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

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

This guidance aims to provide advice on the generic management of cases or outbreaks of flu-like illness in nursing and residential homes and provides specific guidance appropriate to pandemic (H1N1) 2009 influenza. General information on pandemic (H1N1) 2009 influenza can be found on the Health Protection Agency (HPA) website at www.hpa.org.uk

Care homes should telephone the GP or the National Pandemic Flu Service (NPFS) for a clinical assessment of possible influenza in their residents.

Care homes should report any clinically diagnosed cases of pandemic influenza or more than two cases of influenza-like illness in a 48 hour period to their local Health Protection Unit by their usual local reporting mechanisms for further advice on management and outbreak prevention and control.

BACKGROUND

Pandemic (H1N1) 2009 influenza is a new subtype of influenza that has emerged as a result of changes to the swine influenza virus circulating in the US in recent years. The changes to the virus have meant it is now able to infect humans and to spread easily from person to person. Since this is a new subtype of influenza, very few people will have been exposed to it and so large numbers of the population will be susceptible. It is for these reasons and the extent of the geographical spread across the globe that the World Health Organization has declared a pandemic.

The symptoms of pandemic (H1N1) 2009 influenza are similar to the symptoms of seasonal influenza and include fever, fatigue, malaise, coughing, sore throat, joint pain, headache and rhinorrhoea. Some people with pandemic (H1N1) 2009 influenza have also reported vomiting and diarrhoea. Transmission of this new influenza virus is thought to occur in the same way as seasonal influenza (see below).

At the current time, flu caused by this new influenza subtype appears to be affecting mainly young people/adults. Care home residents are predominantly older people. However, the elderly can suffer a more severe illness when they get influenza and a

more rapid deterioration, due to underlying disease, ageing of the immune system, immobility and debility.

When people are living in close proximity to one another, infection can also spread rapidly and more widely. Staff and visitors moving between residents can help spread the virus unless strict infection control measures are in place. An outbreak of influenza may cause rapid and significant illness and death, and possible outbreaks should therefore be investigated and managed promptly. This is true during the normal winter 'flu' season but especially so during the present influenza pandemic.

Usually we expect influenza in the winter months, but in the current situation, staff and visitors should be reminded to be alert to the signs and symptoms of influenza in care home residents at any time.

TRANSMISSION

People with an influenza-like illness are considered infectious to others when they have symptoms.

Influenza is usually spread through one of three main 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.
- Direct contact transmission – this occurs during skin-to-skin or oral contact. Infectious organisms are passed directly from an infected person (for example after coughing into their hands) to a susceptible person and the person then transfers the organisms into their nose, mouth or eyes.
- 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.

Aerosol generating procedures (AGPs) – for example chest physiotherapy can produce droplets less than 5 microns in size which may cause infection if they are inhaled. Unless an aerosol generating procedure is performed, this mode of transmission is not considered a significant route of transmission..

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.
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 convincingly demonstrate that transmission by asymptomatic persons is important in producing additional symptomatic cases.*

Experimental 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 transferability of influenza A virus from contaminated surfaces onto hands was evaluated; it was found that measurable 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.

Influenza viruses are deactivated by washing with soap and water, household detergents and cleaners; alcohol is also effective against the influenza virus. Micro-organisms are removed and killed during all stages of the laundering. 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 two hours. However, only very low quantities after 15 minutes, though this is still long enough to pass on infection if hand hygiene is not correctly observed.

PROTECTION AVAILABLE FROM INFLUENZA VACCINES

All care home residents and front line staff should be offered influenza vaccine containing a seasonal H1N1 strain (this should NOT be confused with the current pandemic influenza strain). The current seasonal flu vaccine is designed to protect against seasonal H1N1, but it does not provide significant protection against the current strain of pandemic (H1N1) 2009 flu. This autumn, front line health and social care staff will receive H1N1 2009 flu vaccine as well as seasonal flu vaccine. Currently, residents with a chronic condition will be offered H1N1 2009 flu vaccine in addition to the seasonal flu vaccine.

RECOGNITION OF CASES AND OUTBREAKS

Recognition of a case

Prompt action is necessary if a flu-like illness is suspected. The case definition below should be met.

Fever or oral temperature of 38.0°C 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 it is thought that a resident or member of staff within a care home setting fits the case definition for pandemic (H1N1) 2009 then the GP or the NPFS should be contacted for assessment of the individual.

Anti-viral treatment, as indicated by the GP or the NPFS, should be collected from the local antiviral collection point promptly on behalf of the case by an appropriate 'flu friend' or care worker and administered to the case as directed. Staff should remain vigilant for further cases of influenza-like illness in residents or staff.

The local health protection unit (HPU) should be informed without delay if pandemic influenza is clinically diagnosed, to enable a full risk assessment.

Recognition of an outbreak

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 therefore report any possible outbreaks of flu-like illness to their local HPU immediately. Contact details of local HPUs can be found on the main web page of the HPA web site (www.hpa.org.uk) in the box called 'HPA in your region'.

The HPU will discuss on a case by case basis taking into account local risk factors to include the following prior to making a decision about further investigation and management of contacts.

Risk assessment information required by the HPU:

- *Type of care establishment e.g. Nursing Home, Residential home, Learning disability home, hospice, community hospital, Hostel etc.*
- *Number of residents & staff.*
- *How many residents and staff have symptoms? How many staff are off sick?*
- *What are the symptoms & do they meet the case definition for influenza or could it be another cause?*
- *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).*
- *Does the home provide day care?*
- *Are any of the residents at higher risk of complications from swine flu (i.e. belong to more than one category for complications)?*
- *Are any staff pregnant or have underlying health conditions (e.g. immuno-compromised)?*
- *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.*

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.

Laboratory confirmation of case(s)

The HPU will discuss with the care home manager the appropriateness or otherwise of testing. Testing should be considered in early cases within each care home setting for the following reasons:

- It may prevent the need to consider antiviral prophylaxis
- It will clarify 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 consideration of escalating

outbreak plans, cohorting ill residents may need to be more actively considered

- It will prompt investigation of other causes of infection if influenza is not found

If testing for influenza is thought necessary following discussion with the HPU (i.e. to establish cause of an outbreak) then nose and throat swabs should be obtained by the care home staff as per local arrangements (using appropriate personal protective equipment (PPE) as per local Infection Control Guidance). The HPU will advise on local arrangements for the testing of specimens if this is different to normal specimen collection and transportation routes. Samples should be sent to the laboratory with a laboratory request form requesting testing for pandemic (H1N1) 2009 and full respiratory viruses screen to confirm the possible cause of the illness.

OUTBREAK CONTROL

If a case of influenza (in a resident or staff member) becomes a **confirmed** case (i.e. laboratory confirmed) then any identification and prophylaxis of close contacts will be guided by advice from the local HPU.

Post-exposure prophylaxis, follow-up and information

Post-exposure prophylaxis involves giving a drug to prevent infection occurring. It is not the same as a vaccine and protection only lasts while the drug is being taken. Post-exposure prophylaxis will be recommended on a home by home basis dependent on levels of transmission of pandemic (H1N1) 2009 influenza in the local area, the degree of interaction with the community, the type and layout of the home, the individual circumstances of the index case(s) i.e. single room accommodation, mobile/immobile, interaction with others in the home, staff or resident etc.

Post-exposure prophylaxis for all home contacts of each separate case of pandemic (H1N1) 2009 is not routinely recommended without a prior risk assessment and this would only likely be recommend if there was evidence of rapid spread or significant morbidity within the home.

Assessment of need for post-exposure prophylaxis will be dependent on a number of factors, not least the length of time between last contact with a symptomatic case and other risk factors the resident may have for complications of influenza. Where prophylaxis is required for a group of residents in an outbreak situation, the HPU and Care Home manager will liaise with the local PCT to co-ordinate this as per local arrangements.

Vaccines

In an outbreak of influenza, immunisation with seasonal flu vaccine is not recommended as a control measure given the time it can take for adequate levels of protective antibodies to develop. This would currently also apply to the H1N1 2009 flu vaccine.

