…../……/……

Dear Doctor,

I am writing regarding preparation for this year’s influenza season. As you know, influenza is one of several common pathogens which cause respiratory outbreaks in residential care facilities.

In order to plan, prepare and respond to respiratory outbreaks the Department of Health and Human Services recommends a number of key preventative actions to reduce the severity of illness and risk of death, reduce transmission and limit the duration of outbreaks if they occur.

General practitioners (GPs) play an absolutely critical role in facilitating influenza prevention and treatment. This includes the discussion of influenza vaccination for residents, their families and staff. The decision to use antiviral medication as treatment and / or prophylaxis for your patient/s in confirmed influenza outbreaks is also very important to consider.

Where possible, a decision should be made prior to the influenza season regarding the intention to use antiviral medication in an outbreak setting for each resident and documented in the resident’s file or the facilities’ outbreak management plan to facilitate early and effective use.

**Vaccination**

Immunisation remains the single most effective action in preventing the spread of influenza and should be promoted for all residents and staff. The influenza vaccine is free for people aged 65 years and over, most Aboriginal and Torres Strait Islander people, pregnant women and individuals with certain chronic conditions or immunosuppression. Early discussion, recommendation and documentation of vaccination status with residents and their families will contribute to increased coverage in the facility.

In a confirmed influenza outbreak, the department recommends that all asymptomatic residents and staff who are unvaccinated should be offered influenza vaccination.

**Antiviral medication in an outbreak setting**

There is good evidence that the timely administration of antiviral medication, as treatment and / or prophylaxis can decrease the length of an outbreak and the number of residents affected.

As per the *National Respiratory Guidelines for the Prevention and Public Health Management of Influenza Outbreaks in Residential Care Facilities in Australia*, the department recommends the use of antiviral medications in symptomatic patients during **laboratory** **confirmed type A or B influenza** outbreaks, and the consideration of prophylaxis for asymptomatic patients (regardless of vaccination) and unvaccinated staff.

Specifically, the guidelines recommend:

*Antivirals as treatment*

**Antiviral treatment** for all symptomatic residents (without awaiting test results if influenza has already been confirmed in other residents) within 48 hours of symptom onset.

Antiviral treatment may be used after 48 hours in some circumstances (severe illness) if deemed to be of clinical benefit.

The recommended drug is **oseltamivir** (Tamiflu®); the recommended dose is **75 mg twice daily for five days.**

Antiviral treatment should be individualized according to the dosage recommendations, potential adverse reactions and contraindications described in the product information.

*Antivirals as prophylaxis*

**Antiviral prophylaxis** is most effective at reducing transmission when all remaining asymptomatic residents and **unvaccinated staff** are commenced on prophylaxis.

Antivirals are recommended for influenza prophylaxis if antivirals can be delivered to all targeted residents and unvaccinated staff over a 24 hour period AND Medication safety issues including renal function/renal insufficiency are appropriately considered during the prescribing phase.

If this is deemed feasible at the facility, prophylaxis with oseltamivir (Tamiflu®) is recommended at a dose of **75 mg once daily** **for 10 days;** but may be continued for up to 42 days if necessary.

Prophylaxis will need to be provided until the outbreak is declared over, which is considered to be 8 days from the onset of symptoms in the last case.

If respiratory symptoms develop in residents or staff who have been prescribed prophylaxis, the dose should be upgraded to the treatment dose whilst tests are being performed (note that antiviral treatment and prophylaxis is currently not included in the Schedule of Pharmaceutical Benefits).

*Assessment prior to giving antivirals*

General practitioners should ensure that appropriate clinical assessment is completed prior to administration (for example, renal function testing), and that financial consent has been gained from residents and / or their families.

The department may liaise with you further if a respiratory outbreak is notified to us by facilities to recommend key outbreak *management* actions. This includes identifying the cause of the respiratory pathogen, limiting the use of antibiotics, early initiation of antiviral treatment and /or prophylaxis and encouraging vaccination (for confirmed influenza outbreaks).

