

# Management of localised community outbreaks of influenza across the BNSSG area

## 1. Background

Most influenza outbreaks occur during the influenza season following the Chief Medical Officer's (CMO) alert authorising the prescribing of antivirals in primary care 'in-season', however, a small number of outbreaks may occur in the 'out of season' period which is defined as the period when the levels of circulating influenza are not yet epidemiologically significant for the CMO to issue their alert authorising antiviral medications on FP10 prescription. An outbreak situation is [defined](#) as two or more cases which meet the clinical case definition of Influenza like illness (or alternatively 2 or more cases of laboratory confirmed Influenza) arising within the same 48-hour period with an epidemiological link to the institutional environment, predominately care homes. The possibility of dual outbreaks (for example influenza and another pathogen) should also be considered.

Where indicated, oseltamivir antiviral treatment for flu should be started as soon as possible, ideally within 48 hours of onset of symptoms. Therefore, the process for clinical assessment and dispensing of antivirals needs to be completed in a very timely fashion. However, there is evidence that oseltamivir treatment may reduce the risk of mortality even if started up to five days after onset, but this is an off-label use of oseltamivir (Tamiflu®) and requires clinical judgement. Prophylaxis should be started within 48 hours of exposure to a case; or after 48 hours on specialist advice only – usually from UK Health Security Agency (UKHSA) (formally Public Health England) or consultant virologist.

### 1.1 Procedures in an outbreak situation

In an outbreak situation, the UKHSA Health Protection Team (HPT) will have risk assessed the outbreak situation and made recommendations regarding the use of antivirals, however, the ICB Tactical On-Call Manager or Medicines Optimisation Team input may be required to support UKHSA Health Protection Team (HPT) where difficulties are experienced to deliver a timely response to the outbreak. The pathways below should be followed by the commissioned community provider, Mendip Vale PCN and noted by GP practices and out-of-hours services to guide the actions required to achieve assessment and supply of antiviral medications. The antiviral assessment pathway will only be activated following confirmation of an outbreak by the HPT. Where individual patients are clinically unwell, care homes should follow their normal procedures by contacting their link GP practice or out of hours when outside normal working hours.

#### 'In season' outbreaks

In an 'in season' outbreak situation, where antiviral medication is required, this should be prescribed in line with NICE guidance TA158 and TA168 and obtained via an FP10 or patient specific direction (PSD) dispensed by a community pharmacy. There are some community pharmacies that hold small stocks of antiviral medications across the BNSSG area as part of the Community Pharmacy Specialist Medicines Local Enhanced Service, but all will require notice in order to obtain larger stocks.

<https://remedy.bnssgccg.nhs.uk/formulary-adult/local-guidelines/16-palliative-care-guidelines/>

