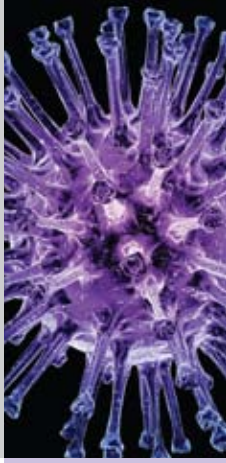
Mexican Swine 'Flu

- A novel influenza A H1N1 virus emerged from Mexico in late April 2009 and spread rapidly, causing over 11000 cases in 42 countries in only 4 weeks
- Symptoms can include: fever, fatigue, lack of appetite, coughing and sore throat and, in about one quarter of cases, vomiting and diarrhoea



Overview

'Flu viruses circulate widely in the human and animal environment. Different strains cause disease in humans, birds and pigs; each type of virus is adapted to cause infection in its host. All cause similar respiratory symptoms. 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 they have not encountered the virus before, the human population has little or no immunity to a novel strain which can easily cause infection and spread from person to person.

Fighting a pandemic

A combination of tactics will be essential to control spread of influenza A H1N1:

- use of antiviral medicines oseltamivir (Tamiflu) and zanamivir (Relenza)
- social distancing
- employing WHO recommended hygiene precautions
- a targeted vaccination programme

The novel H1N1 strain

Although termed swine 'flu in the media, the recently emerging novel influenza A H1N1 strain has not been identified in pigs in Mexico. It contains a combination of genetic material that is typical to avian, swine and human 'flu viruses. The virus is transmitted by human to human contact in the same way as seasonal 'flu and can not be caught from eating pork.

True swine 'flu, a respiratory disease of pigs, rarely affects humans and then only after close contact with infected animals. There has been no known case of swine 'flu in humans in the UK during the last ten years.

What next?

The novel H1N1 strain is currently unable to cause infection outside the respiratory tract; resulting in fairly mild symptoms and a fatality rate estimated to be only slightly higher than seasonal 'flu. However the behaviour of 'flu viruses is unpredictable and although it is possible for the novel strain to fizzle out during the summer, scientists are concerned that it could evolve during coming months and become more virulent resulting in a pandemic. The virus could also change to a more lethal form as it spreads to the southern hemisphere and encounters the existing human viruses during that region's influenza season.

Scientists predict that during peak 'flu season, when climatic conditions are optimal for transmission, influenza A H1N1 could infect one third of the population. Since the strain affects predominantly younger people, even if symptoms remain mild, this level of infections in the workforce and schools could have a major impact on the UK economy.

Vaccines

The current season 'flu vaccine may not offer good protection against the novel influenza A H1N1. A specific vaccine for the novel strain is under development but it may take several months to produce. Two doses of the new vaccine will probably be needed to confer full protection. The new vaccine will be given to a different target group than those who currently are recommended for seasonal 'flu vaccine, although more data are needed to decide exactly who will get the new vaccine.

Latest information

www.who.int
www.hpa.org.uk

society for general Microbiology

www.sgm.ac.uk

microbiology awareness campaign MAC

The Society for General Microbiology (SGM) Microbiology Awareness Campaign (MAC) aims to highlight the important issues relating to microbiology. Through its many members, the SGM can offer impartial and expert information on all microbiological topics. Enquiries are welcome. Contact SGM, Marlborough House, Basingstoke Road, Spencers Wood, Reading RG7 1AG (t 0118 988 1800; f 0118 988 5656; e pa@sgm.ac.uk).

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Image: Pasieka/Science Photo Library
Thanks are due to Professor Wendy Barclay, Imperial College London, for her helpful comments on the text.