Are either influenza A or influenza B circulating in the community or has the patient had exposure to virologically confirmed influenza? (you would have been notified by the Chief Medical Officer/Chief Public Health Officer if this is the case)

**NO**

**Do not prescribe antiviral medication (oseltamivir, amantadine or zanamivir)**

To do so would contravene the NICE guidance\(^1\) and/or the product licence\(^2,3\).

**YES**

Is the patient:
- Pregnant (including up to two weeks post-partum)?
- Aged 65 years or older?
- Aged under 65 years and at risk of developing medical complications from influenza (Includes, but is not restricted to, those patients in ‘at risk’ groups (see table 1)? Apply clinical judgement to take into account the risk of flu exacerbating any underlying disease that a patient may have, as well as the risk of serious illness from flu itself)

**NO**

Was patient exposed to someone suffering from influenza like illness OR lives in residential care establishment and another resident or member of staff of the home has an influenza-like illness AND able to start prophylaxis (if no contra-indications) within 36 - 48 hours of exposure*?

*Exposure is defined as close contact with a person in the same household or residential setting who has had recent symptoms of influenza

**YES**

Are any of the following statements true?
- Not vaccinated since previous influenza season
- Vaccine contraindicated so not given
- There have been less than 14 days between vaccination and onset of symptoms
- Vaccine given but not well matched to the strain of influenza virus circulating (advice from PHE weekly national flu report)
- Local care home outbreak despite residents being vaccinated?

**YES**

Prescribe prophylaxis as advised below

**Children less than 1 year:**
Consider specialist paediatric advice

**Children over 1 year and less than 5 years:**
Prescribe Oseltamivir (Tamiflu\(^4\))
(See weight adjusted dose schedule below)

**Children 5 - 12 years:**
Prescribe Oseltamivir (Tamiflu\(^4\)) (See weight adjusted dose schedule below)
OR
Zanamivir (Relenza\(^5\))
(10mg (2 inhalations) by Diskhaler\(^6\)) once daily for 10 days\(^3\)

**Adults and children 13 years and over**
Prescribe Oseltamivir (Tamiflu\(^4\)) (75mg once daily for 10 days\(^3\))
For adults <40kg: Use weight-adjusted child doses OR
Zanamivir (Relenza\(^5\))
(10mg (2 inhalations) by Diskhaler\(^6\)) once daily for 10 days\(^3\)

**Oseltamivir (Tamiflu\(^4\)) child doses (over 1 yr only)**

Body weight:
- ≤15kg: 30mg once daily for 10 days
- >15-23kg: 45mg once daily for 10 days
- >23-40kg: 60mg once daily for 10 days
- >40kg: dose as per adults

Note: Oseltamivir (Tamiflu\(^4\)) 30 mg, 45 mg and 75mg capsules and oral suspension are available however oral suspension should be reserved for those aged <1yr (off label but supported by BNFC\(^7\)) to ensure demand can be met.

Other patients with swallowing difficulties or for administration via enteral tubes, the capsules should be opened and contents mixed with an appropriately sweetened liquid (as oseltamivir has a bitter taste\(^5\))

**NB start prophylaxis within 36 - 48 hours of exposure**

See Table 2 for oseltamivir doses in renal impairment

See Table 3 for appropriate selection of antiviral
Table 1: ‘At Risk’ patient groups

<table>
<thead>
<tr>
<th>Condition</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Chronic respiratory disease (including asthma and COPD)</td>
<td></td>
</tr>
<tr>
<td>b) Chronic heart disease</td>
<td></td>
</tr>
<tr>
<td>c) Chronic renal disease</td>
<td></td>
</tr>
<tr>
<td>d) Chronic liver disease</td>
<td></td>
</tr>
<tr>
<td>e) Chronic neurological disease</td>
<td></td>
</tr>
<tr>
<td>f) Immunosuppression</td>
<td></td>
</tr>
<tr>
<td>g) Diabetes</td>
<td></td>
</tr>
<tr>
<td>h) Morbid obesity (BMI ≥40)</td>
<td></td>
</tr>
<tr>
<td>i) Children under six months of age</td>
<td></td>
</tr>
<tr>
<td>j) Established renal failure (CrCl &lt;10mL/min)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Recommended dosage of oseltamivir in patients with renal dysfunction (adults aged 13 or over)

