

Influenza A (H1N1; 'swine flu'): information for healthcare professionals

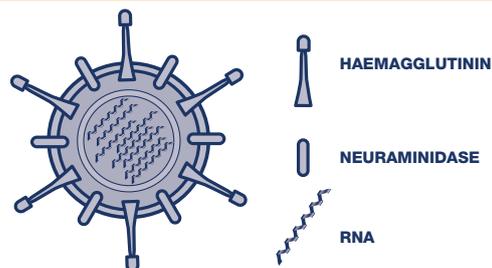


The virus

Influenza A (H1N1) is a respiratory disease that is normally found in pigs, but human cases can and do occur. Until recently, no human cases had been detected in the UK. The virus detected in this outbreak is an H1N1 strain of influenza type A that has not been previously seen in pigs or humans. It contains a mixture of human, pig and avian influenza genetic material. Influenza A (H1N1) is the same strain that causes seasonal outbreaks of flu in humans. Transmission of this new swine influenza virus is thought to occur in the same way as seasonal flu.

Influenza A (H1N1)

Haemagglutinin (H) and neuraminidase (N) are external antigens on the influenza virus. In general they show much variation and are subtype (in this case H1N1) and strain specific. The 'H1' protein on the surface of influenza A (H1N1) is one most human immune systems have never encountered, meaning it can infect people of all ages, and increasing the likelihood of a pandemic.



What has happened so far?

Overall, 55–70,000 cases of influenza A (H1N1) have been confirmed in 74 countries. Most patients have experienced mild symptoms and recovered fully, but around 2% have developed severe illness. Around 300 people have died.

The majority of cases have occurred in people under the age of 25 years, but most of the severe and fatal infections have been in adults between the ages of 30 and 50 years. Most severe cases have occurred in people with underlying conditions, including respiratory diseases, cardiovascular disease, diabetes, autoimmune disorders and obesity.

On 11 June 2009, the World Health Organization raised the level of pandemic alert for influenza A (H1N1) from Phase 5 to 6, reflecting the spread to many parts of the world. This contrasts with the avian influenza A (H5N1) outbreak in 2006, when the World Health Organization alert level only reached Phase 3, because transmission between humans was too low to sustain community-level outbreaks.

It is likely that cases of influenza A (H1N1) will increase in the coming weeks and months.

What are the criteria for diagnosis?

You should consider influenza A (H1N1) infection in people who present with the following signs.

Fever ($\geq 38^{\circ}\text{C}$) **OR** History of fever

AND

Flu-like illness (two or more of the following symptoms: cough, sore throat, rhinorrhoea, limb/joint pain, headache)*

OR Other severe/life-threatening illness suggestive of an infectious process

**Some cases in the USA have also presented with vomiting and diarrhoea.*

A patient with the above clinical presentation may be classified further depending on their level of contact with other cases, and whether there is widespread community transmission. Refer to the latest national and local guidelines.

Advice for patients under assessment for influenza A (H1N1)

- ✓ Advise the patient to stay at home if they are well enough to do so
- ✓ Make sure they know to seek help if their condition worsens
- ✓ Tell them to avoid contact with other people until the results of tests are known
- ✓ Explain the importance of respiratory and hand hygiene: catch it, bin it, kill it!
- ✓ Instruct them to clean hard surfaces regularly with a standard cleaning preparation
- ✓ Advise them to ensure their children follow the same advice

What is the management protocol?

A. Swabs

The situation is evolving rapidly. If diagnosis is confirmed clinically or if you are in an area with widespread transmission, authorities may recommend testing is limited. If a patient meets the criteria as a possible case of influenza A (H1N1), you should refer to the latest national and local guidelines for the required procedure regarding nose and throat swabs to be sent to local surveillance laboratories and the treatment procedure.

B. Antivirals

Again, the situation is evolving, but it is likely that guidelines will recommend you start the patient on antivirals. Influenza A (H1N1) is susceptible to the most widely stockpiled antiviral agents, the neuraminidase inhibitors (oseltamivir and zanamivir), but is resistant to amantadanes (amantadine and rimantadine). Refer to the prescribing information and your local guidelines for dosages.

Guidelines may recommend post-exposure prophylaxis for close contacts, particularly in areas where transmission is not widespread. Close contacts include those who were exposed to a probable or confirmed case during the period when the case was symptomatic AND the contact's last exposure occurred no more than 7 days previously.

Infants are at higher risk of complications from seasonal influenza than older children or adults, and typically have high rates of morbidity and mortality. The risk of complications associated with influenza A (H1N1) in infants is not known, but it is likely that they will benefit from prompt treatment with antivirals.

What infection control measures should I take?

If a patient mentions a febrile respiratory illness, you should follow appropriate infection control measures as advised by your national public health institute before continuing with the assessment.

If one of your patients tests positive for influenza A (H1N1), seek local advice on whether you or your staff need to be assessed for antiviral prophylaxis.

Is a vaccine on the horizon?

Production of a vaccine against influenza A (H1N1) is underway. Countries are working to ensure the largest possible supply of pandemic vaccine in the months to come.

The World Health Organization has recently said that the virus is still stable and shows no sign of mixing with other influenza viruses. If the virus changes significantly, the vaccine composition may need to be adjusted.

It is not known whether the seasonal influenza virus vaccine offers any cross-protection against influenza A (H1N1), but any protection is likely to be only partial.

Advice for the worried well

- ✓ Give patients a copy of the accompanying patient leaflet
- ✓ Point them to good sources of accurate advice, such as a national helpline
- ✓ Advise them on the importance of good hygiene to reduce transmission
- ✓ Warn patients of the dangers of buying counterfeit antiviral drugs on the internet
- ✓ Patients will have heard a lot of information about 'swine flu' from many different sources. Reassure them that doctors are well prepared

Useful sources of information

- European Commission: http://ec.europa.eu/health/ph_threats/com/Influenza/novelflu_en.htm
- World Health Organization: www.who.int/csr/disease/swineflu
- World Health Organization Pandemic Phase 6 algorithms: <http://www.hpa.org.uk/web/HPAweb&Page&HPAwebAutoListName/Page/1242949541960>

National helpline/website:

Practice address: