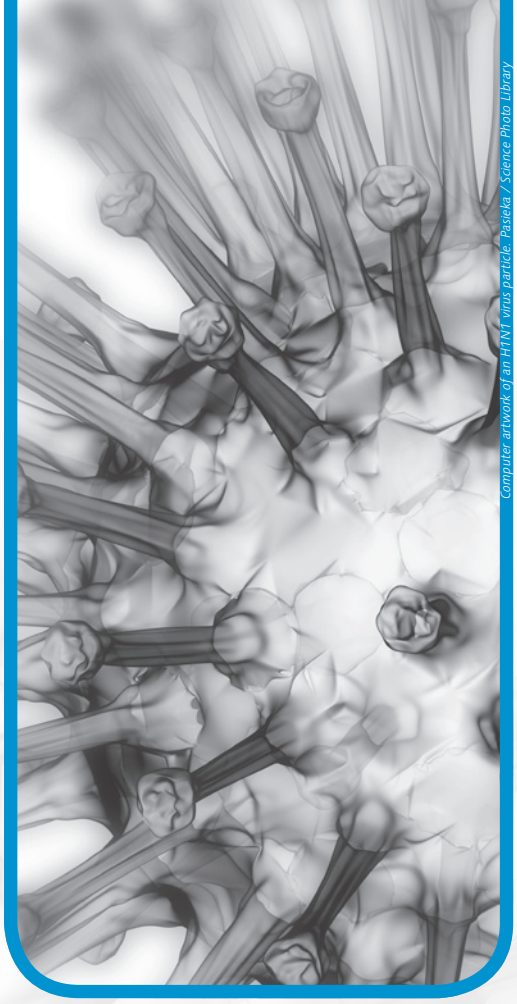
H1N1 (2009) 'SWINE FLU'


Computer artwork of an H1N1 virus particle. Pasieka / Science Photo Library

- A novel H1N1 virus emerged from Mexico in April 2009 and spread so rapidly that the World Health Organization (WHO) declared a global flu pandemic on 11 June.
- H1N1 (2009) is now circulating as seasonal flu and has been incorporated into the 2010/2011 seasonal flu vaccine.
- Good hygiene practices such as correct hand washing are very important in preventing the spread of infections such as flu.

AN OVERVIEW OF INFLUENZA

Birds and mammals are natural hosts of flu viruses. Different strains cause disease in humans, poultry and pigs; each type of virus is adapted to cause infection in its host. If flu viruses are passed back and forth between hosts (e.g. through close human contact with infected animals) the mixing can lead to development of a novel strain. As the human population has not encountered the virus before, it has little or no immunity to the novel strain which can cause infection and may easily spread from person to person.

THE H1N1 (2009) STRAIN

H1N1 (2009) is a new strain of influenza A virus. The strain was initially named swine flu because first analysis showed genetic similarities with existing pig viruses. The strain has not been identified in pigs in Mexico but has been seen to pass from humans into pig herds in many countries around the world.

The H1N1 (2009) strain does not spread outside the respiratory tract. It causes characteristic flu symptoms, which can include fever, muscle pain, sore throat and, in some cases, vomiting and diarrhoea. Most people recover from flu within 1–2 weeks, but more serious illness, and even death, can result from secondary infections, e.g. bacterial pneumonia.

WHO IS AFFECTED?

Most cases of H1N1 (2009) have been in young people under 25, in contrast to other strains of flu that predominantly affect the elderly. The fatality rate for H1N1 (2009) flu is estimated to be 26 per 100,000 cases, which is similar to that of other seasonal flu strains and is lower than previous pandemic influenza strains.

Some groups have an increased risk of contracting and suffering complications from H1N1 (2009). These 'at-risk' groups include people with long-term health conditions including asthma and diabetes, all pregnant women and those with weak immune systems.

TRANSMISSION

Flu viruses are transmitted from person to person by sneezing and coughing or by touching virus-contaminated surfaces such as door handles. The Health Protection Agency (HPA) advises the following steps to help reduce the spread of infection:

- sneezing into a tissue
- putting dirty tissues in the bin quickly
- washing hands frequently
- frequent cleaning of hard surfaces.

