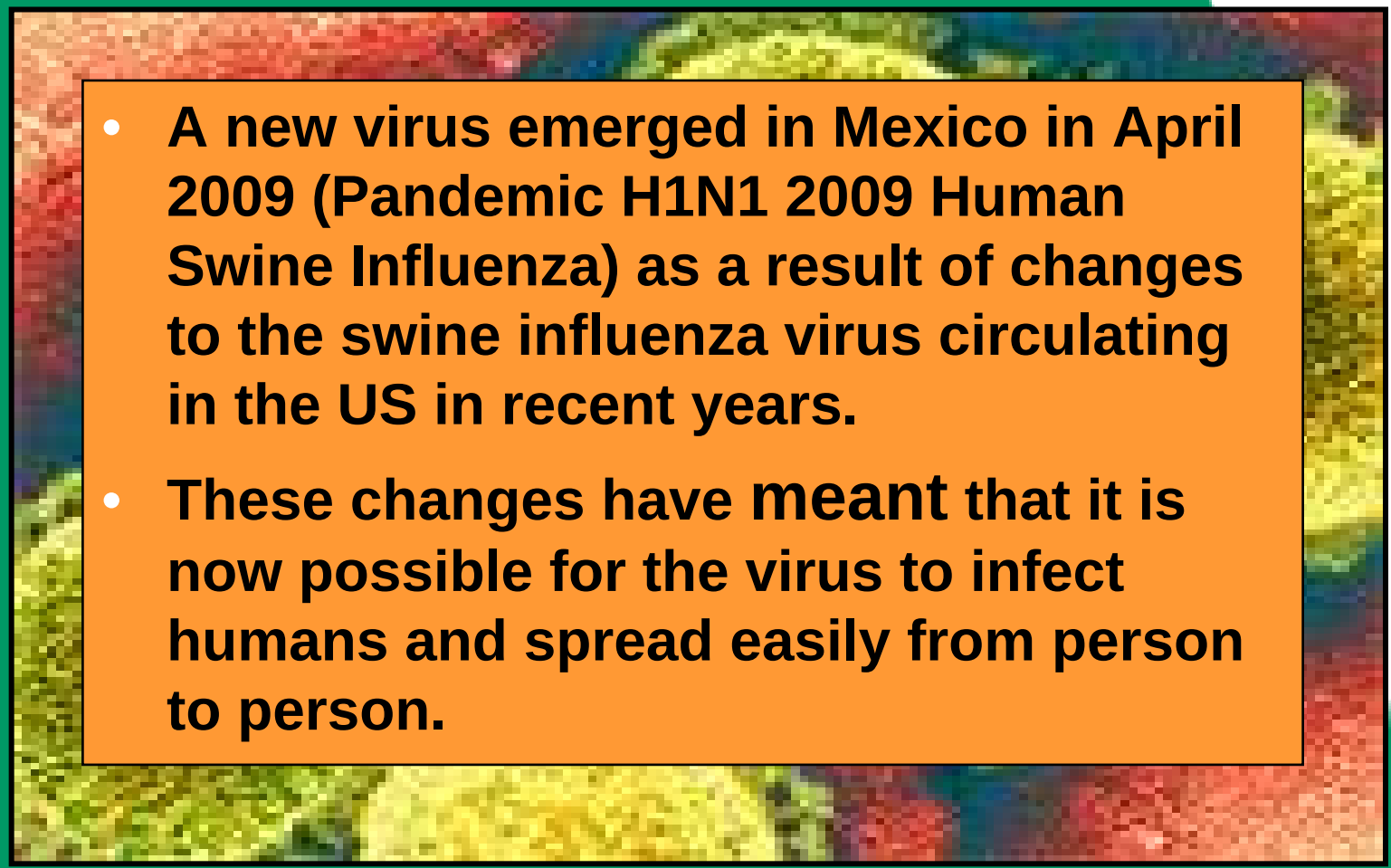
Managing influenza-like illness (ILI) in nursing and residential homes during the current influenza pandemic (WHO Phase 6)

Social Care

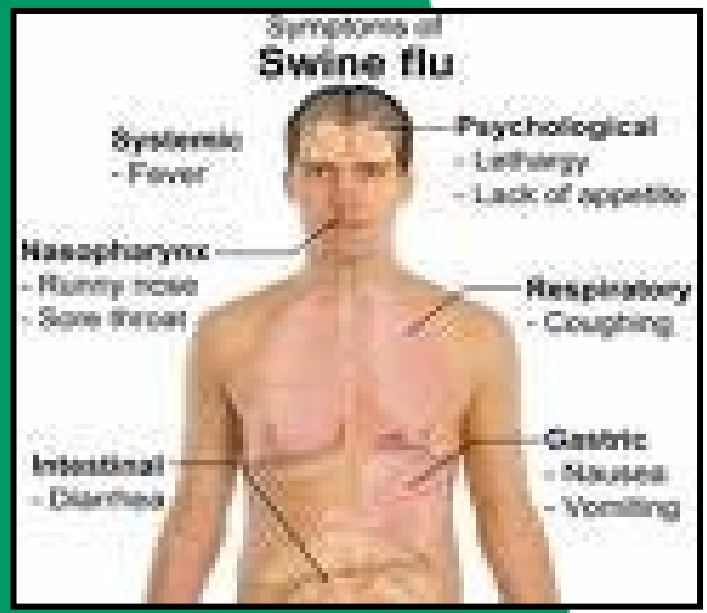
Background and History



- **A new virus emerged in Mexico in April 2009 (Pandemic H1N1 2009 Human Swine Influenza) as a result of changes to the swine influenza virus circulating in the US in recent years.**
- **These changes have meant that it is now possible for the virus to infect humans and spread easily from person to person.**

Signs & Symptoms

- Symptoms of pandemic (H1N1) 2009 influenza are similar to the symptoms of seasonal influenza:
  - fever
  - fatigue
  - malaise
  - coughing
  - sore throat
  - joint pain
  - headache
  - runny nose (Rhinorrhea)



- Some people have also reported vomiting and diarrhoea.
- *Influenza is only one potential cause of an influenza-like illness and other causes should be investigated as well.*

Transmission Routes

Influenza is usually spread through one of 3 main routes:

1. **Droplet transmission**

2. **Indirect Contact transmission**

3. **Direct Contact transmission**

A 4th transmission route might be through aerosol generating procedure (AGPs), but unless an AGP is performed, e.g. through airway suction this mode of transmission is not considered to be a significant route.

Transmission Routes

Table 1 Incubation period and period of communicability of Influenza viruses: comparison of seasonal and pandemic (H1N1) 2009 influenza

Incubation Period	Period of Communicability *
For pandemic (H1N1) 2009 influenza this is typically 3-4 days (but may range from 1-7 days)	For pandemic (H1N1) 2009 influenza this is unknown but likely to be similar to that of seasonal influenza
For seasonal influenza, typically 1-3 days	For seasonal influenza: up to 5 days after symptom onset in adults; and up to 7 days in young children, occasionally longer

***Few data exist which conclusively demonstrates that transmission by asymptomatic persons is important in producing additional symptomatic cases**

Transmission Routes

Droplet Transmission

- Droplets greater than 5 microns in size may be generated by coughing, sneezing, or even talking.

  If droplets from an infected person come into contact with the mucous membrane (mouth or nose) or surface of the eye of a susceptible individual, they can cause infection. Because of their size, these droplets do not remain in the air for long and do not travel more than a distance of one metre, so fairly close contact is required.

Transmission Routes

Direct Contact Transmission

- This occurs during skin-to-skin contact. Infectious organisms are passed directly from an infected person (e.g. after coughing into their hands) to a susceptible person and the person then transfers the organisms into their mouth, nose or eyes

Transmission Routes

Indirect Contact Transmission

- Indirect contact transmission takes place when a susceptible person has contact with a contaminated object, such as bedding, furniture or crockery which is usually in the environment of an infected person. Again, the susceptible person transfers the organisms from the object to their mouth, nose or eyes

Transmission Routes

Studies of survival of the influenza virus suggest that, depending on the surface, it can survive for limited periods of time in the environment.

When the studies were evaluated, it was found that viable virus could be transferred to hands from hard stainless-steel surfaces for up to 24 hours after the surface had been contaminated.

Hand hygiene and environmental cleaning can, therefore, be important in helping to control spread through contact.

Transmission Routes

- Influenza viruses can be killed by washing with soap and water, household detergents and ordinary cleaners. Alcohol is also effective against the virus.

- Careful and frequent hand-washing with soap and water or the use of commercially available alcohol hand-rub is recommended.

- The virus can also be transferred from soft materials (pyjamas, magazines, tissues) for up to 2 hours, but only very low quantities after 15 mins, though this is still long enough to pass on infection if hand-hygiene is not correctly observed.

Most care home residents will have received seasonal influenza vaccine containing a seasonal H1N1 strain, (this should NOT be confused with the current pandemic strain) but this does not provide significant protection against the current strain of pandemic (H1N1) 2009 flu

Recognition of Cases and Outbreaks

Recognition of a case

Fever or oral temperature of 38.0oC or more*

PLUS two of the following: cough, runny nose, sore throat, sneezing, headache, limb/joint pain, diarrhoea/vomiting.

* ***Note: illness in the elderly may not be accompanied by a fever. Instead, an acute deterioration in physical or mental ability without other known cause, OR acute onset of weakness should also be considered***

- If a resident or a member of staff fits the case definition for pandemic (H1N1) 2009, then the GP or National Pandemic Flu Service (NPFS) should be contacted for assessment of the individual.
- Anti-viral treatment, as indicated by the GP or NPFS should be collected from the local antiviral collection point on behalf of the case by the 'flu friend' and administered as directed.
- Staff should remain vigilant for further cases.

The local health protection unit (HPU) should be informed without delay if pandemic influenza has been diagnosed on the symptoms presented, to enable a full risk assessment

Recognition of Outbreaks

Influenza can spread rapidly within closed communities like care homes and it is important that potential outbreaks are identified early so that immediate steps are taken to prevent the spread of illness. An outbreak is defined as:

Two or more cases of influenza-like illness arising within the same 48 hour period in residents or staff

- ***Care homes should report any possible outbreaks of flu-like illness to their local HPU immediately*.**
- Contact details of local HPUs can be found on www.hpa.org.uk under ‘HPA in your region’.

Recognition of an outbreak

Risk assessment information required by the HPU:

1. Type of care establishment e.g. Nursing Home, Residential Home, Learning Disability Home, Hospice, Community Hospital, Hostel etc
2. ***Number of residents & staff***
3. ***How many residents and staff have symptoms? How many staff are off sick?***
4. ***What are the symptoms & do they meet the case definition for influenza or could it be another cause?***
5. ***What is the layout of the care setting/home? (This needs to include single room usage, separate floor or wing areas, communal dining facilities & day rooms)***
6. ***Does the home provide day care?***
7. ***Are any of the residents at higher risk of complications from swine flu (i.e. belong to more than one category for complications)?***
8. *Are any staff pregnant or have underlying health conditions (e.g. immuno-compromised)?*
9. *Is this outbreak spreading rapidly or limited to a small number of cases? If rapid, wider prophylaxis may be considered to try to contain the outbreak*

Recognition of an outbreak

The HPU will review this information with the care home manager and establish the relevant action required in relation to testing, prophylaxis if indicated and outbreak control where appropriate

Recognition of an outbreak

Laboratory confirmation of cases

Testing may be considered for the following reasons:

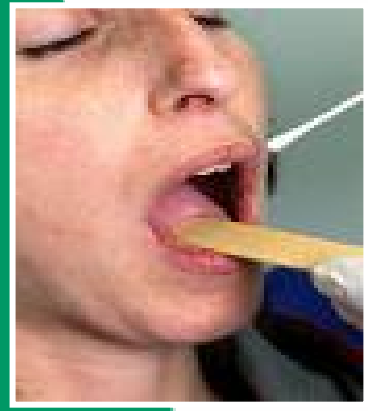
1. *It may prevent the need to consider preventative (antiviral) treatment*

2. *It clarifies whether influenza is within the particular care home at this time which may help with business continuity planning – i.e. if a care home has cases of flu, it is expected that more will occur and the escalation of outbreak plans may need to be considered, cohorting ill residents may need to be more actively considered*

3. *It will prompt investigation of other causes of infection if influenza is not found*

Recognition of an Outbreak

- If testing for influenza is thought necessary after discussion with the HPU, nose and throat swabs should be obtained by the care home staff with support from the local HPU (using appropriate personal protective equipment as per the local Infection Control Guidance)



- If this is different to normal specimen collection and transportation routes, the HPU will advise.

- Samples should be sent to the lab with a laboratory request form requesting testing for pandemic (H1N1) 2009 and full respiratory viruses screen to confirm possible cause of the illness.

Outbreak Control

- *If a case of influenza becomes a **confirmed** case, then identification of and giving preventative (antiviral) treatment to close contacts **may be** considered (if any of the close contacts have underlying health conditions or are pregnant) but care homes should be guided by advice from the local HPU*

RESIDENTS

If a case is confirmed, new admissions or transfers should be stopped.

Whether this involves the whole establishment or a wing, will depend on the ability to establish self-contained areas for symptomatic & exposed residents & the staff caring for them.

The local HPU should be contacted for advice regarding possible closure of the home.

Outbreak Control

RESIDENTS (cont'd)

If the process of closing the home would produce increased pressures on the health & social care system, the HPU would take this into account in their risk assessment and would discuss with partner organizations which might include PCTs, Local Authorities and the Care Quality Commission.

The residual risk around the consequences of such a decision would be held jointly by those involved and not solely by the HPA

Outbreak Control

Identification of close contacts

Usually, close contacts are identified as those who have been in contact with the patient/resident for more than 1 hour and for less than 1 metre apart.

BUT **for care homes it may be appropriate, in certain circumstances, to consider those within the whole wing or home as equivalent of close contacts.**

Monitoring of all residents for elevated temperatures & other respiratory signs suggestive of significant illness should take place.

