

ECDC HEALTH INFORMATION

Frequently asked questions on pandemic (H1N1) 2009

Updated 08 October 2009

Q1. What is the influenza A(H1N1)v virus?

The present influenza A(H1N1)v virus is a new virus subtype of influenza affecting humans, which contains segments of genes from pig, bird and human influenza viruses in a combination that has never been observed before anywhere in the world. New viruses are often the result of a re-assortment of genes from two other viruses (swap of genes). This A(H1N1)v virus is the result of a combination of two swine influenza viruses that contained genes of avian and human origin.

Q2. What is the difference between the pandemic (H1N1) 2009 and swine influenza?

The typical swine influenza (swine flu) is an acute viral infection of the respiratory tract in pigs, caused by type A influenza virus. The mortality rate is low in pigs and recovery usually occurs within 7–10 days. Swine-origin influenza infections also occur in wild birds, poultry, horses and humans, but transmission between species is considered a rare event. So far three influenza type A virus subtypes have been found in pigs: H1N1, H1N2 and H3N2.

Zoonotic human infections with swine influenza viruses have been detected occasionally since the late 1950s, usually in persons with direct exposure to pigs (e.g. people working on pig farms, etc.). In Europe, since 1958 a total of 17 cases have been reported. In the US in 1976, an outbreak of swine influenza virus infections in humans was detected among recruits in a military camp in Fort Dix, New Jersey. A link to pigs was presumed but never established. Instead there was limited human-to-human transmission, with over 200 infections resulting in 12 hospitalisations and one death.

In contrast to the swine influenza virus, the new influenza A(H1N1)v virus is capable of human-to-human transmission.

Q3. What are the symptoms of influenza A(H1N1)v?

Symptoms of influenza A(H1N1)v in humans are usually similar to regular human seasonal influenza symptoms:

- Fever
- Respiratory symptoms such as cough or runny nose

- Sore throat
- Possibly other symptoms such as
 - Body aches (particularly muscle pain)
 - Headache
 - Chills
 - Fatigue
 - Vomiting or diarrhoea (not typical in seasonal influenza but reported in a substantial number of cases of influenza A(H1N1)v)

In some cases, severe complications could occur even in normally healthy persons who become infected with the virus (see Q17).

Q4. How do people become infected with influenza A(H1N1)v?

People become infected with influenza A(H1N1)v in the same way as with seasonal influenza. There are three routes of transmission:

- airborne: via droplets from an infected person who is sneezing or coughing in a face-to-face situation;
- direct (skin) contact: by hand, contaminated by an infected droplet, touching the mouth;
- indirect (skin) contact: through any material (e.g. door handle) contaminated by an infected droplet, touched by the hand that then touches the mouth.

Q5. How long is the incubation period? How long can an infected person spread the influenza A (H1N1)v virus to others?

Ongoing investigations suggest that the incubation period is from one to seven days. At the current time, it is believed that this virus has the same properties in terms of spread as seasonal influenza viruses. Based on that, adults who are sick can infect others for approximately five days after symptoms start, and children are infectious for approximately seven days after symptoms start. However, it is prudent to consider someone infectious for the entire time they have symptoms.

Q6. Can the influenza A (H1N1)v virus be transmitted to humans by eating pork and pork products?

No. The influenza virus is not transmitted by eating properly handled and cooked pork and pork products. The European Food Safety Authority (EFSA) and ECDC are not aware of any scientific evidence to suggest that influenza viruses can be transmitted to humans through the consumption of meat such as pork and pork products.

Regardless of the present epidemic, longstanding food safety advice is to avoid eating raw meat in order to prevent possible risk of food-borne illness. It is always recommended to follow proper food hygiene practices in kitchens and to wash hands and all surfaces and equipment with soap after handling raw meat. Cooking pork thoroughly (to an internal temperature of 70°C) kills viruses and bacteria.

Q7. Can the influenza A(H1N1)v virus be passed back and forth between humans and pigs?

Canadian officials reported on 2 May 2009 that a farm worker infected with the influenza A(H1N1)v virus had passed the virus to pigs in Alberta, Canada, and there have been similar cases in Argentina and Australia. WHO food safety scientists confirmed that there is a risk that the disease could also infect people who work closely with sick pigs on farms or in slaughterhouses. In the past, several cases were documented in which people caught swine flu from contact with infected pigs.

