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Guidance for Cruise Ships on the Management of Influenza-Like Illness (ILI) - UPDATED

Outbreaks of influenza and other respiratory viral diseases can occur at any time of the year among cruise ship passengers and military personnel aboard ships. Early detection, prevention, and control of influenza are important, not only to protect the health of travelers on cruise ships, but also to avoid spread of disease into home communities by disembarking ill passengers and crew members.

This document provides interim guidance for cruise ships originating from or stopping in the United States, to help prevent, diagnose, and control outbreaks of influenza-like illness (ILI). This guidance will be updated as needed. The Centers for Disease Control and Prevention (CDC) recognizes that cruise ships travel worldwide, necessitating awareness of and responsiveness to local jurisdictional requirements. Cruise ship management and medical staff need to be flexible in identifying and caring for persons with ILI. The health care provider's assessment of a patient's clinical presentation and underlying risk factors is always an essential part of decisions about the need for further medical evaluation, testing, and treatment.

Background

Commercial maritime travel is characterized by the movement of large numbers of people in closed and semi-closed settings. As with other close-contact environments, these settings can facilitate the transmission of influenza viruses and other respiratory viruses from person to person through droplet spread or potentially through contact with contaminated surfaces.

CDC recommends that efforts to reduce the spread of influenza and other respiratory diseases on cruise ships focus on encouraging crew members and passengers to:

- Get vaccinated annually for influenza
- Postpone travel when sick

- Take everyday steps to protect themselves and others while traveling

Specific management should include early identification and isolation of crew members and passengers with ILI, implementation of good respiratory hygiene and cough etiquette, use of influenza antiviral medications for treatment of persons with suspected or confirmed influenza, and use of antiviral chemoprophylaxis during influenza outbreaks if indicated for high-risk persons exposed to persons ill with influenza. This document provides guidance for the management of ILI during and after a voyage, including personal protective measures for the crew.

Influenza Vaccination of Crew and Passengers

CDC recommends that all persons 6 months of age and older be vaccinated each year with influenza vaccine.

Crew members should be vaccinated yearly. Vaccination of passengers, especially those at high risk for influenza complications, is recommended at least 2 weeks in advance of cruise ship travel, if influenza vaccine is available and the person has not already been vaccinated with the current year's vaccine. For more information, review the [recommendations for use of the influenza vaccine](#).

Managing Passengers and Crew with Influenza-Like Illness

Signs and symptoms of influenza can include some or all of these symptoms: fever or feeling feverish, chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headache, fatigue (tiredness), and sometimes diarrhea or vomiting. Fever (a temperature of 100° F [37.8° C] or higher) will not always be present in persons with influenza, especially not in elderly persons. Cruise ship medical personnel should consider someone to have a fever if the ill person feels warm to the touch, gives a history of feeling feverish, or has an actual measured temperature of 100° F (37.8° C) or higher. Because the signs and symptoms of influenza are not specific and most persons who have a respiratory illness are not tested for influenza, ILI has been defined for surveillance purposes as an illness with fever or feverishness plus either cough or sore throat.

Persons who are experiencing severe illness (e.g., high fever, shortness of breath, difficulty breathing, rapid breathing, chest pain, altered mental status, dehydration, or worsening of chronic underlying medical conditions) or who have ILI and are at high risk for severe influenza due to their age or chronic conditions should seek medical evaluation immediately.

Respiratory Hygiene and Cough Etiquette

Persons with ILI should be advised of the importance of covering coughs and sneezes with their shoulder, elbow, or a tissue. Used tissues should be disposed of immediately in a disposable container (e.g., plastic bag) or a washable trash can. Passengers and crew members should be reminded to wash their hands often with soap and water, especially after coughing or sneezing. If soap and water are not available, they can use an alcohol-based hand sanitizer.

Screening and Isolation

Any passenger who has ILI at the time of embarkation should be advised not to travel until at least 24 hours after resolution of

fever (100° F [37.8° C]) without the use of fever-reducing medications (e.g., acetaminophen, ibuprofen, paracetamol). Aspirin should not be used to treat influenza symptoms in children or adolescents younger than 19 years because of the risk of Reye's syndrome.

Passengers with ILI who nonetheless decide to board, as well as passengers who become ill with ILI en route, should be medically evaluated (see next section) and remain isolated in their cabins or quarters until at least 24 hours after resolution of fever (100° F [37.8° C]) without the use of fever-reducing medications.

