TREATMENT OF INFLUENZA in ADULT PATIENTS

NHS Tayside

PRIMARY CARE:

This guidance can be used when a CMO letter advising influenza is circulating has been issued by Scottish Government (exceptions click here)

SECONDARY CARE:

This guidance can be used when influenza is suspected or confirmed at any time

UNCOMPLICATED INFLUENZA: (see link in PHS data and surveillance section for information on current circulating strain)

- **Previously healthy**
  - **NO** antiviral treatment is normally indicated (or oral oseltamivir if physician feels patient is at serious risk of developing complications)

- **At risk group (including pregnant/2 weeks post partum patients) but *NOT* severely immunosuppressed**
  - prescribe oral oseltamivir within 48 hours of onset (or later at clinical discretion)
  - do not wait for laboratory confirmation
  - At risk groups - see p14

- **At risk group AND severely immunosuppressed** (e.g. patients with primary immunodeficiency, current or recent (within 6 months) chemotherapy or radiotherapy for malignancy, solid organ transplant on immunosuppressive therapy, bone marrow transplant recipients currently receiving immunosuppressive treatment/within 12 months of receiving immunosuppression, patients with graft v host disease, patients currently receiving high dose systemic steroids (equivalent to ≥20mg prednisolone per day, HIV patients CD4<200 or <15%, patients currently or recently (within 6 months) on other types of highly immunosuppressive therapy or where the patient's specialist regards them as severely immunosuppressed) ***AND*** **the dominant circulating strain has:**
  - A lower risk of oseltamivir resistance (e.g. influenza A[H3N2] or influenza B) — prescribe oral oseltamivir within 48 hours of onset (or later at clinical discretion)
  - A higher risk of oseltamivir resistance (e.g. influenza A [H1N1]pdm09) — within 48hours of onset (or later at clinical discretion) prescribe inhaled zanamivir
    - Where possible, patients who have good respiratory function despite their illness, can use the Diskhaler®
    - Inhaled zanamivir via Diskhaler® may not be an effective delivery route in some patients, including those unable to administer the Diskhaler® and patients with severe underlying respiratory disease
    - If inhaled zanamivir is unsuitable or inappropriate, oral/NG oseltamivir can be prescribed and monitor clinical condition closely - if patient condition deteriorates seek infection specialist advice

COMPLICATED INFLUENZA: (see link in PHS data and surveillance section for information on current circulating strain)

REQUIRING HOSPITAL ADMISSION AND/OR SIGNS AND SYMPTOMS OF LRTI (HYPOXAEMIA, DYSPNOEA, LUNG INFILTRATE), CNS INVOLVEMENT AND/OR SIGNIFICANT EXACERBATION OF AN UNDERLYING MEDICAL CONDITION

- ***NOT* severely immunosuppressed**
  - FIRST LINE oral oseltamivir (or via NG)
  - SECOND LINE inhaled zanamivir (if unable to use diskhaler seek advice)

- **Severely immunosuppressed** (e.g. patients with primary immunodeficiency, current or recent (within 6 months) chemotherapy or radiotherapy for malignancy, solid organ transplant on immunosuppressive therapy, bone marrow transplant recipients currently receiving immunosuppressive treatment/within 12 months of receiving immunosuppression, patients with graft v host disease, patients currently receiving high dose systemic steroids (equivalent to ≥20mg prednisolone per day, HIV patients CD4<200 or <15%, patients currently or recently (within 6 months) on other types of highly immunosuppressive therapy or where the patient's specialist regards them as severely immunosuppressed) ***AND*** **the dominant circulating strain has:**
  - Lower risk of oseltamivir resistance (e.g. influenza A[H3N2] or influenza B)
    - FIRST LINE oral oseltamivir (or via NG) consider switch to SECOND line option if poor clinical response/evidence of GI dysfunction/ subtype testing confirms resistance
    - SECOND LINE inhaled zanamivir
      - Where possible, patients who have good respiratory function despite their illness, can use the Diskhaler®

- Inhaled zanamivir via Diskhaler® may not be an effective delivery route in some patients, including those unable to administer the Diskhaler® and patients with severe underlying respiratory disease
- consider IV zanamivir if patient condition deteriorates and /or has severe complicated illness such as multi-organ failure – MUST be ID/Micro approved