Outbreak Control

- *If possible*, residents with symptoms of pandemic flu should be cared for in single rooms.
- If this is *not possible*, symptomatic residents should be cared for in areas well away from residents without symptoms
- It is *preferable* to isolate residents into separate floors or wings of the home.
- Movement of symptomatic residents should be *minimized*
- Assume cases to be infectious until all symptoms of acute influenza have gone.
- Resident's clothes, linen & soft furnishings should be washed on a regular basis & all rooms kept clean using your normal cleaning products.

Outbreak Control

- More frequent cleaning of surfaces such as lockers, tables, chairs, televisions and floors may be indicated, especially those items located within 1 metre of a symptomatic patient.
- Hoists, lifting aids, should also be thoroughly cleaned between patients.
- Ensure that there are adequate supplies of tissues should be provided for residents as well as convenient & hygienic methods for disposal.

Outbreak Control

Some residents may require assistance containing coughs & sneezes.

Wherever possible, residents should cover their nose & mouth with disposable single-use tissues when sneezing, coughing, wiping & blowing noses and clean their hands or use hand-rubs (microbiocidal hand-rubs) afterwards.

If practicable, you might consider allowing affected residents the use of fluid repellent surgical masks (if this can be tolerated) when they are within one metre of other people

Please note as per Roy Taylor's (the National Director, Social Care Flu Resilience) letter of 5th August 2009 deliveries of facemasks was made to PCTs in July and August of this year for onward distribution to sectors of front-line social care staff.

Outbreak Control

Staff

- If staff develop flu-like symptoms they should seek advice from the National Pandemic Flu Service & should take sick leave from the home until symptom free
- If possible, care home staff should work either with symptomatic or asymptomatic residents (but not both) & this arrangement should be continued for the duration of the outbreak
- Agency & temporary staff exposed during the outbreak should be advised not to work elsewhere (e.g. in another home) until the cause is identified & appropriate advice given.

Outbreak Control

- Staff should clean their hands thoroughly with soap & water or a hand-rub (microbiocidal hand-rubs, particularly alcohol-based) before & after any contact with residents, and before going home at the end of a shift.
- Consideration should be given to placing hand-rub dispensers at the residents' bedsides for use by visitors & staff
- Staff should wear single-use fluid repellent surgical masks, plastic aprons, and gloves when in close contact with an infected resident, i.e. within 1 metre.
- More stringent infection control is needed during aerosol generating procedures (AGPs) such as airway suction & CPR.

Outbreak Control

The numbers of staff involved in AGPs should be minimised and FFP3 respirators and eye protection should be used in addition to gowns, gloves and universal precautions – see HSE guidelines:

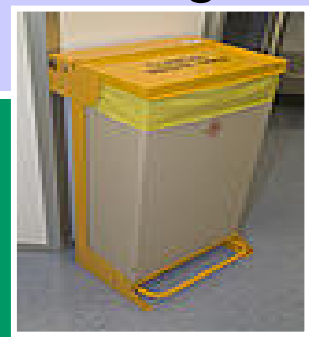
http://www.hse.gov.uk/biosafety/diseases/pandemic.htm

If this level of PPE is required then it is essential that staff using this equipment are trained appropriately and fit tested

AGPs should only be performed when necessary and in well ventilated single rooms with the door closed

Outbreak Control

- Uniforms and other work clothing should be laundered at work if there are facilities. If laundered at home, the general advice on washing work clothes would apply.
- Uniforms should never be worn between home and the place of work
- Clinical waste should be disposed of according to standard infection control principles
- Staff at risk of complications if infected (e.g. pregnant or immuno-compromised individuals) should avoid caring for symptomatic patients



Outbreak Control

Visitors

Visits should be discouraged during an influenza outbreak where this is feasible & does not adversely affect the social/emotional needs of residents.

Visitors should avoid all physical contact & be at least at a 1 metre distance from possible cases & wear a single use fluid repellent surgical mask. They should clean their hands thoroughly with soap and water or a hand rub (microbiocidal hand rubs, particularly alcohol-based) before and after visiting residents.

Symptomatic visitors should not visit the care home until they are symptom free.

Summary of Guidance

A single possible case – refer to GP or the National Pandemic Flu Service for assessment and treatment (inform local HPU if pandemic influenza is diagnosed)

Two or more cases of influenza-like illness arising within the same 48 hour period in residents or staff – liaise with local HPU for risk assessment and possible outbreak control measures

Influenza is only one potential cause of an influenza-like illness and other causes should be investigated as well.

All information taken from 'Managing influenza-like illness (ILI) in nursing and residential homes during the current influenza pandemic (WHO Phase 6)' – written by HPA – 7th August 2009

Further Guidance

Further guidance for commissioners and social care can be found on the DH website at ww.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_093380