Infection Prevention & Control Guidelines for the management of a respiratory outbreak in ARC / LTCF

Background

Elderly persons are vulnerable to significant disease including hospitalisation and death from influenza and other respiratory viruses. There is an annual vaccine available for influenza, which is the most important respiratory virus in terms of morbidity and disease. High rates of respiratory disease are reported in the elderly and aged residential care (ARC) and long term care (LTC) facilities are susceptible to outbreaks of respiratory viral infections. In addition to the seasonal influenza vaccine, other infection prevention and control measures are essential to minimise transmission.

These guidelines and flowchart provide some practical advice for the management of a respiratory disease outbreak in an ARC / LTC facility. This advice is to be used in conjunction with the facility's own internal processes for outbreak management.

Once influenza season has begun, any resident(s) with 'just a cough' should be considered as a potential influenza case.

Step 1: Determine an outbreak

Consider an outbreak if, during the influenza season, ≥ two residents manifest signs and symptoms of influenza-like illness within 72 hours of each other:

- cough
- sore throat
- breathing difficulties
- myalgia
- headache
- fever (may not be present)

Whenever there are two cases of acute respiratory tract illness within 72 hours on one unit or geographically distinct area, an outbreak should be suspected and tests should be done to determine the causative organism.

Although respiratory virus outbreaks are more common during the winter season, an outbreak should be suspected at any time that the above criteria apply.

Inform the GP of any symptomatic resident

Obtain expert infection prevention & control advice if necessary.

Action point
Commence a line listing of affected residents and staff (Appendix 1)

Step 2: Implement infection prevention & control measures

Respiratory viruses, such as influenza, respiratory syncytial virus (RSV), parainfluenza, rhinovirus, adenovirus, etc. are primarily transmitted by large respiratory droplets. Some organisms can remain viable for up to 24 hours, after landing on hard surfaces.

General infection control measures including environmental cleaning, wearing appropriate PPE, and hand hygiene will interrupt this mode of disease transmission.

Regardless of what causative agent may or may not be found, IPC remains the same and clinical management will generally be the same for any of the respiratory viruses.

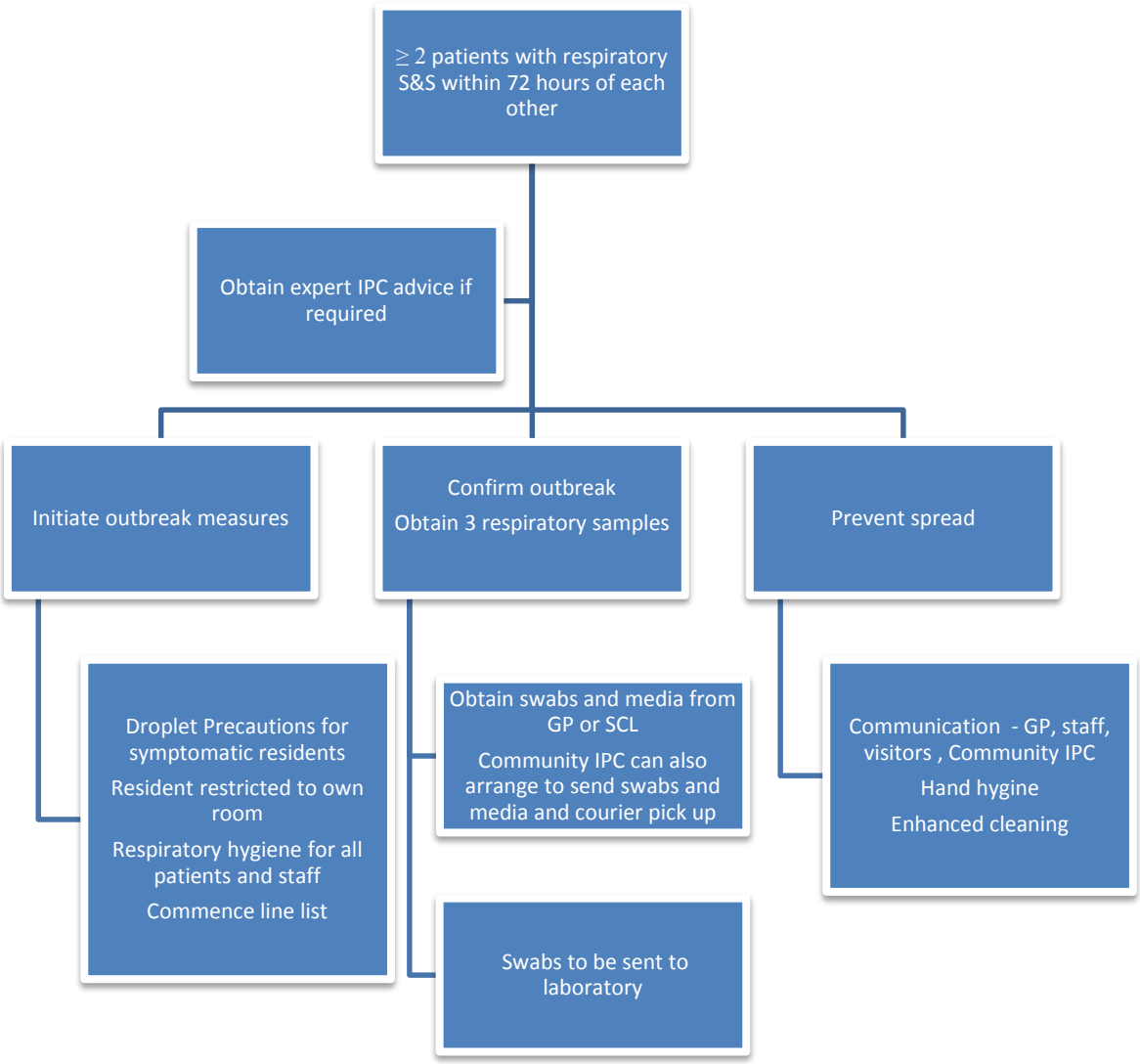
- ✓ Notify all staff of the outbreak quickly and make supplies available – gloves, droplet/surgical masks, ABHR, tissues
- ✓ Place symptomatic residents in Droplet Precautions as soon as possible after symptoms are identified
- ✓ Monitor asymptomatic residents closely for signs of respiratory illness
- ✓ Promote good hand hygiene according to The 5 Moments for Hand hygiene
- ✓ Encourage respiratory etiquette for all staff, visitors and residents
- ✓ Provide training for staff on the correct use of masks and other PPE
- ✓ Provide facility signage to alert staff and visitors to extra precautions in place