<table>
<thead>
<tr>
<th>Creatinine Clearance*</th>
<th>Oseltamivir PO (Prophylaxis – 10 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate impairment (CrCl 31-60mL/min)</td>
<td>30mg OD</td>
</tr>
<tr>
<td>Severe impairment (CrCl 11-30mL/min)</td>
<td>30mg every 48 hours</td>
</tr>
<tr>
<td>Established renal failure (CrCl &lt;10mL/min)</td>
<td>30mg ONCE repeated after 7 days**</td>
</tr>
</tbody>
</table>

* eGFR may be used if CrCl is not available
**dosage based on expert opinion. Specialist advice should be sought

NB: There is NO dose adjustment for zanamivir in renal impairment.
There is NO dose adjustment for oseltamivir and inhaled zanamivir in hepatic impairment.

Table 3: Selection of antivirals for post-exposure prophylaxis

<table>
<thead>
<tr>
<th>Condition</th>
<th>Dominant influenza strain is lower risk for oseltamivir resistance e.g. H3N2, Influenza B</th>
<th>Dominant influenza strain is higher risk for oseltamivir resistance e.g. H1N1</th>
<th>Exposed to suspected or confirmed oseltamivir resistant influenza</th>
</tr>
</thead>
<tbody>
<tr>
<td>At risk of complicated influenza (excluding pregnant women)</td>
<td>Oseltamivir PO 10 days, once daily, if therapy can be started within 48 hrs of last contact; or after 48 hrs on specialist advice only.</td>
<td>Oseltamivir PO 10 days, once daily, if therapy can be started within 48 hrs of last contact; or after 48 hrs on specialist advice only.</td>
<td>Zanamivir INH 10 days, once daily, if therapy can be started within 36 hrs of last contact; or after 36 hrs on specialist advice only.</td>
</tr>
<tr>
<td>Severe immunosuppressed patients (excluding children under 5 years)</td>
<td>Oseltamivir PO 10 days, once daily, if therapy can be started within 48 hrs of last contact; or after 48 hrs on specialist advice only.</td>
<td>Zanamivir INH 10 days, once daily, if therapy can be started within 36 hrs of last contact; or after 36 hrs on specialist advice only.</td>
<td>Zanamivir INH 10 days, once daily, only if therapy can be started within 36 hrs of last contact; or after 36 hrs on specialist advice only.</td>
</tr>
<tr>
<td>Children under 5 years in at risk groups including severely immunocompromised children</td>
<td>Oseltamivir PO 10 days, once daily, if therapy can be started within 48 hrs of last contact; or after 48 hrs on specialist advice only.</td>
<td>Oseltamivir PO 10 days, once daily, if therapy can be started within 48 hrs of last contact; or after 48 hrs on specialist advice only.</td>
<td>Discuss with specialist. Monitor closely and begin treatment promptly if influenza-like illness symptoms develop (follow treatment pathway)</td>
</tr>
</tbody>
</table>

Note 1: For use in pregnancy decision should be made following discussion with patient regarding risks and benefits.

Note 2: For use in pregnancy treatment should be discussed with a local infection specialist.

N.B. For use while breastfeeding: The overall consensus is that treatment with either drug is not a reason to discontinue, or put limitations on, breastfeeding full or pre-term infants. Due to the very small amounts transferred into breast milk and the limited oral bioavailability the benefits of breastfeeding are considered to outweigh any, albeit unidentified, risks.

References
1. NICE technology appraisal guidance 158 – Amantadine, oseltamivir and zanamivir for the prophylaxis of influenza (Sept 2008). Click here
2. Summary of Product Characteristic – Tamiflu® (Oseltamivir); accessed 3/11/17. Click here
4. BNFC online; accessed 19/8/19. Click here
5. PHE guidance on use of antiviral agents for the treatment and prevention of seasonal influenza – Sept 19. Click here
6. SPS medicines Q&A – Oseltamivir or zanamivir – Can mothers breastfeed after treatment for influenza? Click here

For further information, please contact NHS Wandsworth CCG Pharmacy Team on 0203 922 1464
With acknowledgment to Sutton CCG