quarantine facilities away from the port.
 - vii. Conduct further public health risk assessments relating to the arrival and departure of travelers who are ill or suspected of being ill. Consideration should be given to disease-specific local protocols where appropriate; assessment should be undertaken at the earliest possible opportunity following disembarkation from the conveyance.
 - viii. Establish a system whereby all relevant health authorities and border agency representatives are appropriately trained according to their duties and competencies in passenger health assessment and management, including use of and access to PPE.
 - ix. Ensure that arriving passengers are treated in accordance with national law and international requirements (including the IHR (2005)).
 - x. Communicate with or establish arrangements to inform the competent authority for the next known port, if not able to carry out the required control measures at the port.

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Appendix 1

This Appendix addresses some of the IHR (2005) provisions for all States Parties in implementing public health measures with regard to international conveyances and travelers. For the specific official requirements, please refer directly to the IHR (2005) articles cited below.²²

Ports and ships under the IHR (2005)

In preparing for, and managing potential cases of the pandemic (H1N1) 2009 virus infection, on board ships, it is important that all persons and entities involved understand the many relevant provisions in IHR (2005) that provide the international legal and coordination framework for the management of acute (and other) public health events involving international ships, both during a voyage and at ports. All WHO Member States are legally bound by the IHR (2005), which provide public health rights and obligations relevant to application of health measures in the context of international travelers and conveyances (including ships), and points of entry (including ports).²³

Implementation of health measures. Whether applied to international conveyances, travelers or goods, health measures under the IHR (2005) must be initiated and completed without delay, and applied in a transparent and non-discriminatory manner.

1 International Conveyances

In general, a ship on an international voyage shall not be prevented from calling at any port for public health reasons, unless there is a sufficient public health justification or an applicable international agreement provides to the contrary. In addition if the port is not equipped to apply necessary health measures under the IHR (2005), the ship may be ordered to proceed at its own risk to the nearest available and suitable port (unless operational problems would make this unsafe)²⁴.

Similarly, a ship shall generally not be refused *free pratique* by States Parties for public health reasons, unless there is a sufficient public health justification²⁵ or an applicable international agreement provides to the contrary; in particular a ship shall not be prevented from embarking

²² The full text of the IHR (2005) in the six language official versions is available on the WHO IHR website at www.who.int/ihr.

²⁰ See Articles 28.1 and 43, IHR (2005).

²¹ See Articles 28.1 and 43, IHR (2005).

²² Exceptions include applicability of other international agreements which provide to the contrary, and measures authorized under Article 43.

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or disembarking, discharging or loading cargo or stores, or taking on fuel, water, food and supplies. However, States Parties may subject the granting of *free pratique* to inspection and, if a source of infection or contamination is found on board, the carrying out of necessary disinfection, decontamination or other measures to prevent the spread of the infection or contamination.²⁶

Officers in command of ships may take emergency measures as may be necessary for the health and safety of travelers on board. The officer must inform the competent authority as soon as possible of any such measures taken. (Article 28.6)

If, for reasons beyond the control of the officer in command, a suspect or affected²⁷ ship berths elsewhere than the port at which it was due to berth, the officer must make every effort to communicate without delay with the nearest competent authority. In addition:

- i. The competent authority may apply health measures recommended by WHO or other health measures provided in the IHR (2005);
- ii. Unless required for emergency purposes or to communicate with the competent authority, no traveler or cargo on board the ship shall leave its vicinity (unless authorized by the competent authority)
- iii. When all health measures required by the competent authority have been completed, the ship may proceed (insofar as health measures are concerned) either to the port at which it was due to berth, or, if it cannot do so, to another conveniently situated port.

2 Application of measures to international ships/conveyances

While the IHR (2005) provide for and regulate application of the full range of health or control measures applied to ships and travelers, in the context of the outbreaks of the pandemic (H1N1) 2009 virus infection, the most relevant procedures for ships are likely to relate to hygiene on board, such as cleaning and disinfection for the control of actual and potential sources of infection. Where these or other control measures are implemented, they must be carried out so as to avoid injury and, as far as possible, discomfort to persons, or damage to the environment in a way that impacts upon public health, or damage to baggage, cargo, the ship or goods. (Article 22.3)

The competent authority must ensure that the measures themselves and the way that they are applied are consistent with IHR (2005) requirements.

