



MARCH 9, 2022

CDC's website is being modified to comply with President Trump's Executive Orders.

Interim Guidance for Infection Control Within Healthcare Settings When Caring for Confirmed Cases, Probable Cases, and Cases Under Investigation for Infection with Novel Influenza A Viruses Associated with Severe Disease

WHAT TO KNOW

This guidance provides recommendations for infection prevention and control in healthcare settings for patients who may be infected with a novel influenza A virus (i.e., an influenza A virus of animal origin that has not recently been circulating among humans) associated with severe disease. The prevention measures outlined in this guidance will help prevent transmission to health care personnel, other patients, and visitors. Patients who may be infected with novel influenza A viruses include confirmed cases, probable cases, and suspect cases/cases under investigation for infection with a novel influenza A virus associated with severe disease.



Interim Guidance Background

Current Situation Summary



For information on the most recent avian influenza developments specific to the United States, please visit the [Current Situation Summary](#) page.

These recommendations will be updated as additional information on transmissibility, epidemiology, available treatment, or vaccine options for novel influenza A viruses becomes available.

These interim recommendations are based upon current available information and assume the following:

- Lack of an available safe and effective vaccine against novel influenza A viruses associated with severe disease in infected humans [e.g., avian influenza A(H5) or A(H7) viruses]
- Concern for increased morbidity and mortality among infected patients
- Few or no confirmed cases in the United States

This interim guidance recommends a level of infection prevention and control measures for patients with suspected or confirmed novel influenza A virus infection that is different from that recommended for patients with seasonal influenza, as outlined in the [Prevention Strategies for Seasonal Influenza in Healthcare Settings](#). Among important differences from seasonal influenza guidance are recommendations for Contact and Airborne Precautions.

Note that recommendations in this guidance are in addition to Standard Precautions. Information on Standard Precautions (can be found in the following documents:

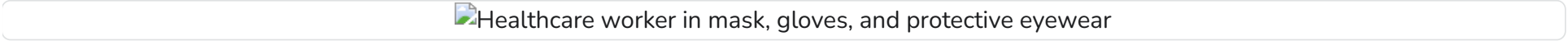
- [Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings](#)
- [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings – Recommendations of the Healthcare Infection Control Practices Advisory Committee](#) [PDF](#)

This interim guidance was developed based on existing infection prevention and control guidelines, currently available scientific evidence, and expert opinion.



Definition of Healthcare Settings

Definition of Healthcare Settings — Refers to places where healthcare is delivered. Healthcare settings include but are not limited to acute-care hospitals; long-term acute care facilities, inpatient rehabilitation facilities, long-term care facilities, such as nursing homes and skilled nursing facilities; physicians' offices; urgent-care centers; outpatient clinics; home healthcare (i.e., care provided at home by professional healthcare providers), and vehicles where healthcare is delivered (e.g., mobile clinics). They also include specific sites within non-healthcare settings where healthcare is routinely delivered (e.g., a medical clinic embedded within a workplace or school).



Definition of Healthcare Personnel (HCP)

Definition of Healthcare Personnel (HCP) – HCP refers to all paid and unpaid persons serving in healthcare settings who have the potential for direct or indirect exposure to patients or infectious materials, including body substances (e.g., blood, tissue, and specific body fluids); contaminated medical supplies, devices, and equipment; contaminated environmental surfaces; or contaminated air. These HCP include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel).

Information and Definitions of Facemask and Respirator available in the Appendix on this page.

Fundamental Elements to Prevent Transmission

COLLAPSE ALL —

Minimize Potential Exposures

Implement policies and practices to minimize exposures before arrival, upon arrival, and throughout the duration of the affected patient's presence in the healthcare setting. Measures include prompt screening and triage of symptomatic patients, implementation of respiratory hygiene and cough etiquette, placement of a facemask ([Appendix](#)) on symptomatic patients upon entry to the facility, placement in a single-patient airborne infection isolation room (or if unavailable, a single room with door closed pending transfer), and rapid implementation of Airborne and Contact Precautions with the use of eye protection, in addition to Standard Precautions. Use of source control for exposed but asymptomatic patients (e.g., household contacts) can also be considered. For more information on ways to minimize potential exposures: [Prevention Strategies for Seasonal Influenza in Healthcare Settings](#).