Crew members with ILI should take the following actions:

- Notify their supervisors.
- Report to the infirmary for medical evaluation, according to shipboard protocols.
- Remain isolated in their cabins or quarters until at least 24 hours after resolution of fever (100° F [37.8° C]) without the use of fever-reducing medications.
- Continue to practice respiratory hygiene, cough etiquette, and hand hygiene after returning to work, because respiratory viruses can continue to be shed for several days after fever resolves.

While temporarily in common areas, passengers and crew members with ILI should be encouraged to remain as far away from others as possible (at least 6 feet), and either wear face masks or cover their mouths and noses with their elbow, shoulder, or tissues when they cough or sneeze.

Management of Passengers or Crew with ILI upon Disembarkation

A disembarking cruise ship passenger or crew member who has ILI or who has had fever within the 24 hours prior to disembarking should be advised to take the same precautions: to stay in home or hotel isolation in the city of disembarkation and to refrain from further travel until at least 24 hours after he or she is free of fever (100° F [37.8° C]) without the use of fever-reducing medications.

If a passenger or crew member with ILI is taken to a health-care facility off the ship, the facility should be informed before arrival.

Managing Passengers and Crew Following Exposure to an Ill Person

Passengers and crew who may have been exposed to an ill person suspected of having influenza should monitor their health for 5–7 days after the exposure. Passengers and crew who develop ILI while still onboard should notify the shipboard infirmary immediately and remain isolated in their cabins or quarters until at least 24 hours after resolution of fever (100° F [37.8° C]) without the use of fever-reducing medications. Ill persons should be advised to seek health care if they are at high risk of developing severe illness from influenza or if they are concerned about their illness.

Medical Evaluation and Management


For more information, read updated resources for clinicians and guidance on the medical evaluation and management of persons with influenza, available on CDC's [influenza website](#).

Influenza Diagnostic Tests

CDC's influenza website also includes interim recommendations for the [clinical use of influenza diagnostic tests](#).

Rapid influenza diagnostic tests have low to moderate sensitivity, and many false-negative results occur. As a result, many influenza virus infections will be missed. Therefore, negative rapid influenza diagnostic test results do not exclude a diagnosis of influenza; clinical diagnosis of influenza should be considered. However, positive test results are useful to establish a diagnosis of influenza and to provide evidence of influenza in passengers and crew aboard ships.

Use of Antiviral Treatment and Chemoprophylaxis for High-Risk Persons

Early antiviral treatment with neuraminidase inhibitors (oral oseltamivir or inhaled zanamivir) is recommended for persons with suspected or confirmed influenza who have severe illness or who are at [high risk for influenza complications](#) , including persons with asthma, diabetes, and heart disease. Early antiviral treatment of influenza is most effective.

For patients aged 7 years and older (who do not have chronic pulmonary disease, including asthma) when oseltamivir resistance is demonstrated or highly suspected (e.g., for immunosuppressed patients with prolonged viral replication during oseltamivir treatment and persons who developed illness while receiving oral oseltamivir chemoprophylaxis), inhaled zanamivir is the treatment of choice.

In addition to treatment of suspected or confirmed influenza with antiviral medications, antiviral chemoprophylaxis can be considered for prevention of infection in exposed persons who are at high risk for complications or for controlling influenza outbreaks on cruise ships when large numbers of persons at higher risk for influenza complications are on board.

The Advisory Committee on Immunization Practices (ACIP) makes [recommendations on the use of antiviral agents](#) for the treatment and chemoprophylaxis of influenza and CDC's influenza website also provides information about the [use of antiviral agents](#) and [antiviral resistance](#).

Outbreak Control

A combination of measures, including isolation and early antiviral treatment of ill persons, following recommended infection control, antiviral chemoprophylaxis of exposed persons, and active surveillance for new cases, can be implemented to control influenza outbreaks.

Preventing Influenza in Crew

In addition to annual influenza vaccination, the following recommendations should be followed, when possible, by crew members whose work activities involve contact with passengers and by other crew members who have ILI.

- Maintain a distance of about 6 feet from the ill person while interviewing, escorting, or providing other assistance.
- Keep interactions with ill persons as brief as possible.
- Limit the number of persons who interact with ill persons. To the extent possible, the ill person should receive care and meals from a single person.
- Avoid touching your eyes, nose, and mouth.