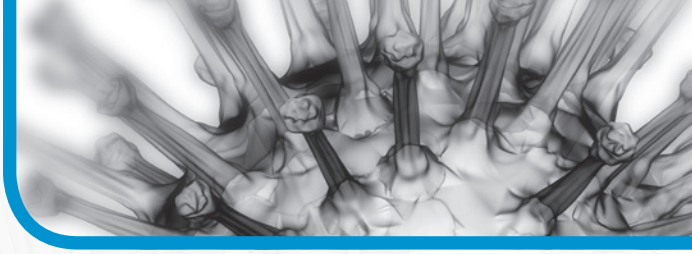
TREATMENT

The recommended treatment for flu, including H1N1 (2009), for healthy individuals is bed rest and a high fluid intake. Remedies containing paracetamol or ibuprofen will help ease symptoms such as a high temperature and muscle pain. Antibiotics are *NOT* effective against viruses such as influenza, but can be prescribed to treat secondary bacterial infections that arise as complications.

Patients in at-risk groups may be prescribed antiviral medication to reduce their risk of developing serious complications. Antiviral medications, such as oseltamivir (Tamiflu™) and zanamivir (Relenza™), can reduce the length of symptoms by about a day and usually lessen their severity. Antivirals must be taken quickly to be effective, ideally within 12–48 hours of onset of symptoms.

VACCINES

In October 2009, two vaccines offering protection against H1N1 flu only (monovalent vaccines) were developed and licensed for use in the UK. Individuals in at-risk groups were offered the vaccine first, in addition to the elderly and front-line health workers. During the first wave of the pandemic, children were the main group affected by H1N1 flu, and many of them suffered severe infections. From December 2009, all children between 6 months and 5 years were offered the vaccine.

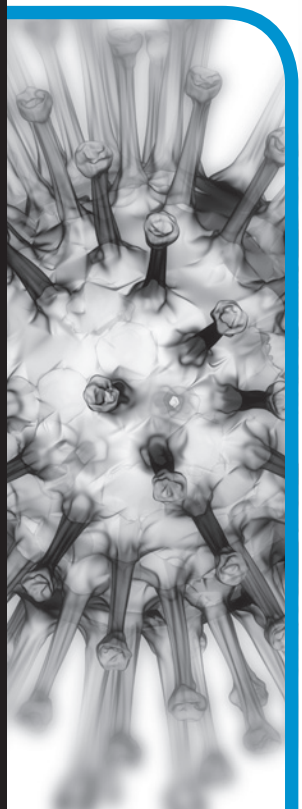


The H1N1 (2009) strain was included in the 2010/2011 seasonal flu vaccine along with two other influenza strains. This (trivalent) vaccine is offered to at-risk groups [for H1N1 (2009)], as well as the elderly and front-line health workers. Children under 15 have been less affected by H1N1 (2009) in the 2010/2011 seasonal flu season due to increased immunity. On 30 December 2010 the Joint Committee on Vaccination and Immunisation (JCVI) decided that this group would not be offered the vaccine as priority.

In January 2011, a surge in people coming forward for seasonal flu jabs led to a shortage of vaccine. Surplus doses of the monovalent H1N1 vaccine from 2009 were released to supplement low stocks of the trivalent seasonal flu vaccine.

THE SPREAD OF INFECTION

H1N1 infection spread rapidly in June and July 2009 and the number of weekly new cases peaked at 100,000 in England. Some estimates suggest one in four of the UK population were infected with H1N1 flu around this time. On 10 August 2010, the WHO officially declared the pandemic over. The number of new H1N1 cases started to increase again in December 2010. HPA data shows that the 15–45 age group are suffering more infections proportionally this year.



MONITORING THE VIRUS

The H1N1 (2009) virus is expected to continue to circulate as a seasonal influenza strain for the foreseeable future and because of this, more people will develop immunity to this current version of the virus. However, the virus is also expected to change over time, meaning that immunity to this current strain may not protect against future strains of the virus. Global influenza surveillance will continue to track the evolution of H1N1 (2009).

SGM BRIEFINGS

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