Implement Engineering Controls

Consider designing and installing engineering controls to reduce or eliminate exposures by shielding HCP and other patients from infected individuals. Examples of engineering controls include installing physical barriers such as partitions in triage areas or curtains that are drawn between patients in shared areas. Engineering controls may also be important to reduce exposures related to specific procedures such as using closed suctioning systems for airways suction in intubated patients. Another important engineering control is ensuring that appropriate air-handling systems (with appropriate directionality, filtration, exchange rate, etc.) are installed and maintained in healthcare facilities.

Monitor and Manage Ill and Exposed Healthcare Personnel`

- HCP who are potentially exposed to patients covered by this guidance should be advised to report any signs or symptoms of acute illness to their supervisor for a period of 10 days after the last known contact with the sick patient.
 - Facilities should consider dedicating HCP caring for these patients to minimize risk of transmission and exposure to other patients and other HCP.
 - Facilities should keep track of all HCP (e.g., clinicians, environmental services workers, food service) who care for or enter the rooms of these patients.
- HCP who develop any respiratory symptoms after any contact with patients covered by this guidance should not report for work. These HCP should
 - notify occupational health services, their supervisor, or other appropriate individual about their symptoms,
 - isolate themselves at home,

- implement respiratory hygiene and cough etiquette (e.g., wear a facemask),
- seek prompt medical evaluation, and
- comply with exclusion from work until they are no longer deemed infectious to others.
- If novel influenza virus A virus infection is suspected, antiviral treatment should be started as soon as possible after symptom onset, especially for HCP with underlying medical conditions that may put them at increased risk for complications of influenza.
- For asymptomatic HCP who have been judged to have had an unprotected exposure (e.g., within 2 meters of a symptomatic patient with novel influenza A virus infection without use of recommended respiratory protection and eye protection), exclude the provider from work until 10 days after their last exposure to monitor for signs and symptoms of respiratory illness.
 - If necessary to ensure adequate staffing of the facility, the asymptomatic healthcare worker could be considered for continuing work if they:
 - Have a negative influenza molecular assay result on upper respiratory tract specimens.

AND

- Are started on post-exposure antiviral chemoprophylaxis within 2 days of the exposure

AND

- Wear a facemask for source control. The facemask should be worn at all times while in the healthcare facility during a probable incubation period, e.g., 10 days after the exposure unless in a situation where a higher-level of respiratory protection is indicated (e.g., entering the room of a patient on Airborne Precautions). Antiviral chemoprophylaxis should continue for the duration of the potential incubation period.
- Refer to the CDC [web site](#) for the most current recommendations on the use of antiviral agents for treatment and chemoprophylaxis of influenza. Both HCP and patients should be reminded that persons treated with influenza antiviral medications continue to shed influenza virus while on treatment. Thus, hand hygiene, respiratory hygiene and cough etiquette practices should continue while on treatment.
- Facilities and organizations providing healthcare should:
 - Implement sick leave policies for HCP that are non-punitive, flexible and consistent with public health guidance (e.g., policies should allow and encourage HCP who may have infections due to agents covered by this guidance to stay home, unless hospital admission for isolation and treatment is recommended).
 - Ensure that all HCP encompassed by these policies are aware of the sick leave policies.
 - Provide employee health services consistent with those recommended in the [Guideline for Infection Control in Healthcare Personnel](#) and that:
 - Establish procedures for tracking absences and promptly identify HCP who may have infections due to agents covered by this guidance.
 - Ensure that HCP have ready access, including via telephone, to medical consultation and, if needed, prompt treatment.

Train and Educate Healthcare Personnel

Provide all HCP with job- or task-specific education and training on preventing transmission of infectious agents, including refresher training when an outbreak of respiratory disease is detected in the healthcare facility.

Ensure Adherence to Infection Control Practices (i.e., Standard Precautions, plus Contact and Airborne Precautions)

HCP (review section 7 for measures for non-HCP visitors) who enter the room or care area of patients covered by this guidance with suspected or laboratory-confirmed novel influenza A virus infection should adhere to all of the following (follow recommended sequence for donning and doffing of personal protective equipment):

- **Hand Hygiene**
 - HCP should perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of personal protective equipment, including gloves. Alcohol-based hand rub is preferred for hand hygiene in healthcare settings; if hands are visibly soiled, use soap and water instead of alcohol-based hand rubs.
 - Healthcare facilities should ensure that facilities and supplies for performing hand hygiene are readily available to all personnel.

- **Gloves**

- Put on clean, non-sterile gloves upon entry into the patient room or care area. Change the gloves if they become torn or heavily contaminated.
- Wear gloves whenever touching the patient's intact skin or surfaces and articles in close proximity to the patient (e.g., medical equipment, bed rails, linens).
- Remove and discard gloves immediately upon leaving the patient room or care area. Please see section below on “Using More than one Kind of Personal Protective Equipment (PPE)” for recommended sequence of PPE removal.

- **Gowns**

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

- **Respiratory Protection**

- Use respiratory protection (i.e., a respirator) that is at least as protective as a fit-tested NIOSH-approved disposable N95 filtering facepiece respirator upon entry to the patient room or care area. See appendix for respirator definition.
- The respirator should be the last part of the personal protective equipment (PPE) ensemble to be removed. If reusable respirators are used, they must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use. If disposable respirators are used, they should be removed and discarded after leaving the patient room or care area and closing the door.
- Respirator use should be in the context of a complete respiratory protection program in accordance with Occupational Safety and Health Administration (OSHA) regulation. ([29 CFR 1910.134](#) ) . Staff should be medically cleared, fit-tested if using respirators with tight-fitting facepieces (e.g., a NIOSH-approved disposable N95) and trained in the proper use of respirators, safe removal and disposal, and medical contraindications to respirator use.

- **Eye Protection**

- Put on eye protection (i.e., goggles or face shield) upon entry to the patient room or care area. Remove and discard eye protection immediately upon leaving the patient room or care area. If reusable eye protection is used, it must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use.

- **Patient Placement**

- Place a patient who is confirmed or suspected to be infected with a novel influenza A virus associated with severe disease (e.g. [probable or suspect case/case under investigation](#)) in an airborne infection isolation room (AIIR) that has been constructed in accordance with current guidelines.
- If an AIIR is not available, the patient should be transferred as soon as is feasible to a facility where an AIIR is available. Pending transfer, place a facemask on the patient and isolate him/her in an examination room with the door closed. The patient should not be placed in any room where room exhaust is recirculated without high-efficiency particulate air (HEPA) filtration.
- Once in an AIIR, the patient's facemask may be removed; the facemask should remain on if the patient is not in an AIIR. Limit transport and movement of the patient outside of the AIIR to medically essential purposes. When outside of the AIIR, patients should wear a facemask for source control.
- Only essential personnel should enter the AIIR. Implement staffing policies to minimize the number of essential personnel who must enter the room.
- In the event in which large numbers of patients require AIIR, consideration can be made to placing patients who are presumed to have the same infection together (cohorting).
- Once the patient vacates a room, unprotected individuals, including HCP, should not be allowed in that room until sufficient time has elapsed for enough air changes to remove potentially infectious particles. More information on [clearance rates under differing ventilation conditions](#) is available. In addition, the room should undergo appropriate cleaning and surface disinfection before unprotected individuals are allowed to reenter it. [More information](#)  is available.

- **Use Caution When Performing Aerosol-Generating Procedures (AGPs)**

- Some procedures performed on patients covered in this guidance may be more likely to generate higher concentrations of infectious respiratory aerosols. These procedures potentially put HCP and others at an increased risk for influenza exposure. There is neither expert consensus, nor sufficient supporting data, to create a definitive and comprehensive list of AGPs for healthcare settings.
- Commonly performed medical procedures that are often considered AGPs, or that might create uncontrolled respiratory secretions, include:
 - open suctioning of airways
 - sputum induction

- cardiopulmonary resuscitation
- endotracheal intubation and extubation
- non-invasive ventilation (e.g., BiPAP, CPAP)
- bronchoscopy
- manual ventilation
- In general, these procedures should be limited to situations when they are medically necessary and cannot be postponed. When performing AGPs, limiting the number of HCP present during the procedure to only those essential for patient care and support is recommended.
- Based on limited available data, it is uncertain whether aerosols generated from some procedures may be infectious, such as:
 - nebulizer administration*
 - high flow O2 delivery
- *Aerosols generated by nebulizers are derived from medication in the nebulizer. It is uncertain whether potential associations between performing this common procedure and increased risk of infection might be due to aerosols generated by the procedure or due to increased contact between those administering the nebulized medication and infected patient