Action point
Ensure staff are able to safely put on and remove a surgical/droplet mask (Appendix 2)

Step 3: Arrange for laboratory testing

1. Facility to contact one of the following of their choice to obtain swabs:
    - the CDHB Community Liaison Infection Prevention & Control Nurse Specialist who will arrange for viral swabs to be sent to either the facility or a named GP for the facility
    - the patient's GP
    - Southern Community Laboratory
2. GP or RN at facility to take swabs from a maximum of three symptomatic residents or two residents and one symptomatic staff member.
    - Follow the correct procedure for taking a swab and send to the laboratory in a viral medium container (Appendix 3)
    - The swabs should be collected within 48 hours from the start of symptoms
3. Use a regular laboratory testing form and request 'multiplex virus test' under the resident's or staff member's GP name. Also write 'Part of outbreak management' on the form.
4. Contact the courier to arrange a time for pick up. If the pick-up is the following day, store the swabs overnight in a fridge
5. The Canterbury Health laboratory can provide a courier pick up. Contact the CDHB community liaison infection prevention & control nurse specialist to arrange.

Respiratory Outbreak Action Flowchart



References for Respiratory Guidelines for LTCF / ARC

1. Canada - A Guide to the Control of Respiratory Infection Outbreaks in Long-Term Care Homes – Ontario Ministry of Health and Long-Term Care September 2014
2. Respiratory Illness in Residential and Aged Care Facilities Victoria Department of Health 2014
3. Australian Government Fact Sheet - Prevention of infection and spread of influenza in residential aged care homes, June 2014

Appendix 1: Line list for respiratory illness outbreak

Case Identification					Symptoms												Swab			Outcome		
Name	Resident	Staff	Date of Birth	Flu Vaccine & date	Onset date	End date	Fever or temp>38°C	Cough	Sore throat	Runny nose	Shortness of breath	Myalgia	Malaise	Lethargy	Headache	Other, specify	Nose/throat swab	Date swab taken	Swab result	Hospitalised	Deceased	Other details

Appendix 2: Putting on a surgical/droplet mask with ear loops

A. Put your fingers through the ear-loops. The nose clip should be positioned at the top. Place the mask over your nose and mouth.

B. Position the ear-loops around the ears. Pull the mask from the top and bottom to fully unfold the pleats of the surgical mask. This will provide maximum coverage of the face and minimize the layers you have to breathe through.

C. Form the nose clip over the bridge of the nose to minimize air leakage.

D. Dispose of the surgical mask after use.

- Change mask when wet or contaminated
- Avoid touching the front of the mask when wearing it or removing it. Always perform hand hygiene after removing the mask or if you touch the mask during use

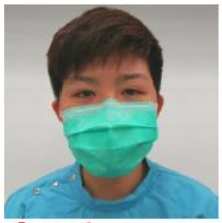


Image 1


Image 2


Image 3


Image 4

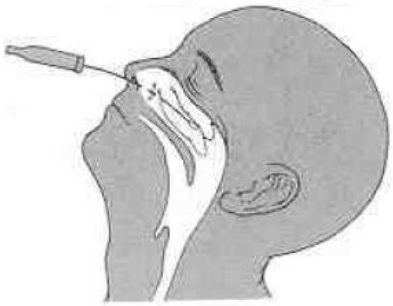

Image 5

Appendix 3: Procedure for taking a respiratory viral swab

Nasopharyngeal Swab Method

- Wear appropriate PPE. Then using a synthetic fibre tipped NP swab: (Adult: orange top swab / Paediatric: white top swab)

Nasophyaryngeal swab in Viral Transport Media



- Insert swab into one nostril
- Press swab tip on the mucosal surface of the mid-inferior portion of the inferior turbinate (see sketch), and rotate the swab tip several times across the mucosal surface to collect cellular material.
- Place swab into VIRUS TRANSPORT MEDIUM.

- Label with patient name, date of birth, and date of collection.