

Investigating acute respiratory infections in community settings: Principles for investigation of outbreaks/clusters in care homes

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Background/rationale for testing

- To enable early detection of influenza in a community – ‘early warning’.
- To identify the dominant flu subtypes so that issues or problems associated with any change are identified early. The dominant subtype in the current southern hemisphere flu season has varied from county to country and it is not known what will happen in the UK.
- Investigation of respiratory illness in care homes is also important as a number of other infectious causes of respiratory illness can have significant morbidity/mortality in the care home population, and there is potential for public health/infection control action to limit the impact on this vulnerable population and the wider community.
- In care home outbreaks, the use of antivirals for treatment and prophylaxis is recommended if flu is suspected. It can often be very difficult to differentiate flu from other respiratory viruses at the beginning of the flu season.

Preparation for investigations

- There is a need for awareness among clinicians/care homes to report outbreaks of illness to health protection units. **Action required: HPUs to make local arrangements for raising awareness among GPs, community provider services and care homes, and to ensure locally appropriate arrangements are in place for reporting and sampling.**
- There is a need for awareness among local laboratories (NHS and HPA) about outbreak investigation and the agreed suite of testing that will be done. Regional HPA laboratories offer an HPA-recommended respiratory virus real-time PCR panel that involves testing combined nose and throat swabs or other respiratory samples for influenza A (including pandemic H1N1 and, where possible, oseltamivir resistance testing), influenza B, respiratory syncytial virus, human metapneumovirus, parainfluenza virus types 1-3, adenoviruses and rhinoviruses. At HPA regional laboratories, all influenza A positives will be H and N typed and all H1N1s will be tested for resistance locally and referred to Colindale. **Action required: HPUs to ensure local laboratories are aware of and signed up to investigation protocol. Action required: HPUs to ensure all outbreak samples are clearly marked with an outbreak number and identifiable by laboratories.**
- In care homes it is important to consider other infectious causes of respiratory illness, in particular pneumococcal infection and Legionnaires’ disease. Urine samples can be submitted for urinary antigen testing.

Actions to be taken by HPU

Definition of outbreaks/clusters of illness: two cases within 48 hours.

- Standard dataset to be collected on homes (see HPA reporting form).
- Risk assessment to be undertaken.
- Samples to be collected as per guidance (care homes)/clinical picture. Sampling out of season and early or late in the 'normal' flu season is particularly important to get a confirmed diagnosis when it is least expected.
- HPUs should work closely with regional epidemiology units and HPA laboratories to ensure that information from routine influenza-like illness/acute respiratory illness surveillance systems (GP spotter practice, HPA regional microbiology surveillance scheme) is shared to give a clear local picture of the infections. This information should be used to inform risk assessments and investigation of community clusters.
- Information about local picture should be shared (by local HPU or regional epidemiology unit depending on local arrangements) with local GPs and provider services (acute and community trusts) and primary care trusts, together with any updates on investigation arrangements/local findings of note – such as regional newsletters in the flu season.

Reporting

Information on outbreaks of influenza-like illness reported on a standard form, which should be sent to the respiratory disease department at HPA Colindale within a week to (respcdsc@hpa.org.uk).

Reports of care home outbreaks should also be flagged at the weekly HPA update teleconference (every Tuesday morning) reporting the numbers of homes affected and any confirmed laboratory diagnoses.