



## Swine Flu

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# Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients with Confirmed or Suspected Swine-Origin Influenza A (H1N1) Infection

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*This document provides interim guidance for 9-1-1 Public Safety Answering Points (PSAPs), the EMS system and medical first-responders and will be updated as needed at <http://www.cdc.gov/swineflu/guidance/>. The information contained in this document is intended to complement existing guidance for healthcare personnel, "Interim Guidance for Infection Control for Care of Patients with Confirmed or Suspected Swine Influenza A (H1N1) Virus Infection in a Healthcare Setting" at [http://www.cdc.gov/swineflu/guidelines\\_infection\\_control.htm](http://www.cdc.gov/swineflu/guidelines_infection_control.htm).*

## Background

As a component of the Nation's critical infrastructure, emergency medical services (along with other emergency services) play a vital role in responding to requests for assistance, triaging patients, and providing emergency treatment to influenza patients. However, unlike patient care in the controlled environment of a fixed medical facility, prehospital EMS patient care is provided in an uncontrolled environment, often confined to a very small space, and frequently requires rapid medical decision-making, and interventions with limited information. EMS personnel are frequently unable to determine the patient history before having to administer emergency care.

## Interim Recommendations

Coordination among PSAPs, the EMS system, healthcare facilities (e.g. emergency departments), and the public health system is important for a coordinated response to swine-origin influenza A (H1N1). Each 9-1-1 and EMS system should seek the involvement of an EMS medical director to provide appropriate medical oversight. Given the uncertainty of the disease, its treatment, and its progression, the ongoing role of EMS medical directors is critically important. The guidance provided in this document is based on current knowledge of swine-origin influenza A (H1N1).

The U.S. Department of Transportation's *EMS Pandemic Influenza Guidelines for Statewide Adoption and Preparing for Pandemic Influenza: Recommendations for Protocol Development and 9-1-1 Personnel and Public Safety Answering Points (PSAPs)* are available online at [www.ems.gov](http://www.ems.gov) (Click on Pandemic News). State and local EMS agencies should review these documents for additional information. For instance, Guideline 6.1 addresses protection of the EMS and 9-1-1 workers and their families while Guideline 6.2 addresses vaccines and antiviral medications for EMS personnel. Also, EMS Agencies should work with their occupational health programs and/or local public health/public safety agencies to make sure that long term personal protective equipment (PPE) needs and antiviral medication needs are addressed.

## Infectious Period

Persons with swine-origin influenza A (H1N1) virus infection should be considered potentially infectious from one day before to 7 days following illness onset. Persons who continue to be ill longer than 7 days after illness onset should be considered potentially contagious until symptoms have resolved. Children, especially younger children, might potentially be contagious for longer periods.

Non-hospitalized ill persons who are a confirmed or suspected case of swine-origin influenza A (H1N1) virus infection are recommended to stay at home (voluntary isolation) for at least the first 7 days after checking with their health care provider about any special care they might need if they are pregnant or have a health condition such as diabetes, heart disease, asthma, or emphysema. CDC guidance on care of patients at home can be found at [http://www.cdc.gov/swineflu/guidance\\_homecare.htm](http://www.cdc.gov/swineflu/guidance_homecare.htm) )

## Case Definitions for Infection with Swine-origin Influenza A (H1N1) Virus (S-OIV)

A **confirmed case** of S-OIV infection is defined as a person with an acute febrile respiratory illness with laboratory confirmed S-OIV infection at CDC by one or more of the following tests:

1. real-time RT-PCR
2. viral culture

A **probable case** of S-OIV infection is defined as a person with an acute febrile respiratory illness who is positive for influenza A, but negative for H1 and H3

A **suspected case** of S-OIV infection is defined as a person with acute febrile respiratory illness with onset

- within 7 days of close contact with a person who is a confirmed case of S-OIV infection, or
- within 7 days of travel to community either within the United States or internationally where there are one or more confirmed cases of S-OIV infection, or
- resides in a community where there are one or more confirmed cases of S-OIV infection.