- Higher risk of oseltamivir resistance (e.g. influenza A [H1N1]pdm09)
  - prescribe inhaled zanamivir within 48 hours of onset (or later at clinical discretion)
    - Where possible, patients who have good respiratory function despite their illness, can use the Diskhaler®
    - Inhaled zanamivir via Diskhaler® may not be an effective delivery route in some patients, including those unable to administer the Diskhaler® and patients with severe underlying respiratory disease
    - If inhaled zanamivir is unsuitable or inappropriate, oral/NG oseltamivir can be prescribed and monitor clinical condition closely - note this is local guidance but based on national data showing very low levels of oseltamivir resistance in influenza A [H1N1]pdm09 in tested samples. If patient's condition deteriorates and/or has severe complicated illness such as multi-organ failure then consider IV Zanamivir – Infection Specialist approval required

DOSAGES:

For hospital inpatients always add stop date to HEPMA/medicine chart

ORAL OSELTAMIVIR (Tamiflu®) Duration 5 days (consider 10 days if severely immunosupresssed/critically ill) CrCl >30ml/min 75mg TWICE daily

OBESITY: no dose adjustment ADULTS 24-40kg: 60mg TWICE daily

RENAL IMPAIRMENT: Due to clinical experience and good tolerability of oseltamivir the Renal Drug Database advises doses which differ from SPC/UKHSA guidance. These have been used locally for a number of years. CrCl 10–29 mL/min: 75mg ONCE daily CrCl <10ml/min 75mg ONE off dose

DIALYSIS dosages:

HDF	75mg ONCE and then 75mg after every HDF session
HD (used in acute settings e.g. MHDU/SHDU)	30mg ONCE and then 30mg after every HD session
ICU patients on dialysis	Discuss with ICU pharmacist
CAPD/APD	30mg ONE off dose

NG OSELTAMIVIR (Tamiflu®) Doses as per oral oseltamivir above. The contents of the capsule pour easily, but are granular in nature. Disperse in water, draw up the entire dose and administer and flush well. Although small particles are visible in the dispersion, this flushes via an 8Fr NG tube without blockage. Refer to full guidance here.

INHALED ZANAMIVIR (Relenza® DISKHALER) 10mg TWICE daily for 5 days (up to 10 days (off label) if suspected/confirmed oseltamivir resistance)
Note: this formulation is NOT suitable for use IV or via nebuliser RENAL IMPAIRMENT/DIALYSIS: no dosage adjustment required

IV ZANAMIVIR (Dectova®)
MUST be approved by ID/Microbiology before use

- **SPC recommends to commence as soon as possible and usually within 6 days of symptom onset**
- **NOTE: Kept in NW Night Emergency Drug Cupboard**
- **Total Duration: 5-10 days**

For ALL patients calculate creatinine clearance (CrCl) DO NOT use eGFR

CrCl ≥80ml/min: 600mg twice daily (if <50kg seek advice, obesity no dose adjustment)

RENAL IMPAIRMENT (<50kg seek advice):

CrCl ≥80mL/min	Initial dose: 600mg and 12 hours later, maintenance dose: 600mg BD
CrCl 50-79	Initial dose: 600mg and 12 hours later, maintenance dose: 400mg BD
CrCl 30-49	Initial dose: 600mg and 12 hours later, maintenance dose: 250mg BD
CrCl 15-29	Initial dose: 600mg and 24 hours later, maintenance dose: 150mg BD
CrCl <15	Initial dose: 600mg and 48 hours later, maintenance dose: 60mg BD

DIALYSIS dosages: seek advice

PREGNANCY/BREASTFEEDING: Limited safety data. Please refer to p28 of UKHSA guidance and seek further advice if needed

ANTIBIOTICS IN INFLUENZA POSITIVE PATIENTS: Consider empirical treatment in febrile patients with extensive pneumonia, hypotension, respiratory failure OR in deteriorating patients OR where no improvement with 3-5 days antiviral treatment. Ensure antibiotics are reviewed and stopped in patients who test positive for influenza where there are no signs or symptoms of bacterial co-infection.

References: UKHSA Guidance 2021 PHS Guidance 2023 Oseltamivir SPC Zanamivir IV SPC NG Oseltamivir Renal Drug Database accessed 27/11/2023 BNF accessed 27/11/2023

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