Information for clinicians

Preparing individual doses and suspensions of oseltamivir using capsule contents

Key points:

1. **The commercially registered oseltamivir suspension should be used preferentially for patients with swallowing difficulties.** This factsheet is designed to help clinicians prepare individual doses or suspensions of oseltamivir using capsule contents if the commercial oseltamivir oral suspension product is **not available.**

2. **Individual doses of oseltamivir** can be prepared by clinicians using capsule contents in two ways. The first is via mixing with food directly, or by preparing a solution (see pages 1 and 2). The oseltamivir solution for individual doses has a final concentration of **15 mg/mL**, which is different from the commercial and compounded oral suspension products.

3. A **compounded oral suspension** of oseltamivir can also be prepared by a pharmacist (see pages 3 and 4). The compounded suspension has a final concentration of **6 mg/mL**, which is the same as the commercial oral suspension product. The content in this factsheet has been informed by the approved Product Information for Tamiflu® (oseltamivir phosphate).

4. Refer to the Therapeutic Guidelines: Antibiotic (accessible via CIAP) for **oseltamivir dose recommendations** including advice regarding paediatric patients and dose adjustments in renal impairment.

For clinicians: Preparing and administering individual doses of oseltamivir for patients unable to swallow capsules

Preparation of capsule contents for mixing with food

For whole doses via oral route only:

1. Hold the oseltamivir capsule(s), required to deliver the appropriate dose, over a small bowl. Carefully pull the capsule(s) open and pour the entire contents into the bowl.

2. Add a suitable, small amount (maximum 1 teaspoon) of sweetened food product (e.g., fruit puree, yoghurt or chocolate syrup) to mask the bitter taste of the medication.

3. Stir the mixture well and give the entire contents to the patient. The mixture must be swallowed immediately after its preparation. If there is some mixture left inside the bowl, rinse the bowl with a small amount of water and have the patient drink this remaining mixture. It is not necessary to administer any undissolved white powder as this is inert material.

This Communication is intended as a guide only and does not equate to expert opinion. Interpretation of recommendations should always be taken in context with the patient's current condition and formal clinical assessment. As the information in this publication is subject to review, please contact a medical or health professional before using this publication. Whilst the information is considered to be true and correct at the date of publication, changes in circumstances after the time of publication may impact on the accuracy of the information. The information may change without notice and the State of New South Wales is not in any way liable for the accuracy of any information printed and stored or in any way interpreted and used by a user.

Preparation of capsule contents as a solution (15 mg/mL)

For part or whole doses via oral route or enteral feeding tubes:

1. Hold one oseltamivir 75 mg capsule over a small bowl. Carefully pull the capsule open and pour the entire contents into the bowl.

2. Using a graduated oral/enteral syringe, add 5 mL of water to the powder. Stir, using the tip of the syringe, for about two minutes until an even dispersion is formed. This makes a solution of **oseltamivir 15 mg/mL**.

3. Draw up into the syringe the correct amount of mixture from the bowl (see **examples** in Table 1 below). **Discard any unused mixture – for single patient use only.**

Table 1

Required dose	Amount of oseltamivir 15 mg/mL solution for one dose
15 mg	1 mL
30 mg	2 mL
45 mg	3 mL
60 mg	4 mL
75 mg	5 mL

4. **To administer via oral route:**

   a) Once the desired amount has been drawn up into the oral syringe, administer to the patient directly or add to a suitable, small amount (1 teaspoon maximum) of sweetened food product (e.g., fruit puree, yoghurt or chocolate syrup) to mask the bitter taste of the medication.

   b) Stir this mixture well and give the entire contents of the bowl or the syringe to the patient. This mixture must be swallowed immediately after its preparation. If there is some mixture left inside the bowl or syringe, rinse the bowl with a small amount of water and have the patient drink this remaining mixture.

5. **To administer via enteral feeding tube:**

   a) Stop any enteral feeds in progress and flush the tube with 30 mL of water.

   b) Draw up the required dose (see Table 2) and dilute by drawing up an equal volume of water . Mix well and give into the enteral feeding tube. Flush the tube with 30 mL of water and restart the feed.

NSW GOVERNMENT | CLINICAL EXCELLENCE COMMISSION

This Communication is intended as a guide only and does not equate to expert opinion. Interpretation of recommendations should always be taken in context with the patient's current condition and formal clinical assessment. As the information in this publication is subject to review, please contact a medical or health professional before using this publication. Whilst the information is considered to be true and correct at the date of publication, changes in circumstances after the time of publication may impact on the accuracy of the information. The information may change without notice and the State of New South Wales is not in any way liable for the accuracy of any information printed and stored or in any way interpreted and used by a user.