However, health officials repeated that it is safe to eat properly cooked pork as the virus cannot be transmitted by eating properly handled and cooked pork or pork products (see Q6). The main risk of this human-to-animal

infection is that a new re-assortant virus could emerge from pigs co-infected by the pandemic virus and by another swine virus. This could lead potentially to a 'new' virus with possible increased severity.

Q8. Is there a vaccine against influenza A(H1N1)v?

Regulatory authorities have licensed pandemic vaccines in several countries, including Australia, China and the United States. In the European Union, the European Commission has granted authorisation to three vaccines for influenza pandemic (H1N1) 2009, following the positive scientific opinion issued by the Committee for Medicinal Products for Human Use (CHMP) at the European Medicines Agency (EMA).

The products concerned are Focetria® (Novartis), Pandemrix® (GlaxoSmithKline) and Celvapan® (Baxter). The vaccines are authorised for use in all Member States of the EU and the EEA (Iceland, Liechtenstein and Norway). That should ensure that sufficient vaccines will be available before the start of the flu season and will reduce the risks for illnesses and deaths for European Citizens. For further information including indications and doses in different age groups see <http://www.emea.europa.eu/>

In addition, the National Regulatory Agency in Hungary provided a national licence of a pandemic vaccine produced by the Hungarian manufacturer Omniinvest on 29 September 2009 for use in Hungary.

Vaccine production capacity has increased recently, which is a reassuring sign for Europe in terms of potentially having sufficient vaccine available to cover the needs of the population. Eventually the decision of who will get the vaccine is the responsibility of the Member States and individual doctors advising patients.

Q9. Is the human seasonal influenza vaccine effective against influenza A(H1N1)v?

There are certain similarities between the usual H1N1 human influenza viruses (covered by the seasonal vaccine) and the influenza A (H1N1)v virus but recent evidence suggests no significant cross-protection.

Q10. Can influenza A(H1N1)v be treated?

So far, most human cases of influenza A(H1N1)v are mild and probably most patients will recover by themselves. Current evidence suggests that the influenza A(H1N1)v virus is susceptible to antiviral medications such as neuraminidase inhibitors but resistant to amantadanes. Antivirals could alleviate symptoms and reduce the course of the disease and are essential in the treatment of severe cases.

Q11. Can the virus be resistant to antiviral treatment?

Cases of pandemic (H1N1) 2009 that were resistant to the antiviral medicine oseltamivir (Tamiflu®, a neuraminidase inhibitor) were reported in a few countries. So far, these findings appear to be isolated cases and these virus strains are thought to be unfit (i.e. will not transmit from person to person) though this is still under investigation to be confirmed and established. Hence there is no immediate public health impact.

It is too early to predict if oseltamivir-resistant viruses will spread. It is possible that these will remain isolated findings.

The good news is that the oseltamivir-resistant viruses identified are not resistant to zanamivir.

WHO is closely monitoring the situation through its Global Influenza Surveillance Network and other networks and will provide updated information when available.

Q12. What is the situation across Europe?

All EU/EFTA Member States have reported cases of the pandemic. The situation is constantly evolving, therefore for latest information please consult the ECDC website. More detailed updates can be found at:

http://ecdc.europa.eu/en/healthtopics/Pages/Influenza_A%28H1N1%29_Outbreak.aspx

Q13. What is being done in the European Union about the situation?

In the European Union, ECDC is following the epidemiological situation and assessing the risks: daily situation updates including regular risk assessments are published on the Centre's website, and different types of guidance documents have been prepared, such as information on personal protective measures to be taken, information for travellers, guidance for management of cases and contacts and others. A common European case definition has been developed, which is used for the daily reporting of cases on the EU level. In addition, the diagnostic capacity for this novel virus is being strengthened in the European Member States. The most recent ECDC risk assessment can be found at: http://ecdc.europa.eu/en/healthtopics/Pages/Influenza_A%28H1N1%29_Outbreak.aspx

The European Commission is working closely with the EU Member States on all risk management issues within the Early Warning and Response System (EWRS) and EU Health Ministers have got together in extraordinary meetings to discuss the situation and reinforce the need for the EU to work together and join forces.

Q14. The development of a pandemic: how does flu spread?

One of the components of the definition of a pandemic virus is that it is a novel influenza virus; therefore many people, if not most people, have little or no immunity to it – less than to ordinary seasonal virus. We do not yet know what proportion of people will be in this situation.

In a pandemic, some people will have no symptoms at all (asymptomatic infections) and many will have mild symptoms. However, a small proportion will have more severe symptoms and will benefit from hospitalisation and a very small proportion of the group will die prematurely, usually from complications of the influenza infection.