### 'Out of season' outbreaks

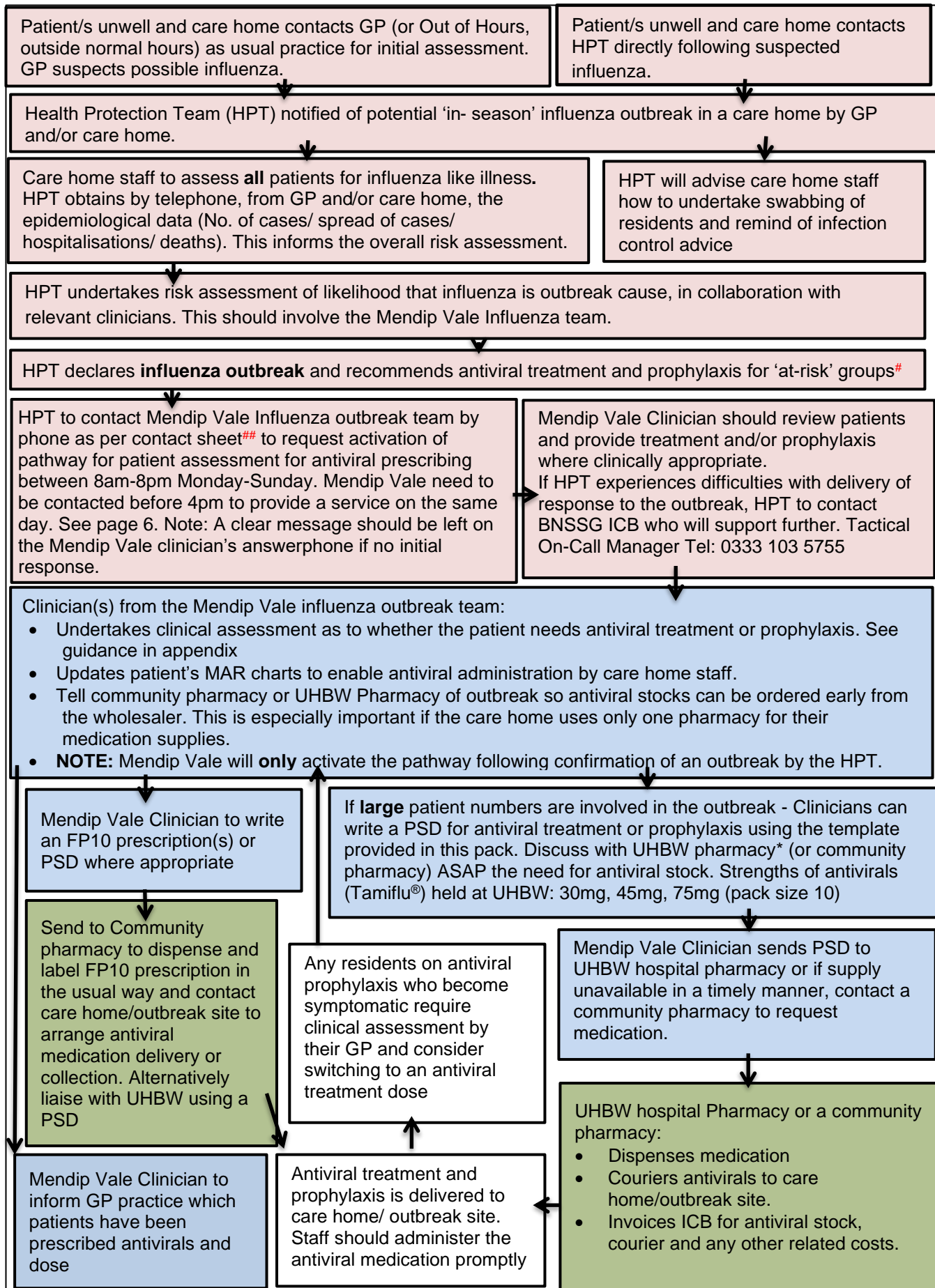
In an out of season outbreak situation, where antiviral medication is required, the UKHSA Health Protection Duty Team will authorise the release of the local UKHSA stocks of Oseltamivir (Tamiflu®) held at a local hospital trust (UHBW pharmacy) for emergency use. The hospital has the facilities to over label these medications, which is important as the medication is not a single dose and this will therefore support medication administration. A Patient Specific Direction (PSD) for the supply would be needed and the ICB will then be required to fund the costs of these antivirals as well as fund delivery if required. A template Patient Specific Direction (PSD) has been included in this pack. Alternatively, where small numbers of patients are affected then a PSD can be taken to a community pharmacy and an antiviral local enhanced service is in place to support this provision. Pharmacies signed up to the Specialist Medicines LES should hold small quantities of antiviral stock. The pharmacy would then need to invoice the ICB for medication supplies and dispensing fees.

In an out of season outbreak situation Zanamivir (Relenza®), an alternative antiviral for patients unable to have oseltamivir, is not kept in the UKHSA stockpile. This would not be the first line treatment option and could be ordered in by the hospital trust (UHBW) or could be accessed via a community pharmacy.

