



Recognizing and controlling respiratory disease outbreaks in long-term care facilities

This is the second in a 3-part series. Preventing influenza outbreaks was discussed in part 1; the use of amantadine will be discussed in part 3.

Respiratory disease outbreaks occur frequently in long-term care facilities and are always disruptive and costly. With better laboratory testing, we now recognize outbreaks caused by agents such as respiratory syncytial virus (RSV), parainfluenza viruses, rhinoviruses, *Legionella*, *Streptococcus pneumoniae* and *Chlamydia pneumoniae* in addition to influenza viruses.¹⁻⁵ It is not uncommon for more than 1 agent to be implicated. Influenza outbreaks are often surprisingly mild in facilities with high vaccination rates, whereas other viruses may cause severe symptoms and excess mortality.⁶

Recognizing outbreaks

Early outbreak recognition is vital to effective management. The facility should watch for clusters of upper or lower respiratory tract infections, e.g., cases occurring on a particular ward or over a brief period. Typical symptoms include coryza, sore throat, cough, malaise and fever, although fever may not be prominent in elderly people.

Extra vigilance is necessary during winter, especially around holidays, when most outbreaks occur. Public health units usually alert local facilities when influenza and RSV reach their area, and advisory physicians should provide warnings when they see increased respiratory infections in their practices. At this point, many facilities post signs warning people with acute respiratory infections not to visit, as well as launching handwashing campaigns and taking specimens from suspecting cases.

Laboratory testing

The goal of laboratory testing is to identify the causative agent or agents rapidly so that control measures can be tailored accordingly.⁷ Facilities should keep viral testing kits on hand during the influenza season.

Rapid testing (e.g., for influenza and RSV) and viral culture are of most value. Specimens must be taken within 72 hours of onset, preferably by nasopharyngeal swab; ad-

visory physicians should encourage facility staff to learn this technique. Serologic testing may be of value epidemiologically and requires samples to be taken 2 weeks apart, during the acute and convalescent phases of the illness. During an outbreak, the medical officer of health and the public health laboratory will advise on the number and type of specimens required; generally, samples from 8 to 10 ill people will be needed initially.

Outbreak control

When a respiratory disease outbreak is suspected the facility should notify the local public health unit and the advisory physician. Delays can thwart specimen collection and outbreak control. The advisory physician should be part of the outbreak management team and keep other physicians (who sometimes object to the outbreak management "rules") informed.

In implementing control measures the team must find the right balance between effectiveness and an acceptable psychosocial impact on residents. Control measures^{8,9} should be tailored to the situation and address the following areas.

1. Isolation. Ill residents should be confined to their rooms while they are acutely ill (at least 72 hours).
2. Visitors and social events. Because these are important to quality of life, restricting activities to wards and controlling the number of visitors may be considered instead of strict prohibitions.
3. New admissions. In general, new residents should not be admitted during an outbreak.
4. Staff. Ill staff should be kept off work or given tasks other than patient care. Individual staff members should work with either ill or well residents. If they must work with both, they should move from noninfected to infected patients, with strict handwashing between. Reinforcement of proper handwashing by all staff is essential. Staff should not work at other facilities during an outbreak.
5. Environmental control. Organisms such as RSV and parainfluenza viruses can survive on bedside tables, hand rails and door knobs for some hours. Enhanced cleaning regimens, disinfection of surfaces and proper disposal of items contaminated with respiratory secretions are important.



6. Influenza outbreaks. Specific control measures include immediate vaccination of unvaccinated staff and residents and amantadine prophylaxis.

An outbreak may be considered over when 1 incubation period for the infection in question passes without new cases developing.

Susan E. Tamblyn, MD, DPH
Medical Officer of Health
Perth District Health Unit
Stratford, Ont.

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