If clinical signs/symptoms or information/evidence of a public health risk²⁸ is found on board a ship (including sources of infection), the competent authority shall consider the conveyance as affected and may require health measures, consistent with IHR (2005). The evidence found and

²⁶ See Articles 28.2 and 43, IHR (2005)

²⁷ See Article 1 definition of *Affected*, IHR (2005)

²⁸ “*Public Health Risk*” means a likelihood of an event that may affect adversely the health of human populations, with an emphasis on one which may spread internationally or may present a serious and direct danger (Article 1, IHR (2005)).

control measures required must be noted on the ship's Ship Sanitation Control Certificate²⁶.

A conveyance that has been considered as affected shall cease to be regarded as such when the competent authority is satisfied that the required health measures have been effectively carried out; and there are no conditions on board that could constitute a public health risk

If the competent authority for the port is not able to carry out the control measures needed for an affected ship, the next known port should be informed by the competent authority of the evidence found and the control measures which are required should be recorded on the Ship Sanitation Certificate, or in one additional attachment to it, as appropriate.

3 Communications from international ships/conveyances to authorities concerning ill passengers and other health risks, and the Maritime Declaration of Health²⁹

A number of provisions in the IHR (2005) require the officers of a ship to provide information concerning ill persons and health conditions on board, as soon as possible to the relevant authorities.

Officers in command of a ship (or their agents) are required to make known to the port control, as early as possible before arrival at the port of destination, any cases of illness indicative of disease of an infectious nature or evidence of a public health risk on board, which in turn must be immediately communicated to the competent authority for the port. In urgent circumstances, this information should be communicated directly by the officers to the relevant port authority.

Similarly, the master of a ship or the ship's surgeon if one is on board must supply any information required by the competent authority as to health conditions on board during the international voyage.

The master of a ship must also ascertain before arrival in port the state of health on board and deliver to the competent authority a completed Maritime Declaration of Health which shall be countersigned by the ship's surgeon, if one is on board, unless the competent authority does not require the declaration. This Maritime Declaration of Health must conform to the model provided in Annex 8 of the IHR (2005) - which is also attached to this document as Appendix 3. The State Party is required to inform shipping operators or their agents of their requirements with respect to these Maritime Declarations of Health.

Conveyance operators are also required to facilitate inspections, medical examinations of persons on board, application of other health measures under the IHR (2005), and provision of relevant public health information requested by the State Party.

4 General requirements when applying health measures to international travelers³⁰

With respect to travelers, the IHR (2005) provide for the following measures, laid out below.

²⁶ See Article 39 and model in Annex 3 of IHR (2005)

²³ See e.g. Chapter III – Special provisions for travelers of IHR (2005)

4.1. Application of health measures to international travelers on arrival or departure (Article 23)

In general (subject to other applicable international agreements and other provisions in the IHR), States may apply certain measures to international travelers for public health purposes when they arrive or depart the country:

- i. Information concerning the traveler's destination so that they may be contacted;
- ii. Information concerning the traveler's itinerary for travel in or near an affected area or other possible contacts with infection or contamination prior to arrival, as well as review of the traveler's health documents if required under IHR;
- iii. a non-invasive medical examination which is the least intrusive examination that would achieve the public health objective.

If additional health measures are necessary (in addition to appropriate health care), relevant IHR provisions include:

- i. States may apply additional health measures to those above if there is evidence of a public health risk, including, on a case by case basis, the least intrusive and invasive medical exam for a suspect/infected traveler that would achieve the health objective of preventing international disease spread.
- ii. These additional measures need to be based upon certain requirements, including:
 - Scientific principles
 - Available scientific evidence of a risk to human health, or where such evidence is insufficient, the available information including from WHO and other relevant intergovernmental organizations and international bodies
 - Available specific guidance or advice from WHO (Article 43)

4.2. Continuation of journey of travelers under observation

Travelers under public health observation³¹ may continue an international voyage, as long as the traveler does not pose an imminent public health risk. The State Party identifying the need for observation must inform the competent authority at the destination of the traveler's expected arrival. On arrival, the traveler must report to that authority.

4.3. Selected requirements on applying health measures to international travelers

- i. Travelers must be treated with courtesy and respect, with respect to their dignity, human rights and fundamental freedoms, so as to minimize any discomfort or distress;
- ii. Where international travelers are subject to health measures such as quarantine, isolation or medical examinations or other public health procedures, the State must provide or arrange for: adequate food, water, accommodations, clothing and appropriate medical treatment, as well as other assistance.

²⁴According to IHR (2005) “**public health observation**” means the monitoring of the health status of a traveler over time for the purpose of determining the risk of disease transmission.

