



Administrative Strategies and CDC Clinical/Provider Guidance for EMS Agencies for H1N1 Influenza (Swine Influenza)

May 1, 2009

A recent outbreak of the flu in Mexico has been linked to cases of flu in Canada and the United States by the World Health Organization. The EMS Chiefs of Canada (EMSCC) are leading a process to identify and disseminate key strategies for EMS organizations to implement to protect their paramedics and to be public health partners in managing the care of the sick. EMSCC's Membership Services Committee is coordinating its second series of teleconferences to reveal the effectiveness of EMS service strategies in the management of this outbreak as it progresses throughout the world. The first series was conducted during the SARS outbreak in 2003. The National EMS Management Association, First Watch and the National Academies of Emergency Dispatch are participating in EMSCC's process.

This week the US Centers for Disease Control and Prevention (CDC) released interim guidance for EMS and 9-1-1, using input from the EMS Office at the US National Highway Traffic Safety Administration, the Office of Health Affairs at the US Department of Homeland Security, the EMS Chiefs of Canada and the US National EMS Management Association, the US National Association of State EMS Officials, and other federal and non-federal partners.

We have integrated the CDC guidance into these strategies so that EMS leaders and paramedics have one ready resource. [The CDC's EMS clinical/provider guidance in stand alone form can be downloaded by clicking here.](#)

Reference documents are being compiled by the EMS Chiefs of Canada. US reference documents are available on the [National EMS Association's website](#) on the Flu Resources tab.

CDC's guidance is in red font below. Updated language in administrative strategies is in bold red font below.

By Administrators:

- Notification to staff of the emerging problem.
 - Fit test and issue N95 masks to paramedics and other responders, using non-operational personnel to perform fit tests
 - Issue hand sanitizer to paramedics and other responders
- Reviewing and updating local plans.
- Daily communication with hospitals and public health departments.
- Monitoring news reports and government resources, such as:

- [the Public Health Agency of Canada](#)
- [the Centers for Disease Control EMS Guidance](#)
- www.pandemicflu.gov
- [MMWR](#)
- [CDC General Recommendations](#)
- Identify a technical advisor to provide advice to paramedics and to track patients on a regional or state- or province-wide level
- Resolve issues of pay for paramedics who are quarantined.
- Establish procedures with local public health agencies to identify and pre-screen migrant workers entering the area
- Keep an accurate inventory of masks and other personal protective equipment, and an inventory of ventilators available in the service area.
- Develop a policy for limiting the dispatch of first responders to non-critical patients with flu symptoms, be ready to implement it when deemed necessary by medical directors
- In cooperation with medical direction, develop a treat and release protocol and patient information card for patients with minor flu symptoms. Implement the protocol and card when advised to in consultation with medical direction. Consider performing swabs in the home and deliver them to the identified local collection area (local public health, clinic or hospital) to be routed for testing. Consider the use of alternative care destinations like clinics or urgent care centers or identified receiving areas within the hospital away from the ED.
 - **CDC Recommendations: 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.**
- Work with local Health Districts to establish hotlines where the public can receive more information

By Paramedics:

CDC Recommendations:

If there HAS NOT been swine-origin influenza **reported in the geographic area**, 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](#)".

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.

By Dispatchers:

- When using ProQA software flagging MPDS protocols 6, 10, 18 and 26 for further interrogation, and using the drop down SRI (severe respiratory infection [flu-like] symptoms) screen to obtain, at a minimum, the following:
 - Are they febrile or have a fever, and if so, is it higher than 38° C (101°F)?
 - Do they have a cough or any other respiratory symptoms like difficulty breathing?
 - Use card 36 **when a pandemic is declared in your community**.
- For dispatch centers not using ProQA software (paper-based cards only), gathering the above information from all callers on protocol cards 6, 10, 18 and 26. **Use card 36 when a pandemic is declared in your community**.
- Dispatchers should report the responses to these questions to the paramedics before they arrive on the scene.

CDC 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 febrile 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.

The Emergency Medical Services Chiefs of Canada/Directeurs des services médicaux d'urgence du Canada (EMSCC/ DSMUC) is a National organization led by Chiefs and Directors of Canada's EMS services across the country. The goal of the EMSCC is to advance and align emergency medical leadership across Canada. More information is available at www.emscc.ca.



The NAED is a national arm of the International Academy of Emergency Dispatch (IAED): a non-profit, standard-setting organization promoting safe and effective emergency dispatch services worldwide. Comprised of three allied Academies for medical, fire and police dispatching, the NAED supports first responder-related research, unified protocol application, legislation for emergency call center regulation, and strengthening the emergency dispatch community through education, certification and accreditation. Since 2003, the IAED has been working through its CBRN Committee to define and improve ways to capture information for calls related to chemical, biological, radiation, nuclear, and severe respiratory. More information is available at www.emergencydispatch.org



The National EMS Management Association represents 1,600 EMS management professionals and is dedicated to continually improving the care delivered to EMS patients by discovering, developing, and promoting the best EMS management practices. More information is available at www.nemsma.org. NEMSMA has offered to be the secretariat to the EMSCC National Outbreak Discussion Group. In return, meeting minutes and resource source lists will be distributed to our members.



FirstWatch is commercial-off-the-shelf (COTS) software that enables real-time Dashboard views and data analysis for statistically significant trends, patterns or geographic clusters of incidents, based on user-defined criteria – from a Situational Awareness, Public Health, Operational or Homeland Security standpoint. FirstWatch analyzes real-time data from 9-1-1 (EMS, Fire and Police) CAD systems, ProQA, Paramedic ePCR's, Hospital Emergency Departments, Hospital Diversion systems, Poison Control Centers and more - in real time, automatically. Chosen by agencies in 85+ metro areas across the US and Canada, representing more than 61,000,000 citizens. Learn more online at: www.firstwatch.net.