The flow charts below describe the local processes relating to antiviral medication supply in these two outbreak situations when the outbreak is in a care home setting. However, the principles could apply to other institutionalised settings such as school outbreaks.

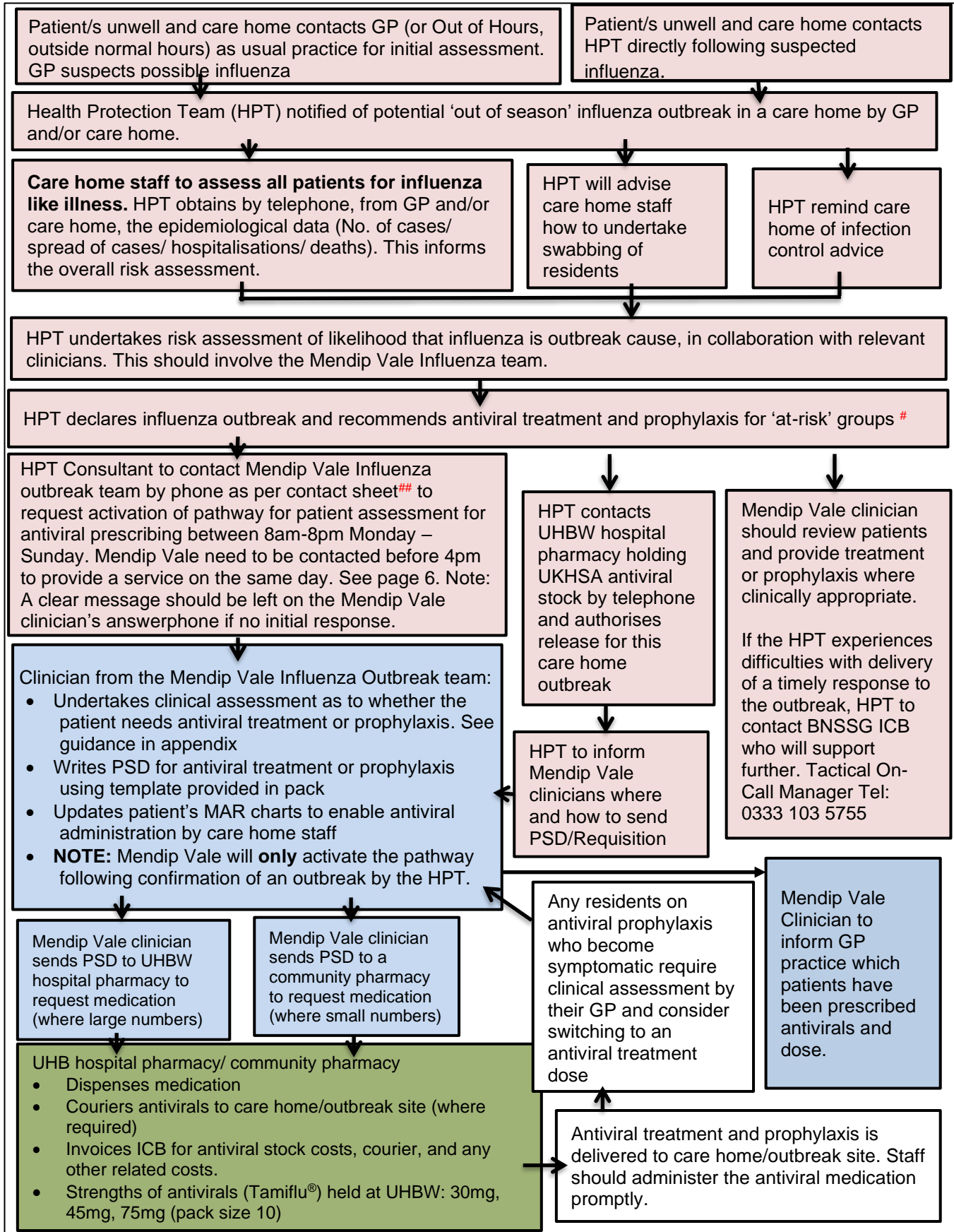
1. Management of an 'in-season' Influenza outbreak
2. Management of 'out of season' Influenza outbreak
3. Care Home Provider Pathway for suspected influenza outbreaks in Care Homes in working hours and out-of-hours
4. Patient Specific Direction (PSD) Templates
5. Appendices

