

Risk assessment - antiviral chemoprophylaxis use during an outbreak of influenza/ ILI in a residential care facility (RCF)

Key points

- There is a paucity of scientific evidence to inform a single approach to antiviral chemoprophylaxis use in a residential care facility (RCF). **The decision to recommend antiviral chemoprophylaxis should be made on a case-by-case basis by the attending physician based on clinical judgement and risk assessment.**
- In the context of an influenza outbreak in a RCF, chemoprophylaxis may be considered for:
 - a. all exposed **residents**, regardless of vaccination status (even when the influenza vaccine and circulating strains are well matched, immunosenescence¹ results in reduced vaccine effectiveness in the elderly compared with younger age groups)
 - b. RCF **staff** who have not received the current seasonal influenza vaccine, or received the vaccine <14 days before contact with an influenza case, **and** are in a high-risk group for influenza² (including pregnancy)
- If a decision is made to administer chemoprophylaxis to exposed **residents**, chemoprophylaxis should be administered to residents on outbreak affected units only, with active daily surveillance of new cases throughout the facility.
- Chemoprophylaxis should be started as soon as possible after contact with an influenza case (ideally within 48 hours for oseltamivir and within 36 hours for zanamivir) and may be continued for up to 10 days after the most recent exposure to an influenza case. If there are concerns about high attack rates or high case fatality rates, prophylaxis may be considered more than 36/48 hours after contact with a case, or for longer durations, following a risk assessment; however it should be noted that such use is currently unlicensed.
- Chemoprophylaxis should be discontinued if a causative organism other than influenza is identified.

Public Health Risk Assessment

In deciding whether or not to recommend chemoprophylaxis, the following factors should be considered:

Individual factors

Residents

- Duration of contact
- Intensity of contact³
- Duration of time elapsed since contact with an influenza case⁴
- Stringency of infection prevention and control (IPC) measures in RCF and individual's ability to comply with same, e.g. cough etiquette, hand hygiene
- Vaccination status and timing⁵

¹ Immunosenescence is impairment in immunity due to age-associated changes in function in a variety of cells

² <https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter11.pdf>

³ e.g. sharing a room with a patient with influenza/ ILI versus resident in an unaffected unit in the same RCF

⁴ Chemoprophylaxis should be started as soon as possible after contact with an influenza case

- Vaccine match/ mismatch with causative/ dominant circulating strain⁶
- Member of risk group for influenza², including immunosuppression
- Contraindications to antiviral chemoprophylaxis, including medication that may interact
- Ability to tolerate chemoprophylaxis – consider potential side effects⁷
- Compliance concerns/ issues

Staff

- Duration of contact
- Intensity of contact
- Duration of time elapsed since contact with an influenza case⁴
- Stringency of IPC measures in RCF
- Evidence of ongoing chains of transmission involving residents and staff
- Provision of care to residents at high risk for influenza complications
- Vaccination status and timing⁵
- Vaccine match/ mismatch with causative/ dominant circulating strain⁶
- Member of risk group for influenza², including pregnancy
- Contraindications to antiviral chemoprophylaxis, including medication that may interact
- Ability to tolerate chemoprophylaxis – consider potential side effects⁷

Outbreak factors

- Pathogenicity of causative influenza virus subtype (if known) or dominant circulating strain – e.g. A(H3N2) is known to affect older people more severely⁸
- Outbreak severity⁹ - including duration, attack rate, morbidity (hospitalisation rates, ICU admission rates) and mortality
- Distribution of cases within RCF
- Ability to implement and comply with IPC measures, e.g. isolation and spatial separation of susceptible individuals, and stringency of these measures
- Has a causative organism been identified – if causative organism other than influenza, e.g. respiratory syncytial virus (RSV), is identified, then discontinue influenza chemoprophylaxis

Examples

Chemoprophylaxis for residents:

A bed-ridden individual with chronic obstructive pulmonary disease residing in the same room as a patient with symptoms of ILI is likely to benefit from antiviral chemoprophylaxis regardless of vaccination status.

Chemoprophylaxis for staff:

A staff member who has not received the influenza vaccine and who provides care to frail, elderly residents with chronic medical conditions across a number of different units is likely to benefit from chemoprophylaxis. This staff member should also receive the seasonal influenza vaccine, but as the vaccine takes two weeks to mount a sufficient immune response, antiviral chemoprophylaxis may be considered in the interim.