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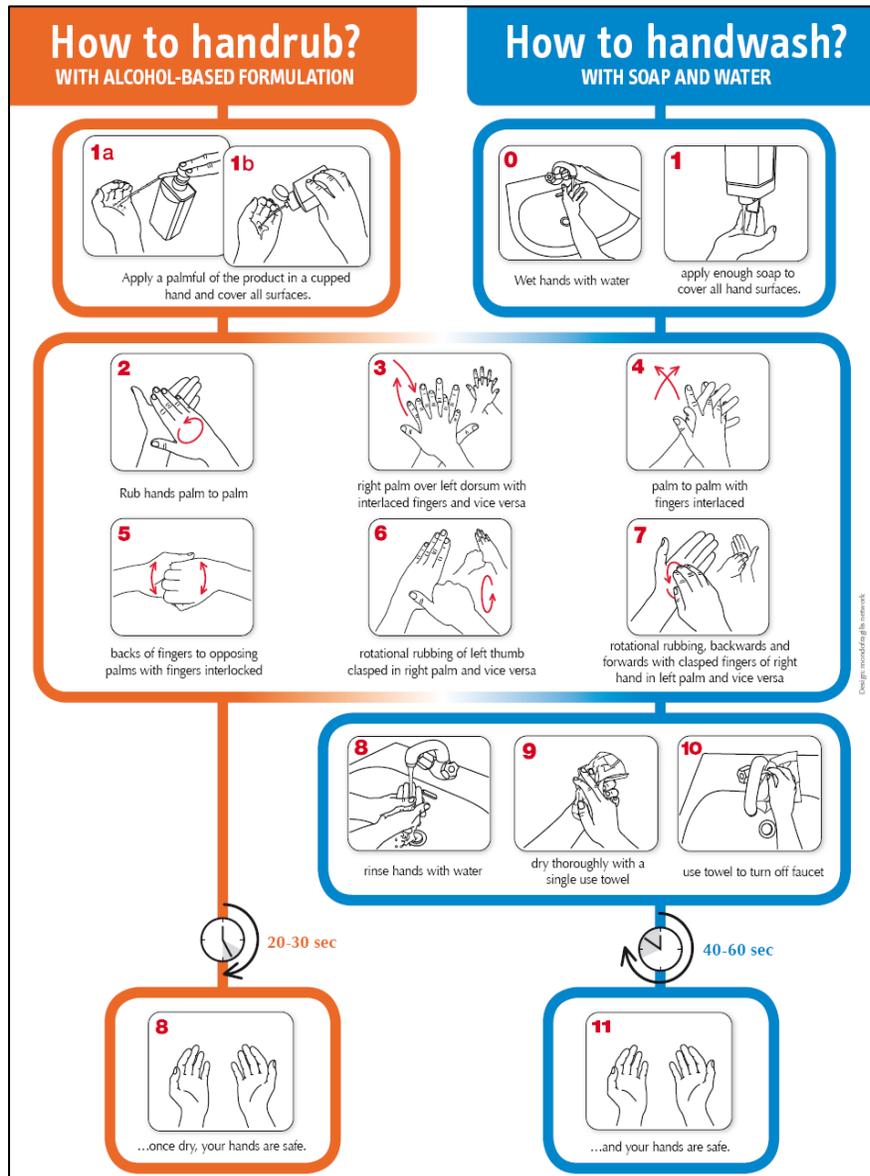
- iii. Unless specific exceptions indicated in the IHR apply, health measures carried out on travelers must have their express informed consent (or of their parents or guardians), in accordance with the country's law and international obligations (Articles 23.3 and 23.4).
- iv. Procedures and measures must be performed or administered in accordance with established national/international safety guidelines/standards to minimize that risk (Article 23.5).

There are specific restrictions on charges which can be made by States to travelers for health measures applied to them for the protection of public health, including for example, a prohibition on charges for required medical examinations to ascertain the traveler's health and appropriate isolation/quarantine requirements. Those charges which are permitted must not exceed their cost, be applied without discrimination as to nationality or residence, and published 10 days in advance (Article 40).

Appendix 2 – Hand washing Procedures

Washing your hands properly takes about as long as singing "Happy Birthday" twice, using the images below.³²

- i. Clean your hands regularly.
- ii. Wash your hands with soap and water, and dry them thoroughly
- iii. Use alcohol-based handrub if you don't have immediate access to soap and water.



³² See also http://www.who.int/gpsc/clean_hands_protection/en/index.html

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Appendix 3 – IHR (2005) Annex 8 -Model of maritime declaration of health

To be completed and submitted to the competent authorities by the masters of ships arriving from foreign ports.