## Recommendations for 9-1-1 Public Safety Answering Points (PSAP)

It is important for the PSAPs to question callers to ascertain if there is anyone at the incident location who is possibly afflicted by the swine-origin influenza A (H1N1) virus, to communicate the possible risk to EMS personnel prior to arrival, and to assign the appropriate EMS resources. PSAPs should review existing medical dispatch procedures and coordinate any modifications with their EMS medical director and in coordination with their local department of public health.

Interim recommendations:

- PSAP call takers should screen all callers for any symptoms of acute febrile respiratory illness. Callers should be asked if they, or someone at the incident location, has had nasal congestion, cough, fever or other flu-like symptoms.
  - If the PSAP call taker suspects a caller is noting symptoms of acute febrile respiratory illness, they should make sure any first responders and EMS personnel are aware of the potential for “acute febrile respiratory illness” before the responders arrive on scene.

## Recommendations for EMS and Medical First Responder Personnel Including Firefighter and Law Enforcement First Responders

For purposes of this section, “EMS providers” means prehospital EMS, Law Enforcement and Fire Service First Responders.” EMS providers' practice should be based on the most up-to-date swine-origin influenza clinical recommendations and information from appropriate public health authorities and EMS medical direction.

**Patient assessment:**

**Interim recommendations:**

If there HAS NOT been swine-origin influenza reported in the geographic area (<http://www.cdc.gov/swineflu/>), EMS providers should assess all patients as follows:

- Step 1: EMS personnel should stay more than 6 feet away from patients and bystanders with symptoms and exercise appropriate routine respiratory droplet precautions while assessing all patients for suspected cases of swine-origin influenza.
- Step 2: Assess all patients for symptoms of acute febrile respiratory illness (fever plus one or more of the following: nasal congestion/ rhinorrhea, sore throat, or cough).
  - If no acute febrile respiratory illness, proceed with normal EMS care.
  - If symptoms of acute febrile respiratory illness, then assess all patients for travel to a geographic area with confirmed cases of swine-origin influenza within the last 7 days or close contact with someone with travel to these areas.
    - If travel exposure, don appropriate PPE for suspected case of swine-origin influenza.
    - If no travel exposure, place a standard surgical mask on the patient (if tolerated) and use appropriate PPE for cases of acute febrile respiratory illness without suspicion of swine-origin influenza (as described in PPE section).

If the CDC confirmed swine-origin influenza in the geographic area (<http://www.cdc.gov/swineflu/>)

- Step 1: Address scene safety:
  - If PSAP advises potential for acute febrile respiratory illness symptoms on scene, EMS personnel should don PPE for suspected cases of swine-origin influenza prior to entering scene.
  - If PSAP has not identified individuals with symptoms of acute febrile respiratory illness on scene, EMS personnel should stay more than 6 feet away from patient and bystanders with symptoms and exercise appropriate routine respiratory droplet precautions while assessing all patients for suspected cases of swine-origin influenza.
- Step 2: Assess all patients for symptoms of acute febrile respiratory illness (fever plus one or more of the following: nasal congestion/ rhinorrhea, sore throat, or cough).
  - If no symptoms of acute febrile respiratory illness, provide routine EMS care.
  - If symptoms of acute febrile respiratory illness, don appropriate PPE for suspected case of swine-origin influenza if not already on.

## **Personal protective equipment (PPE):**

Interim recommendations:

- When treating a patient with a suspected case of swine-origin influenza as defined above, the following PPE should be worn:
  - Fit-tested disposable N95 respirator and eye protection (e.g., goggles; eye shield), disposable non-sterile gloves, and gown, when coming into close contact with the patient.
- When treating a patient that is not a suspected case of swine-origin influenza but who has symptoms of acute febrile respiratory illness, the following precautions should be taken:
  - Place a standard surgical mask on the patient, if tolerated. If not tolerated, EMS personnel may wear a standard surgical mask.
  - Use good respiratory hygiene – use non-sterile gloves for contact with patient, patient secretions, or surfaces that may have been contaminated. Follow hand hygiene including hand washing or cleansing with alcohol based hand disinfectant after contact.
- Encourage good patient compartment vehicle airflow/ ventilation to reduce the concentration of aerosol accumulation when possible.