## 1. Management of an 'in-season' Influenza outbreak in a care home setting



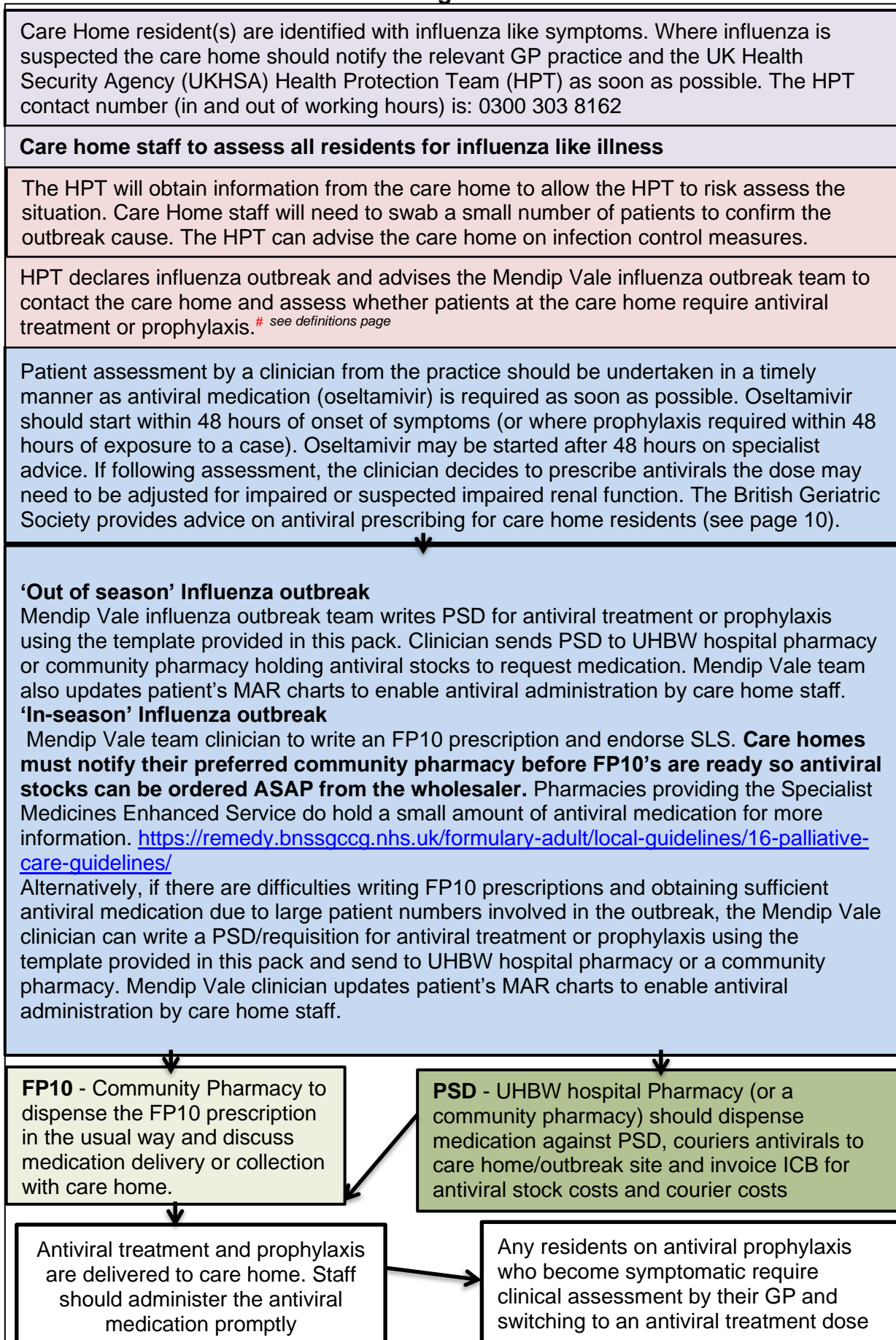
\*In working hours UHBW hospital pharmacy contact 0117 342 2065 Pharmacy stores Monday to Friday 08.00am – 16.20pm or the dispensary on 0117 342 2682 / 2053 Monday to Friday until 17.30pm, asking to speak to the lead for that service area. Out of hours contact the UHBW on call pharmacist via UHBW switchboard: 0117 923 0000 UKHSA HPT contact number (in hours and out of hours): 0300 303 8162

## 2. Management of 'out of season' Influenza outbreak in a care home setting



\*In working hours UHBW hospital pharmacy contact 0117 342 2065 Pharmacy stores Monday to Friday 08.00am – 16.20pm or the dispensary on 0117 342 2682 / 2053 Monday to Friday until 17.30pm. Ask to speak to the lead for that service area.  
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### 3. Care Home Provider Pathway for suspected influenza outbreaks in Care Homes in working hours and out-of-hours



**## Mendip Vale contact for the Flu outbreak service**

**In an outbreak situation, the Health Protection Team clinician e.g. a HPT Consultant should contact directly one of the Mendip Vale clinicians by phone and then supportive information provided in a follow up email.**

**If the HPT are unable to speak to the Mendip Vale team initially a clear message should be left including an appropriate telephone number and name of UKHSA clinician they should contact.**

**Please note this service is available 8am – 8pm Monday – Sunday. However, it is recommended that the HPT contact the Mendip Vale team before 4pm to provide a service on the same day**

Dr Shruti Patel: shruti.patel4@nhs.net Tel:0789 9995014

Dr Joanna King: Joanna.king5@nhs.net Tel:07810582091

David Clark: david.clark23@nhs.net Tel:0774 7801863

Mendip Vale Main telephone line: 01934 839820

For any related infection control queries or advice please contact the BNSSG ICB IPC Cell by emailing: [bnssg.covid.ipc@nhs.net](mailto:bnssg.covid.ipc@nhs.net)

#### 4. Patient Specific Direction (PSD) Template

Prescriber Address:

**FOR URGENT ATTENTION**

In-patient Pharmacy  
 Floor level Three  
 Bristol Royal Infirmary (Zone A)  
 University Hospitals Bristol and Weston (UHBW)  
 Marlborough Street  
 Bristol  
 BS1 3NU

Date

**Patient Specific Direction (PSD)**  
**Please arrange for the supply of:**

Antiviral Medication Name	Medication Strength	Medication Formulation

**For the following patients:**

Patient Name	Date Of Birth	NHS Number	Route	Dosage/ Frequency	Duration

These medicines are required as part of the urgent management of an influenza outbreak declared by UKHSA Avon Gloucestershire and Wiltshire Health Protection Team (telephone 0300 303 8162) at the following location:

<b>Name of care home / school (where applicable)</b>					
<b>Patient address (e.g. care home / school)</b>					
<b>Telephone contact details for care home/school</b>					
<b>Prescriber name (PRINT)</b>		<b>Prescriber signature</b>			
<b>Prescriber GP Practice/ Organisation</b>					
<b>Qualification of registered health professional e.g. GP or NMP</b>		<b>Professional Registration number</b>			
<b>Prescriber contact number</b>		<b>Expiry Date of PSD</b>			

**\*\*Please use a separate PSD for each different formulation or strength of medication. All details with wet signature must fit on one page. More than one signed PSD may be required \*\***

Prescriber Address:

**FOR URGENT ATTENTION**  
**BNSSG Community pharmacy**

Date

**Patient Specific Direction (PSD)**  
**Please arrange for the supply of:**

Antiviral Medication Name	Medication Strength	Medication Formulation

**For the following patients:**

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<b>Prescriber GP Practice/ Organisation</b>					
<b>Qualification of registered health professional e.g. GP or NMP</b>		<b>Professional Registration number</b>			
<b>Prescriber contact number</b>		<b>Expiry Date of PSD</b>			

**\*\*Please use a separate PSD for each different formulation or strength of medication. All details with wet signature must fit on one page. More than one signed PSD may be required \*\***



## 5. Appendices:

### A. Prescribing antivirals - Renal Function

Where renal function is known, this can be used to decide on the most appropriate antiviral medication dose to be prescribed. Dosing guidance can be found in the BNF, product information and in the 'UKHSA Guidance on use of antiviral agents for the treatment and prophylaxis of seasonal influenza. The information below is taken from the UKHSA guidance. <https://www.gov.uk/government/publications/influenza-treatment-and-prophylaxis-using-anti-viral-agents>

Recommended oseltamivir (Tamiflu®) treatment dosing in relation to renal function (adults and those aged 13 years or over)

CrCL (mL/min)	Oseltamivir PO Treatment for 5 Days
>60mL/min*	75mg BD
31-60 mL/min*	30mg BD
11-30mL/min*	30mg OD
≤10mL/min++	30mg ONCE
Haemo-dialysis (HD)++	30mg ONCE and then 30mg after every HD session

Recommended oseltamivir prophylaxis dosing in relation to renal function (adults and those aged 13 years or over)

CrCL (mL/min)	Oseltamivir PO prophylaxis for 10 days
>60mL/min*	75mg OD
31-60 mL/min*	30mg OD
11-30mL/min*	30mg every 48 hours
≤10mL/min++	30mg ONCE, repeated after 7 days
Haemo-dialysis (HD)++	30mg ONCE and then 30mg after every second HD session

*Summary of Product Characteristics updated Feb 2019 (\*)The recommendations for haemo-dialysis and established renal failure are based on expert opinion (++)*

*Please note CrCL (using [Cockcroft and Gault](#)) assumes the patient's renal function is stable. Clinical judgement will be required where renal function is unstable (i.e. in acute renal failure).*

The [Summary of product Characteristics](#) for zanamivir inhalation powder (Relenza®) states that no dose modification is required for impaired renal function.

Appendix 3 of the UKHSA guidance on the '[Management of acute respiratory infection outbreaks in care homes guidance](#)'; offers useful advice on what to do if renal function is unknown. See below <https://www.gov.uk/government/publications/acute-respiratory-disease-managing-outbreaks-in-care-homes/management-of-acute-respiratory-infection-outbreaks-in-care-homes-guidance#appendix3>

## British Geriatric Society advice on antiviral prescribing

In November 2017, the British Geriatrics Society (BGS) issued [advice](#) about consideration of renal impairment in prescribing of antivirals in localised community outbreaks of seasonal influenza.

If an individual has a documented renal function within the last 6 months, which does not indicate renal impairment, the standard dose of oseltamivir antivirals can be prescribed. For individuals with a known renal impairment and where the prescriber has access to their renal function during an emergency outbreak, they can be prescribed an adjusted dose according to the UKHSA influenza guidelines or sources such as the [British National Formulary](#) (BNF) or summaries of product characteristics.

However, in an emergency outbreak response, where there is no information about the presence or absence of renal impairment (or lack of available routine renal function results from the past 6 months), there is a high likelihood of abnormal renal function in care home residents, so we would recommend a reduced daily dose of oseltamivir in all care home residents. This would be for a dose appropriate to creatinine clearance of 31 to 60 mL/min. We would not recommend routine measurement of renal function prior to treatment due to the logistical challenges of collecting bloods en masse in care home populations and the likely delays introduced by waiting for lab results to return in the community. Where time permits, checking renal function in specific patients at high risk of significant renal impairment, for example those on high dose diuretics, may be useful.

