RHCFA
RESIDENTIAL HEALTH CARE FACILITIES ASSOCIATION

We Promote Compliant Standards of Excellence in Care & Service

INFECTION CONTROL IN ROOMING & BOARDING

Surely you have heard the news!!!!

New Jersey Department of Health (DOH) made an official statement, confirming the sad news that more than six children died at the Wanaque Center for Nursing and Rehabilitation in Haskell, New Jersey.

DOH confirmed on Twitter a total of 18 cases of adenovirus among residents at Wanaque Center. The 12 living patients infected with the virus are currently being treated, and the DOH is investigating the viral outbreak.

"This strain of virus tends to cause outbreaks in centers of communal living and has unfortunately led to deaths in several kids with compromised immune systems, New Jersey Department of Health Commissioner Shereef Elnahal tweeted Tuesday. "We take this very seriously. Multiple teams are on site inspecting/directly working with staff to ensure proper infection control protocols," he also tweeted. The facility will not admit any new patients until the cause of the virus has been identified and neutralized

Adenoviruses are "common viruses that cause a range of illness," according to the Centers for Disease Control and Prevention . The virus can cause anything from sore throat to bronchitis, pneumonia, diarrhea or pink eye. Those with weak immune systems, respiratory problems, or cardiac trouble are more susceptible to the virus and can become very sick from exposure to the adenovirus, the CDC reported.

This outbreak prompts our facilities to review infection control practices. **Let's us try to be proactive rather than reactive!!!!**

With the advent of effective antipsychotic medications in the 1950s, mental health care has shifted from large, state-run facilities to community institutions, displacing persons with mental illness to other congregate settings, such as homeless shelters, detention centers, Rooming & Boarding Homes. Such settings lack routine infection control practices.

Public health emergencies and pandemics are not equal opportunity offenders. The very young, the very old, the chronically ill, **and the mentally ill** all are more vulnerable.

In any shared living space, there are also shared infectious agents – usually bacteria or viruses – that from time to time can cause infection outbreaks. The opportunities for infection outbreaks therefore in New Jersey's Rooming & Boarding Care Facilities are abundant and the consequences can be severe; all outbreaks – even pathogens as common as noroviruses can be fatal.

These pre-existing vulnerability puts tremendous additional pressure on staff already charged with caregiving before an incident occurs.

The last thing our industry needs is to be on the news for an infectious disease breakout.

The following summarizes simple principles of outbreak prevention preparedness, detection & management and some key practical guidelines which can help minimize outbreaks:

Citation: Curran ET (2017) Infection outbreaks in care homes: prevention and management. *Nursing Times* [online]; 113: 9, 18-21.

Common Outbreaks in congregate living

Table 1. **Most common types of infection outbreaks in care homes**

Types of infection outbreaks	Most common causative infectious agents	Mode of transmission
Respiratory infection	Influenza virus (A or B)	Droplets and physical contact
	Mycobacterium tuberculosis	Airborne infection
Skin and soft tissue infection	*Streptococcus pyogenes*	Droplets and physical contact
	Staphylococcus aureus (sensitive or resistant)	Physical contact and airborne dissemination
	Sarcoptes scabiei (the mite causing scabies)	Physical contact
UTI (with or without a urinary catheter)*	*Escherichia coli* Many MDROs	Physical contact (transmission will have taken place sometime before the organism causes a UTI)
Gastrointestinal infections	Norovirus *Salmonella* and other organisms causing food poisoning	Physical contact with contaminated items followed by ingestion** or direct ingestion of contaminated food
	Clostridium difficile	Physical contact with contaminated items followed by ingestion**

Key: MDRO = multidrug-resistant organism; MRSA = methicillin-resistant *Staphylococcus aureus*; UTI = urinary tract infection.
* UTIs are more often caused by a resident's own gut flora than by an external infectious organism.
** Also known as the faecal-oral route.

Why and how outbreaks happen

Infection outbreaks can occur in care homes because:

- Infectious agents can survive in and on people, as well as in the environment;

- Poor hygiene and grooming Vulnerable residents have frequent contacts with staff, other residents, visitors and the environment;
- The immune system of vulnerable residents can be easily overwhelmed.