The best way of estimating these proportions is to look back to the experience of previous pandemics: those of 1918, 1957 and 1968. These three pandemics differed in many of their characteristics, especially in their severity. More information about this can be found at:

http://ecdc.europa.eu/en/healthtopics/Documents/0905_Influenza_AH1N1_How_Human_Influenza_Transmits_from_Person_to_Person.pdf

Q15. What should I do if I want to travel?

WHO recommended not to restrict international travel, though it is considered prudent for people who are ill to delay international travel. Anyone who develops symptoms following international travel should seek medical attention and is advised to follow some general hygiene measures while travelling or upon their return, such as:

- Avoiding close contact with people who are sick. Isolate yourself. When you are sick, keep your distance from others to protect them from getting sick too.
- Staying home from work, school, and avoid running errands when you are sick. This will help prevent others from catching your illness.
- Avoiding crowding or mass gatherings.
- Covering your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick. Throw the tissue in the bin after you use it and wash your hands afterwards.
- Washing your hands will help protect you from germs. Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners may also be effective. Avoid touching your eyes, nose or mouth because germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.

Q16. What should I do to keep from getting the flu?

There are everyday actions that can help prevent the spread of germs that cause respiratory illnesses like influenza. Take these everyday steps to protect your health: wash your hands frequently (and don't just rinse

them under running water – wash them thoroughly for 20 seconds), try to stay in good general health, get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food. Try not to touch surfaces that may be contaminated with the flu virus. Avoid touching your eyes, nose or mouth: germs spread this way. Avoid close contact with people who are sick and avoid crowds and mass gatherings.

Q17. What groups are most likely to suffer severe illness if become infected?

A small proportion of those infected have been affected more severely, some have had to go into hospital and a few of these have died despite medical care. However, these are mostly special individuals in 'risk groups'. This means people who, if they are infected, are more likely to experience severe disease.

Almost all of those who have become very ill or died in Europe and North America have been those in previously recognised risk groups namely:

- People of all ages with chronic underlying conditions – diabetes, cardiovascular disease, chronic respiratory disease and other conditions which impair breathing, such as extreme obesity;
- Pregnant women; and
- Young children (especially those under two years of age).

Overall, pregnant women are more likely to expect more severe illness from influenza A(H1N1)v than other people. The European Medicines Agency (EMA) has ruled that pregnant women may be treated with the neuraminidase inhibitor oseltamivir.

It should be noted that severe disease and even deaths have, in rare cases, been reported in previously healthy persons. This has even happened in Europe in adults and children (first deaths reported on 10 July 2009). These are to be expected and are a source of concern. These cases are being investigated by the countries.

So far, it is striking in North America and Europe that there is an underrepresentation of older people among those infected and falling sick.

Q18. What surfaces are most likely to be sources of contamination?

The virus can be spread when a person touches something that is contaminated and then touches his or her eyes, nose, or mouth. Droplets from a cough or sneeze of an infected person move through the air. The virus can be spread when a person touches respiratory droplets from another person on a surface like a desk, books and door handles, for example, and then touches their own eyes, mouth or nose before washing their hands. Studies have shown that the influenza virus can survive and infect a person for up to 2–8 hours after being deposited on the surface.

Q19. What household cleaning should be done to prevent the spread of influenza virus?

It is important to keep all surfaces clean, especially bedside tables, surfaces in bathrooms and kitchen counters, by wiping them down with a household disinfectant according to directions on the product label.

Q20. What is the best way to keep from spreading the virus when I am sick?

- If you are sick, limit your contact with other people as much as possible. Do not go to work or school if ill for seven days or until your symptoms go away (whichever is longer).
- When you cough or sneeze, cover your nose and mouth with a tissue. Throw the tissue in the bin after you have used it and wash your hands afterwards.
- Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.

Q21. What is the best technique for washing my hands to avoid getting the flu?

Washing your hands often will help protect you from germs. Wash with soap and water or clean with alcohol-based hand cleaner. We recommend that you wash your hands – with soap and warm water – for at least 20 seconds. When soap and water are not available, alcohol-based disposable hand wipes or gel sanitisers may be used. You can find them in most supermarkets and pharmacies. If using gel, rub your hands until the gel is dry. The gel does not need water to work; the alcohol in it kills the germs on your hands.

For more information on Pandemic (H1N1) 2009 please visit our website at www.ecdc.europa.eu