The importance of vaccination in both care home residents and staff is to be reinforced. Importantly, vaccination provides an opportunity for additional conversations, with families of care home patients who lack capacity to consent to therapy, to consider the relative merits of antiviral therapy in advance. It would be useful to discuss in advance, with residents' families, the rationale for antiviral therapy in the event of outbreaks and to determine whether their relative would have been likely to want to opt out of such an approach. This would help to anticipate any issues relating to care home residents' lack capacity to consent. Clinicians are advised to consider this in relation to their own local policies on capacity to consent.

Inhaled zanamivir should be primarily used for cognitively intact residents requiring antiviral therapy, such as those with recognised renal dysfunction or with suspected or confirmed oseltamivir-resistant influenza.

This advice was facilitated by Adam Gordon, of the University of Nottingham and BGS.

[Reference: UKHSA, Management of acute respiratory infection outbreaks in care homes guidance, Appendix 3, July 2024](#)

## **B. Definitions used within the protocols**

Case definition for influenza – Flu like illness usually starts rapidly with a fever/temperature >37.8°C PLUS one or more of the following symptoms: cough (with or without sputum), sore throat, hoarseness, nasal discharge or congestion, shortness of breath, wheezing, sneezing OR an acute deterioration in physical or mental ability without other known cause.

### Clinical Risk Groups #

People 'at risk' in the context of influenza outbreak are defined as those who have one of more of the following: chronic respiratory disease (including asthma & chronic obstructive pulmonary disease), chronic heart disease, chronic renal disease, chronic liver disease, chronic neurological conditions, diabetes mellitus, aged 65 years or older, might be immunosuppressed. Also refer to UKHSA, Immunisation against infectious disease, Green Book - [Influenza chapter](#) (chapter 19) for full information on risk groups and NICE guidance relating to antiviral use.

Out of season influenza period – this refers to the period when the levels of circulating influenza are not yet epidemiologically significant for the Chief Medical Officer (CMO) to issue their alert authorising antiviral medications on FP10 prescription.

In season influenza period – this refers to the period when the levels of circulating influenza are epidemiologically significant and the Chief Medical Officer (CMO) has issued an alert authorising antiviral medications on FP10 prescription.

Over labelled medication – This refers to medicines which have a pre-printed label containing dosage instructions and other information. They are given directly to patients following the addition of the individual patient's name and the date being added to the pack.

Patient Specific Direction (PSD) - A Patient Specific Direction (PSD) is a written instruction, signed by a prescriber for medicines to be supplied and/or administered to a named patient after the prescriber has assessed the patient on an individual basis.

Patient Group Direction (PGD) – These are documents which allow healthcare professionals to supply and administer specified medicines to pre-defined groups of patients, without a prescription.

Wholesale Dealers License (WSD License) - To sell or supply medicines to anyone other than the patient using the medicine, including the bulk supply of medicines you need a wholesaler licence – also known as a wholesale dealer licence or wholesale distribution authorisation. Not all community pharmacies have this license.

## C. Supportive National Guidance

NICE Technology Appraisals (TA158 and 168) recommend that during localised outbreaks of influenza in the out of season period, antivirals may be used for treatment or post-exposure prophylaxis in at-risk people living in long-term residential or nursing homes, whether or not they are vaccinated.