## **Infection Control:**

EMS agencies should always practice basic infection control procedures including vehicle/equipment decontamination, hand hygiene, cough and respiratory hygiene, and proper use of FDA cleared or authorized medical personal protective equipment (PPE).

Interim recommendations:

- Pending clarification of transmission patterns for this virus, EMS personnel who are in close contact with patients with suspected or confirmed swine-origin influenza A (H1N1) cases should wear a fit-tested disposable N95 respirator, disposable non-sterile gloves, eye protection (e.g., goggles; eye shields), and gown, when coming into close contact with the patient.
- All EMS personnel engaged in aerosol generating activities (e.g. endotracheal intubation, nebulizer treatment, and resuscitation involving emergency intubation or cardiac pulmonary resuscitation) should wear a fit-tested disposable N95 respirator, disposable non-sterile gloves, eye protection (e.g., goggles; eye shields), and gown, unless EMS personnel are able to rule out acute febrile respiratory illness or travel to an endemic area in the patient being treated.
- All patients with acute febrile respiratory illness should wear a surgical mask, if tolerated by the patient.

## **Interfacility Transport**


EMS personnel involved in the interfacility transfer of patients with suspected or confirmed swine-origin influenza should use standard, droplet and contact precautions for all patient care activities. This should include wearing a fit-tested disposable N95 respirator, wearing disposable non-sterile gloves, eye protection (e.g., goggles, eyeshield), and gown, to prevent conjunctival exposure. If the transported patient can tolerate a facemask (e.g., a surgical mask), its use can help to minimize the spread of infectious droplets in the patient care compartment. Encourage good patient compartment vehicle airflow/ ventilation to reduce the concentration of aerosol accumulation when possible.

## **Interim Guidance for Cleaning EMS Transport Vehicles After Transporting a Suspected or Confirmed Swine-origin Influenza Patient**

The following are general guidelines for cleaning or maintaining EMS transport vehicles and equipment after transporting a suspected or confirmed swine-origin influenza patient. This guidance may be modified or additional procedures may be recommended by the Centers for Disease Control and Prevention (CDC) as new information becomes available.

Routine cleaning with soap or detergent and water to remove soil and organic matter, followed by the proper use of disinfectants, are the basic components of effective environmental management of influenza. Reducing the number of influenza virus particles on a surface through these steps can reduce the chances of hand transfer of virus. Influenza viruses are susceptible to inactivation by a number of chemical disinfectants readily available from consumer and commercial sources.

After the patient has been removed and prior to cleaning, the air within the vehicle may be exhausted by opening the doors and windows of the vehicle while the ventilation system is running. This should be done outdoors and away from pedestrian traffic. Routine cleaning methods should be employed throughout the vehicle and on non-disposable equipment.

For additional detailed guidance on ambulance decontamination EMS personnel may refer to "Interim Guidance for Cleaning Emergency Medical Service Transport Vehicles during an Influenza Pandemic" available at: [http://www.pandemicflu.gov/plan/healthcare/cleaning\\_ems.html](http://www.pandemicflu.gov/plan/healthcare/cleaning_ems.html) 

## **EMS Transfer of Patient Care to a Healthcare Facility**

When transporting a patient with symptoms of acute febrile respiratory illness, EMS personnel should notify the receiving healthcare facility so that appropriate infection control precautions may be taken prior to patient arrival. Patients with acute febrile respiratory illness should wear a surgical mask, if tolerated. Small facemasks are available that can be worn by children, but it may be problematic for children to wear them correctly and consistently. Moreover, no facemasks (or respirators) have been cleared by the FDA specifically for use by children.