Implement Environmental Infection Control

- Ensure that cleaning and disinfection procedures are followed consistently and correctly.
- Detailed information on environmental infection control in healthcare settings can be found in CDC's [Guidelines for Environmental Infection Control in Health-Care Facilities](#) and [Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings \[section IV.F. Care of the environment\]](#).
- Standard cleaning and disinfection procedures (e.g., using cleaners and water to preclean surfaces prior to applying disinfectants to frequently touched surfaces or objects for indicated contact times) are adequate for influenza virus environmental control in all settings within the healthcare facility, including those patient-care areas in which aerosol-generating procedures are performed.
- Management of laundry and food service utensils should also be performed in accordance with standard procedures. There are no data suggesting these items are associated with influenza virus transmission when these items are properly managed.
- Medical waste should be managed in accordance with requirements of the Department of Transportation. Some medical waste may be designated as regulated or biohazardous waste and require special handling and disposal methods approved by the State authorities.

Manage Visitor Access and Movement Within the Facility

- Establish procedures for monitoring, managing, and training visitors
 - Regardless of restriction policy, all visitors should follow respiratory hygiene and cough etiquette precautions listed in the Take Steps to Minimize Potential Exposures section of the [Prevention Strategies for Seasonal Influenza in Healthcare Settings](#).
 - For the safety of the visitor, in general, patients should be encouraged to limit in-person visitation while they are infectious. However, facilities should adhere to local, territorial, tribal, state, and federal regulations related to visitation.
 - Encourage use of alternative mechanisms for patient and visitor interactions such as video-call applications on cell phones or tablets, when appropriate.
- For persons with acute respiratory symptoms, facilities should develop visitor restriction policies that consider location of patient being visited (e.g., oncology units) and circumstances, such as end-of-life situations, where exemptions to the restriction may be considered at the discretion of the facility.
- Visits to patients in isolation should be controlled to allow for:
 - Screening visitors for symptoms of acute respiratory illness before entering the facility.
 - Facilities should provide instruction, before visitors enter the patient's room, on hand hygiene, limiting surfaces touched, and use of personal protective equipment (PPE) according to current facility policy while in the patient's room.
 - Facilities should consider tracking (e.g., log book) all visitors who enter patient rooms.
 - Visitors should not be present during aerosol-generating procedures.

- Visitors should be instructed to limit their movement within the facility.
- Exposed visitors should be advised to report any signs and symptoms of acute illness to their health care provider for a period of at least 10 days after the last known exposure to the sick patient.

Monitor Severe Respiratory Infections in the Healthcare Setting



- Implement mechanisms and policies that promptly alert HCP about increased respiratory illness activity or outbreak within the facility.
- Establish procedures to identify HCP at highest risk and actively follow them for acute respiratory illness, and to encourage all HCP to self-report acute respiratory illness.
- Communicate and collaborate with public health authorities.

Appendix: Additional Information about Influenza

Information about Facemasks:

- FDA – [Masks and N95 Respirators, FDA](#)
- A facemask is a product that covers the wearer's nose and mouth. Facemasks are for use as source control and some may not be considered personal protective equipment. Facemasks may or may not meet any fluid barrier or filtration efficiency levels; therefore, they are not a substitute for N95 respirators or other filtering facepiece respirators, which provide respiratory protection to the wearer, or for surgical masks, which provide fluid barrier protection to the wearer.

Information about Respirators:

- FDA – [Surgical Masks and N95 Respirators, FDA](#)
- A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases, or vapors. Respirators are approved by the National Institute for Occupational Safety and Health (NIOSH). A commonly used respirator is a disposable N95 filtering facepiece respirator (commonly referred to as an N95).
- Surgical N95 respirators are NIOSH-approved disposable N95 filtering facepiece respirators that also meet the FDA requirements for fluid penetration, flammability, and biocompatibility. Surgical N95 respirators are recommended for use by healthcare personnel who need protection from both airborne and fluid hazards, such as splashes or sprays.
- Reusable respirators include elastomeric half facepiece respirators and powered air-purifying respirators.
- To work properly, tight fitting respirators must be specially fitted for each person who wears one (this is called "fit-testing" and is usually done in a workplace where respirators are used).
- [NIOSH information about respirators.](#)

SOURCES

CONTENT SOURCE:
[National Center for Immunization and Respiratory Diseases \(NCIRD\)](#)