<https://www.nice.org.uk/Guidance/ta158>

<https://www.nice.org.uk/Guidance/ta168>

UKHSA guidance on use of antiviral agents for the treatment and prophylaxis of seasonal influenza, Version 11.0, November 2021

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1058443/ukhsa-guidance-antivirals-influenza-11v4.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1058443/ukhsa-guidance-antivirals-influenza-11v4.pdf)

UKHSA, Management of acute respiratory infection outbreaks in care homes guidance, 24 July 24

<https://www.gov.uk/government/publications/acute-respiratory-disease-managing-outbreaks-in-care-homes/management-of-acute-respiratory-infection-outbreaks-in-care-homes-guidance>

## D. Evidence for effectiveness of Antiviral Treatment

Expert opinion on neuraminidase inhibitors for the prevention and treatment of influenza - review of recent systematic reviews and meta-analyses, European Centre for Disease Prevention and Control, August 2017 <https://ecdc.europa.eu/en/publications-data/expert-opinion-neuraminidase-inhibitors-prevention-and-treatment-influenza-review>

### Executive Summary:

The neuraminidase inhibitors oseltamivir and zanamivir, currently authorised in the European Union/European Economic Area for treatment and prophylaxis of influenza disease (including seasonal, pandemic and zoonotic influenza), have been the subject of debate concerning their effectiveness and safety, and as a consequence, also the appropriateness of stockpiling these drugs for use in future influenza pandemics.

Three large systematic reviews and meta-analyses assessing efficacy, effectiveness and safety of two licensed neuraminidase inhibitors, oral oseltamivir and inhaled zanamivir, were reviewed: The 2014 Cochrane Collaboration report (Jefferson et al.), the 2015 MUGAS study (Dobson et al.) and the 2014 PRIDE study (Muthuri et al.). Additional reviews and studies were considered where appropriate.

The reviews by Jefferson et al. and Dobson et al. conclude that, for adults, oseltamivir decreases the time to first alleviation of symptoms of influenza-like illness (ILI) by 16.8 hours (95% CI 8.4–25.1) and 17.8 hours (95% CI 27.1 to 9.3), respectively. The time to alleviation of all symptoms among the sub-population with laboratory confirmed influenza infection was decreased by 25.2 hours 95% CI 16.0–36.2 in the Dobson et al. analysis.

Additional analyses within the Jefferson et al. and Dobson et al. reviews documented a statistically significant reduction in patient-reported pneumonia, a reduction in lower respiratory tract infections and a decrease in hospital admissions following influenza diagnosis among oseltamivir-treated groups.

All three reviews point to the importance of initiating treatment early, ideally within 48 hours (within 36 hours in the case of zanamivir in children) of onset of symptoms.

With regard to prophylaxis, the review by Jefferson et al. assessing pre- or post-exposure prophylactic oseltamivir observed a 3.05% reduction in absolute risk for laboratory-confirmed influenza A among groups receiving oseltamivir in four RCTs (RR 0.45; 95% CI

0.30–0.67). The trials were conducted in ambulatory community members and nursing home residents. Similarly, Okoli et al. reported an association in an RCT between reduction in laboratory-confirmed influenza A(H1N1) infection and prophylactic treatment with oseltamivir (OR 0.11; 95% CI 0.06–0.20), and in four observational studies of zanamivir (0.23; 95% CI 0.16–0.35).

The most commonly reported adverse effect was an increased risk of nausea and vomiting; Jefferson et al. reported the risk in adults receiving oseltamivir for vomiting (RR 2.43; CI 95% 1.75–3.38) and children (1.70; 95% CI 1.23–2.35), and Dobson et al. in adults (RR 2.43; 95% CI 1.83–3.23).

Limitations were identified for all three systematic reviews and meta-analyses.

While the reviews considered for this expert opinion add to the evidence on the beneficial and adverse impacts of neuraminidase inhibitors, it is clear that further studies are needed to strengthen the evidence base overall.

This ECDC expert opinion confirms earlier assessments by ECDC and national authorities that there is no significant new evidence from RCTs to support any changes to the approved indications and recommended use of neuraminidase inhibitors in EU/EEA Member States.

Available evidence provides support for the use of NAIs as prophylaxis and treatment and thus they can be considered a reasonable public health measure during seasonal influenza outbreaks, pandemics and zoonotic outbreaks caused by susceptible influenza virus strains.