- [Wash your hands often with soap and water](#). If soap and water are not available, use an alcohol-based hand sanitizer.
- Ask the ill person to consider wearing a face mask, and provide one, if wearing it can be tolerated.
- Provide tissues and access to soap and water and ask the ill person to:
 - Cover his or her mouth and nose with a tissue (or face mask) when coughing or sneezing. If the ill person does not have a tissue and is not wearing a face mask, he or she should cough or sneeze into his or her upper sleeve or elbow, not into his or her hands.
 - Dispose of used tissues immediately in a disposable container (plastic bag) or a washable trash can.
 - Wash his or her hands often with soap and water for 20 seconds.
 - If soap and water are not available, the ill person can use an alcohol-based hand sanitizer.

Reporting

CDC does not require that ships traveling to or within U.S. waterways report individual cases of suspected or confirmed influenza, but requests reporting of total ILI/influenza cases (including zero) for each voyage by using the Maritime Illness and Death Reporting System (MIDRS) cumulative report form.

The following situations should be immediately reported to the [CDC Quarantine Station](#) in the jurisdiction of the U.S. seaport where the ship is expected to arrive:

- Changes in the clinical profile and severity of illnesses reported or severe complications among at least two epidemiologically linked influenza cases.
- Outbreaks of influenza among passengers or crew members.
- A death caused by or suspected to be associated with influenza or ILI onboard the vessel

Vessel captains may request assistance from CDC to evaluate or control influenza outbreaks, as needed. If the ship will not be arriving imminently at a U.S. seaport, CDC quarantine officials will provide guidance to cruise ship officials regarding the management and isolation of the suspected case and recommendations for other passengers and crew members.

Before the ship arrives, local port health authorities should be informed if any support is needed, including hospitalization of ill persons and laboratory testing of clinical specimens.

For influenza cases requiring hospitalization, CDC quarantine officials will work with the cruise line and local and state health departments to facilitate medical transportation of the patient upon arrival. In outbreak situations, CDC staff may also assist with disease control and containment measures, passenger and crew notification, surveillance activities, communicating with local public health authorities, obtaining and testing laboratory specimens, and providing additional guidance as needed.

For ships on international voyages, if an illness has occurred onboard, the Maritime Declaration of Health should be completed and sent to the competent authority, according to the 2005 International Health Regulations (IHR) and the national legislation of the country of disembarkation. Before entering a seaport, cruise ships may also be required to report the ship's

previous itinerary.

Additional Recommendations

Personal Protective Equipment

Crew members and other staff who may have contact with persons with ILI should be instructed in the proper use, storage, and disposal of personal protective equipment (PPE). Improper handling of PPE can increase transmission risk.

Crew members should wear impermeable, disposable gloves if they need to have direct contact with ill persons or potentially contaminated surfaces, rooms, or lavatories used by ill passengers and crew members. Crew members should wash their hands with soap and water or use an alcohol-based hand sanitizer after removing gloves. Gloves should be discarded in the trash and should not be rewashed or saved for reuse. Crew members should avoid touching their faces with gloved or unwashed hands.

Use of N95 respirators or face masks is not generally recommended for cruise ship crew members for general work activities. Use of face masks can be considered for cruise ship workers who cannot avoid close contact with persons with ILI. Crew members who use N95 respirators should receive annual fit testing. Crew members who provide health care to passengers or to other crew members (e.g., onboard nurses and physicians) should follow [CDC's prevention strategies for seasonal influenza in health care settings](#).

Supplies

Ships should ensure availability of conveniently located dispensers of alcohol-based hand sanitizer; where sinks are available, they should ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.

Ships should carry a sufficient quantity of PPE such as face masks, N95 respirators, and disposable gloves as may be needed for influenza and other diseases.














Ships should carry a sufficient quantity of medical supplies to meet day-to-day needs. Contingency plans are recommended for rapid resupply in outbreak situations. Stocking oral oseltamivir and inhaled zanamivir for antiviral treatment or chemoprophylaxis of influenza virus infection is recommended.

Ships are encouraged to carry sterile viral transport media and sterile swabs to collect nasopharyngeal and nasal specimens. These optimal recommendations can be modified to reflect individual ship capabilities and characteristics.



Cleaning and Disinfection

In addition to routine cleaning and disinfection strategies, during influenza outbreaks cruise ships may consider more frequent cleaning of commonly touched surfaces, such as handrails, countertops, and doorknobs. Surfaces contaminated by the respiratory secretions of an ill person (e.g., in the ill person's living quarters or work area, and in isolation rooms) can also be cleaned. The primary mode of influenza virus transmission is believed to be through respiratory droplets that are spread from an infected person through coughing or sneezing to a susceptible close contact within about 1-2 meters. Therefore, widespread disinfection to control influenza outbreaks is unlikely to be effective.

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