Further information regarding the recommendations for use of antiviral medications in outbreak management is attached, and is taken from the *National Respiratory Guidelines for the Prevention and Public Health Management of Influenza Outbreaks in Residential Care Facilities in Australia (Communicable Diseases Network of Australia, 2017).*

Also attached is a pro forma that you may find useful as a pre-season planning tool to assist in the management of a confirmed influenza outbreak should they occur.

If you have any questions related to the information contained in this letter, please phone the Communicable Disease Prevention and Control Unit in the department, on

ph 1300 651 160.

Yours sincerely,



**Dr Brett Sutton**

Deputy Chief Health Officer (Communicable Disease)

Health Protection Branch

Regulation Health Protection and Emergency Management Division

**Recommendations for using antiviral medication in influenza outbreaks[[1]](#footnote-1)**

## Antiviral medications & antiviral prophylaxis decision tool

Antiviral medications have a potential role in the management of influenza outbreaks in Residential Care Facilities (RCFs), but only as an adjunct to all other control measures such as restriction on movement, infection control precautions, and high vaccination rates.

### Recommendations for use of antivirals in outbreak management

The use of antiviral medications for prophylaxis of residents and staff requires forward planning, consultation with, and participation of, visiting General Practitioners (GPs).

Although the final decision to use antivirals as prophylaxis in an outbreak will be made by the Outbreak Management Team (OMT) often in consultation with the local public health unit, the residents’ GPs are ultimately responsible for prescribing antivirals for individuals.

Note: Antiviral medications are generally costly and may not be readily available, especially in bulk quantities, from community pharmacies.

If used, antiviral prophylaxis should be continued for 10 days or until the outbreak is declared over (as determined by the OMT), whichever is longer.

As prophylaxis, antivirals are recommended for ALL asymptomatic residents (regardless of vaccination status) and ALL unvaccinated staff. Incomplete coverage reduces the effectiveness of this intervention, although it is recognised that *complete coverage is difficult* to achieve. **Importantly**, antivirals should be organised within 24 hours for asymptomatic residents (and unvaccinated staff), this should be organised by telephone and confirmed in writing, if desired.

The following considerations may assist the RCF OMT team and the Public Health Unit (PHU) in deciding when to implement oseltamivir prophylaxis in an RCF. No indications are absolute – each outbreak situation is unique, and some factors may carry more or less weight in any particular event. The use of prophylaxis assumes implementation of other measures such as confirmation of the outbreak cause, optimal infection control practice and high vaccination rates in residents.

From the perspective of staff management, prophylaxis has implications for reducing the extent and length of staff illness and absenteeism. Those with shorter illnesses return to work sooner; even an anticipated one-day reduction in illness duration helps decrease issues associated with short staffing. These include rostering regular vaccinated staff on extra shifts and obtaining agency staff prepared to work in an RCF with an outbreak.

The most common side effects associated with oseltamivir are mild to moderate nausea and vomiting, diarrhoea and stomach pain.

### Evidence for effectiveness of antiviral use for prophylaxis in RCF

The results of studies on reduced duration of viral shedding when infected persons take oseltamivir vary; and neither temporal nor causal relationships between changes in influenza viral shedding and clinical outcomes have been well established. This is, in part, due to variation in study design.

When antivirals are started soon after developing symptoms, it is more likely that symptoms will be of shorter duration, and viral shedding will decrease rapidly. In the 2009 influenza pandemic, patients shed A(H1N1)pdm09 virus for significantly longer if oseltamivir was delayed for more than 48 hours after onset of symptoms.[32](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_32) Another 2009 pandemic review of viral shedding showed that oseltamivir treatment commenced during the first three days of illness shortened the duration of viral shedding.[33](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_33) However, other observational studies do not concur.[34](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_34)

In a systematic review, the efficacy of oseltamivir for post-exposure prophylaxis (i.e. preventing influenza illness among household and close contacts of a case with laboratory-confirmed influenza) was found to be 81% (95% CI 55–92), with an absolute risk reduction of 7.0% (95% CI 4.8–8.0).[35](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_35) This is consistent with data from a 2014 Cochrane review, which found prophylaxis reduced the development of symptomatic influenza.[36](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_36)