Residents

In the event of an outbreak of pandemic (H1N1) 2009 influenza, temporary closure of a unit or wing of an establishment as infection control measure may be considered. The length of closure to new admissions and transfers is largely dependent on the incubation period of influenza and so if closure is considered should be for seven days in the first instance.

If pandemic flu is widespread in the community and closure would produce increased pressures on the health and social care system it is expected that the risk assessment around closure would take this into account, the decision around closure would be discussed with partner organisations and if necessary a strategic decision to

move away from the usual policy of closing care homes with outbreaks of infectious diseases may be taken while high levels of influenza activity continue to be seen in the community. The residual risk around the consequences of this decision would be held jointly by the agencies involved in the decision making and not solely by the HPA

Identification of close contacts

In general, individuals with pandemic influenza are considered to be infectious only when symptomatic. Therefore those considered to be contacts are usually those in the same room as the case plus any others who have had an equivalent degree of contact (less than 1 metre for 1 hour or more) in the infectious period – while they have symptoms. However, in the circumstances of a care home where there may be considerable mixing, it may be appropriate to consider the whole wing or home as the equivalent of close contacts. Staff in at risk groups should be assessed individually based on their own level of contact with the case. Local HPU staff are trained and experienced in defining close contacts

Specific Control Measures:

- Enhanced surveillance for further cases should be initiated by way of monitoring of all residents for elevated temperatures and other respiratory systems or signs suggestive of significant illness.

- If possible, symptomatic residents 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. If the design of the care home and the numbers of symptomatic residents involved permits, 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 and soft furnishings should be washed on a regular basis and all rooms kept clean using your normal cleaning products.

- More frequent cleaning of surfaces such as lockers, tables, chair televisions and floors may be indicated, especially those items located within one metre of a symptomatic patient.

- Hoists, lifting aids, baths and showers should also be thoroughly cleaned between patients.

- Residents should have an adequate supply of tissues, as well as convenient and hygienic methods for disposal. Some residents may need assistance with containing respiratory secretions. Wherever possible, residents should cover their nose and mouth with disposable single-use tissues when sneezing, coughing, wiping and blowing noses and clean their hands or use hand-rubs (microbiocidal hand-rubs).

- If practicable, consideration might be given to the use of fluid repellent surgical masks by affected residents (if this can be tolerated) when they are within one metre of other people.

Staff:

- If staff develop flu-like symptoms they should seek advice from the National Pandemic Flu Service and 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) and this arrangement should be continued for the duration of the outbreak.
- Agency and temporary staff who are exposed during the outbreak should be advised not to work elsewhere (e.g. extra shifts in another home or the local acute care hospital) until the cause is identified and appropriate advice given.
- Staff should clean their hands thoroughly with soap and water or a hand-rub (microbiocidal hand-rubs, particularly alcohol-based) before and after any contact with residents, and upon 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 and staff.
- Staff should wear single-use fluid repellent surgical masks, plastic aprons, and gloves when in close contact with a case, i.e. within one metre.
- More stringent infection control is needed during aerosol generating procedures (AGPs) such as chest physiotherapy, airway suction and CPR. In these situations the numbers of staff exposed 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 it is envisaged that this level of PPE is required then it will be essential that staff using this equipment are trained appropriately and fit tested. AGPs should be performed only when necessary and in well ventilated single rooms with the door closed.
- Uniforms and other work clothing should be laundered at work if there are facilities for this. 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.

Visitors:

- Visits should be discouraged during an influenza outbreak where this is feasible and does not adversely affect the social/emotional needs of residents.
- Visitors should avoid all physical contact and be at least at a one metre distance from possible cases and wear a single use fluid repellent surgical mask. They should clean their hands thoroughly with soap and water or a handrub (microbiocidal handrubs, particularly alcohol-based) before and after visiting residents.
- Symptomatic visitors should not visit the care home until they are symptom free.

The HPA website www.hpa.org.uk is a useful source of further information on pandemic (H1N1) 2009 influenza.