How Infectious agents spread:

- Through physical contact – a person touches, or is touched by, someone or something that is contaminated with the infectious agent, and then touches another person or object without applying hand hygiene principles;
- Through droplets – small droplets containing the infectious agent are spread by coughing or sneezing and land directly on another person, or on an object from which the organism spreads through physical contact;
- By airborne infection – a person directly inhales the exhaled breath of an infected person; this is how tuberculosis spreads, for example;
- By airborne dissemination – the infectious agent is disseminated in the air – for example, during bed-making or dressing changes – and lands on a person or object from which it can spread via the physical contact route;
- Through ingestion – a person eats contaminated food or water.

Residents' risk of developing an infection if they encounter an infectious organism depends on many factors; for example, the risk of infection with MRSA is increased if the resident has a wound or an invasive device in place; and the risk of infection with Clostridium difficile is increased if the resident has taken antibiotics in the previous eight weeks.

Prevention, Preparedness, Detection and Management

The approach to infection outbreaks encompasses prevention, preparedness, detection and management (PPDM). How well staff in Residential Health Care Facilities/Rooming & Boarding home perform Prevention, Preparedness Detection & Management (PPDM), both individually and collectively, determines whether residents become sick, how many become sick and how sick they become.

Outbreak Prevention

Many outbreaks can be prevented if the basic level of care is done well; that is, HANDWASHING is followed by all staff, all the time.

COMMON RECOMMENDATIONS:

- Assess all new residents for infection before admission. Seek advice before admitting them if they present with any of the following infection risks:
  - Signs and symptoms indicating an infectious disease, such as diarrhea, vomiting, productive cough, night sweats, fever, breaks in the skin, and inflammation of the skin or soft tissues;
  - A history of staying in a care setting where there is/has been an outbreak;
  - A history of previously having had an infectious disease/having been infected with a MDRO;
- Perform hand hygiene at the recommended procedures.
- Manage sanitation of the facility and the environment diligently and carefully.
- Use protective equipment (gloves and aprons) to prevent the spread of infectious agents;
- Promote sneezing and coughing hygiene.
- Education and redirect residents to practice adequate

hygiene Source: World Health Organization (2009)

Outbreak Preparedness

In addition to preventing outbreaks, preparing for them is essential. To be well prepared, staff need to know how outbreaks manifest, so it is useful to ensure, in the autumn, that all staff are aware of the symptoms to look out for. They must report any concerns to the operator and Health Maintenance & Monitoring. should also be familiar with the outbreak plan, which must include when and how to contact the Health Maintenance & Monitoring Nurse, as well as the form to be completed in case of an outbreak, as required by DCA.

Autumn is the perfect time to do so, as outbreaks most commonly occur during the winter months **(Petrignani et al, 2015)**.

Influenza vaccination is offered to all people aged 65 and over in autumn; It is also recommended that immunization should be provided to staff in direct contact with residents, for their own protection and to reduce the risk of transmission in social care premises.

Encouraging staff to be vaccinated can be challenging for managers, but life-saving for residents. It is important to plan a vaccinations early and look for novel approaches to encourage care workers to get their flu jab.

Outbreak Detection

It is easy to detect an outbreak when it arises from a single source within a short space of time; for example, when contaminated food results in most residents becoming sick within hours of each other. It is much more difficult, however, to detect an outbreak when the time between cases is long. It is also difficult to confirm an outbreak, as it can take days – or sometimes weeks – to prove, from looking at specimen results, that the culprit is one and the same infectious agent. It is vital that care home staff have a high index of suspicion and promptly call in experts to investigate any suspected outbreak.

MANAGEMENT RECOMMENDATIONS

A significant proportion of residents in Rooming & Boarding are likely to belong to populations at risk for tuberculosis, including those with a history of substance abuse, homelessness, or previous institutionalization or incarceration.

Facilities should consider instituting a tuberculosis screening program for residents on the basis of the characteristics of the population served and the local prevalence of tuberculosis. Consultation with local public health authorities is recommended. Residents with symptoms suggestive of tuberculosis, such as persistent cough, persistent fever, or unexplained weight loss, should undergo medical evaluation. The earlier an outbreak is recognized and reported, the fewer people (residents and staff) will become sick (Davis et al, 2011). Outbreaks that are reported early are also easier to control.

In the early stages of an outbreak, there may be just one source of infection – for example, one resident's room – but, as more people become sick, the number of possible sources rapidly increases, making control of the outbreak more difficult.

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