Submitted at the port of _____ Date _____
Name of ship or inland navigation vessel _____ Registration/IMO No _____ Arriving from _____ sailing to _____
(Nationality)(Flag of vessel) _____ Master's name _____
Gross tonnage (ship) _____
Tonnage (inland navigation vessel) _____
Valid Sanitation Control Exemption/Control Certificate carried on board? Yes ___ No ___ Issued at _____ Date _____
Re-inspection required? Yes ___ No ___
Has ship/vessel visited an affected area identified by the World Health Organization? Yes ___ No ___
Port and date of visit _____
List ports of call from commencement of voyage with dates of departure, or within past thirty days, whichever is shorter: _____

Upon request of the competent authority at the port of arrival, list crew members, passengers or other persons who have joined ship/vessel since international voyage began or within past thirty days, whichever is shorter, including all ports/countries visited in this period (add additional names to the attached schedule):

(1) Name _____ joined from: (a) _____ (b) _____ (c) _____
(2) Name _____ joined from: (a) _____ (b) _____ (c) _____
(3) Name _____ joined from: (a) _____ (b) _____ (c) _____
Number of crew members on board: _____
Number of passengers on board: _____

Health questions

- (1) Has any person died on board during the voyage other than as a result of accident? Yes ___ No ___
If yes, state particulars in the attached schedule. Total no. of deaths _____
 - (2) Is there on board or has there been during the international voyage any case of disease which you suspect to be of an infectious nature?
Yes ___ No ___ If yes, state particulars in the attached schedule.
 - (3) Has the total number of ill passengers during the voyage been greater than normal/expected? Yes ___ No ___
How many ill persons? _____
 - (4) Are there any ill persons on board now? Yes ___ No ___ If yes, state particulars in the attached schedule.
 - (5) Was a medical practitioner consulted? Yes ___ No ___ If yes, state particulars of any medical treatment or advice provided in the attached schedule.
 - (6) Are you aware of any condition on board which may lead to infection or spread of disease? Yes ___ No ___
If yes, state particulars in the attached schedule.
 - (7) Has any sanitary measure (e.g. quarantine, isolation, disinfection or decontamination) been applied on board? Yes ___ No ___
If yes, specify type, place and date: _____
 - (8) Have any stowaways been found on board? Yes ___ No ___ If yes, where did they join the ship (if known)? _____
-
- (9) Is there a sick animal or pet on board? Yes ___ No ___

Note: In the absence of a surgeon, the ship's master should regard the following symptoms as grounds for suspecting the existence of a disease of an infectious nature:

- (a) fever persisting for several days or accompanied by (i) prostration; (ii) decreased consciousness; (iii) glandular swelling; (iv) jaundice; (v) cough or shortness of breath; (vi) unusual bleeding; or (vii) paralysis.
- (b) with or without fever: (i) any acute skin rash or eruption; (ii) severe vomiting (other than sea sickness); (iii) severe diarrhoea; or (iv) recurrent convulsions.

I hereby declare that the particulars and answers to the questions given in this Declaration of Health (including the schedule) are true and correct to the best of my knowledge and belief.

Signed _____

Master of the Ship

Counter-signed _____

Ship's Surgeon (if applicable)

Date _____

ATTACHMENT TO MODEL OF MARITIME DECLARATION OF HEALTH

Name	Class or rating	Age	Sex	Nationality	Port, date joined ship/vessel	Nature of illness	Date of onset of symptoms	Reported to a port medical officer?	Disposal of case*	Drugs medicines or other treatment given to patient	Comments

* State: (1) whether the person recovered, is still ill or died and (2) whether the person is still on board, was evacuated (including the name of the port or airport), or was buried at sea.

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ATTACHMENT TO MODEL SHIP SANITATION CONTROL EXEMPTION CERTIFICATE/SHIP SANITATION CONTROL CERTIFICATE

Areas/facilities/systems inspected	Evidence found	Sample results	Documents reviewed	Control measures applied	Re-inspection date	Comments regarding conditions found
Food						
Source						
Storage						
Preparation						
Service						
Water						
Source						
Storage						
Distribution						
Waste						
Holding						
Treatment						
Disposal						
Swimming pools/spas						
Equipment						
Operation						
Medical facilities						
Equipment and medical devices						
Operation						
Medicines						
Other areas inspected						

Indicate when the areas listed are not applicable by marking N/A.

Appendix 5 – List of participants

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Public Health Bureau
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