For pharmacists: Compounding an oseltamivir (6 mg/mL) oral suspension using capsules

Compounding the oral suspension

1. Determine the total volume needed to complete a 5-day course of treatment or a 10-day course of prophylaxis. The total volume of compounded oseltamivir 6 mg/mL suspension required is determined by the weight of the patient (see recommendations in Table 2).
2. Prepare a solution of water preserved with 0.05% w/v sodium benzoate (the 'vehicle') –
    a. For patients 40 kg or under: 50 mg of sodium benzoate made up to 100 mL of water.
    b. For patients > 40 kg: 100 mg of sodium benzoate made up to 200 mL of water.
3. Determine the number and strength of capsules, and the amount of vehicle (prepared in Step 2) that is needed to prepare the total volume of compounded oseltamivir 6 mg/mL suspension as shown in Table 2.
4. Carefully open the required number of capsules, pouring the entire contents into a suitable medicine bottle which can be fitted with a child resistant cap.
5. Add the stated amount of vehicle as determined above, tighten the child resistant cap and shake for 2 minutes.

Table 2

1. Calculating total volume required		2. Calculating number of capsules and volume of vehicle required				Final concentration of suspension
Body weight (kg)	**Total volume to compound (mL)**	**Required number of oseltamivir capsules**			**Required volume of vehicle**	
		75 mg	**45 mg**	**30 mg**		
Up to 5 kg	25 mL	2 capsules (150 mg)	N/A	5 capsules (150 mg)	24.5 mL	6 mg/mL
5 to 6 kg	30 mL	N/A	4 capsules (180 mg)	6 capsules (180 mg)	29.5 mL	
> 6 to 15 kg	50 mL	4 capsules (300 mg)	N/A	10 capsules (300 mg)	49.5 mL	
> 15 to 23 kg	75 mL	6 capsules (450 mg)	10 capsules (450 mg)	15 capsules (450 mg)	74 mL	
> 23 to 40 kg	100 mL	8 capsules (600 mg)	N/A	20 capsules (600 mg)	98.5 mL	
> 40 kg	125 mL	10 capsules (750 mg)	N/A	N/A	123.5 mL	

This Communication is intended as a guide only and does not equate to expert opinion. Interpretation of recommendations should always be taken in context with the patient's current condition and formal clinical assessment. As the information in this publication is subject to review, please contact a medical or health professional before using this publication. Whilst the information is considered to be true and correct at the date of publication, changes in circumstances after the time of publication may impact on the accuracy of the information. The information may change without notice and the State of New South Wales is not in any way liable for the accuracy of any information printed and stored or in any way interpreted and used by a user.

6. Dispense the oral suspension to comply with local dispensing guidelines (which includes labelling with clear instructions for use including volume [in mL] to be taken/given for each dose) and an ancillary label indicating the need to ‘Shake Before Use’.

7. Clearly record the expiry date on the label. As per the Product Information, the pharmacy compounded suspension can be stored at room temperature (below 25 °C) for up to 3 weeks (21 days) or in a refrigerator (2 to 8 °C) for up to 6 weeks. The suspension should **not be frozen.**

8. Provide the patient with a graduated oral syringe for measuring the required amount of the suspension.

9. The patient/parent/carer should be educated:

    a. To shake the oseltamivir oral suspension well before each use.

    b. To mix the appropriate dose with an equal quantity of sweet liquid food (e.g., fruit puree, yoghurt or chocolate syrup) to mask the bitter taste.

    c. To discard any remaining suspension after the patient has completed the full course of therapy.

References

1. MIMS Online, *Oseltamivir*, accessed via https://www.mimsonline.com.au.acs.hcn.com.au/Search/DNC.aspx?ModuleName=Product%20Info&searchKeyword=Oseltamivir&PreviousPage=~/Search/QuickSearch.aspx&SearchType=&ID=55420001_2
2. Roche Products Pty Limited, *Australian Product Information: Tamiflu (oseltamivir phosphate),* accessed via https://www.ebs.tga.gov.au/ebs/picmi/picmirepository.nsf/pdf?OpenAgent&id=CP-2012-PI-02051-3&d=202302151723101

This Communication is intended as a guide only and does not equate to expert opinion. Interpretation of recommendations should always be taken in context with the patient’s current condition and formal clinical assessment. As the information in this publication is subject to review, please contact a medical or health professional before using this publication. Whilst the information is considered to be true and correct at the date of publication, changes in circumstances after the time of publication may impact on the accuracy of the information. The information may change without notice and the State of New South Wales is not in any way liable for the accuracy of any information printed and stored or in any way interpreted and used by a user.