Two Cochrane reviews of antiviral use for post-exposure prophylaxis found it 58% effective in households, and 68-89% effective in contacts of index cases in preventing secondary infections.[37](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_37), [38](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_38) A recent report found good evidence that antivirals reduce the duration of symptoms by more than 12 hours.[39](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_39)

### Rationale for antiviral use for prophylaxis

The routine use of antiviral drugs for both treatment and chemoprophylaxis in institutions that house residents at higher risk for influenza complications is recommended by a number of expert bodies:

In Canada, the Association of Medical Microbiology and Infectious Diseases guidelines list the approach as a strong recommendation (Grade C evidence, observational studies), which should be followed unless a clear and compelling reason for an alternative approach is present.[40](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_40)

In the United States of America, the US CDC and Infectious Disease Society of America guidelines advise the use of antivirals as early as possible, to reduce the spread of virus (level A-11 evidence, good evidence based on non-randomized trial (non-RCT)).[41](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_41)

In the United Kingdom, the Academy of Medical Sciences report concluded from meta-analysis of observational studies that deaths in hospitalised patients reduced when neuraminidase inhibitor antivirals were used, supporting the use of antivirals to treat influenza in patients who require hospitalisation.[39](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_39)

Key cohort studies support the approach. In Canada, use of mass prophylaxis with neuraminidase inhibitors was associated with prompt termination of all eight evaluable outbreaks in an influenza season[42](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_42), while a study of eight outbreaks in Michigan over two seasons found that in five outbreaks no further cases were seen after implementation of prophylaxis, and only a small number of cases were observed in the other three outbreaks. In contrast, new cases continued for as long as one month before initiation of prophylaxis.[43](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_43)

While these recommendations are based on observational studies, two randomised controlled trials (RCTs) have directly assessed antiviral prophylaxis in RCFs in an outbreak setting. A Dutch study found no impact from post exposure prophylaxis and an Australian study provided some support for prophylaxis in both reducing attack rates and the duration of outbreaks.[44](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_44), [45](file:///F%3A%5CPH%5CCDC%5CDiseases%5Cinfluenza%5C2018%5CFlu%20Project%20officer%202018_Maree%5CFlu%20guidelines%2C%20national%20and%20VIC%20based%5CCDNA_Guidelines_word.docx#_ENREF_45) However, the latter study was underpowered and more studies are required to confirm the findings and guide practice in RCFs.

# Vaccination and Anti-viral Medication Pre-season Planning Tool for General Practitioners and Residential Care Facilities

**Resident Name:** …………………………………………………………………………………………….

**Resident’s D.O.B:** ……/……/……

**Doctor’s Name:** …………………………………………………………………………………………….

**Doctor’s contact details:** ………………………………………………………………………………………….

 ………………………………………………………………………………………….

**Vaccination**

This resident has been vaccinated with the current season’s influenza vaccine **Yes No**

If Yes, the resident received the vaccination on \_\_\_ /\_\_ /\_\_\_\_

The type of vaccine (e.g. Fluad, Fluzone) this resident received: ……………...

If No, discussion with resident and / or their next of kin recommending influenza vaccination during a confirmed influenza outbreak, has occurred **Yes No**

**Antiviral medication**

The use of antiviral medication in the event of a confirmed influenza outbreak has been discussed between myself and this resident (and / or their next of kin)

 **Yes No**

In the event of a confirmed influenza outbreak, this resident is to receive antiviral medication (Tamiflu) as:

**Treatment**  **Yes No**

**Prophylaxis** **Yes No**

Financial consent has been obtained from the resident and /or their next of kin for the purchase of this medication **Yes No**

**Clinical assessment**

Date of last renal function test \_\_ /\_\_ /\_\_\_\_

Results attached **Yes No**

**Doctor’s Signature:** …………………………………………………………………………………………….

**Date:** ……/……/……

1. Communicable Diseases Network Australia 2017, *Guidelines for the prevention, control and public health management of influenza outbreaks in residential care facilities in Australia*, Australian Government, Canberra [↑](#footnote-ref-1)